

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR 2018

HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES ONE HUNDRED FIFTEENTH CONGRESS FIRST SESSION

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT,
AND RELATED AGENCIES

MICHAEL K. SIMPSON, Idaho, *Chairman*

KEN CALVERT, California

CHARLES J. FLEISCHMANN, Tennessee

JEFF FORTENBERRY, Nebraska

KAY GRANGER, Texas

JAIME HERRERA BEUTLER, Washington

DAVID P. JOYCE, Ohio

DAN NEWHOUSE, Washington

MARCY KAPTUR, Ohio

PETER J. VISCLOSKY, Indiana

DEBBIE WASSERMAN SCHULTZ, Florida

PETE AGUILAR, California

JOSÉ E. SERRANO, New York

NOTE: Under committee rules, Mr. Frelinghuysen, as chairman of the full committee, and Mrs. Lowey, as ranking minority member of the full committee, are authorized to sit as members of all subcommittees.

DONNA SHAHBAZ, ANGIE GIANCARLO, LORAIN HECKENBERG,
PERRY YATES, and AMY MURPHY
Subcommittee Staff

PART 5

	Page
Testimony of Interested Members of Congress	1
Testimony of Interested Individuals and Organizations	121
U.S. Army Corps of Engineers (Civil Works) and Bureau of Reclamation	323
Department of Energy	409



Printed for the use of the Committee on Appropriations

U.S. GOVERNMENT PUBLISHING OFFICE

COMMITTEE ON APPROPRIATIONS

RODNEY P. FRELINGHUYSEN, New Jersey, *Chairman*

HAROLD ROGERS, Kentucky ¹	NITA M. LOWEY, New York
ROBERT B. ADERHOLT, Alabama	MARCY KAPTUR, Ohio
KAY GRANGER, Texas	PETER J. VISCLOSKEY, Indiana
MICHAEL K. SIMPSON, Idaho	JOSÉ E. SERRANO, New York
JOHN ABNEY CULBERSON, Texas	ROSA L. DELAURO, Connecticut
JOHN R. CARTER, Texas	DAVID E. PRICE, North Carolina
KEN CALVERT, California	LUCILLE ROYBAL-ALLARD, California
TOM COLE, Oklahoma	SANFORD D. BISHOP, JR., Georgia
MARIO DIAZ-BALART, Florida	BARBARA LEE, California
CHARLES W. DENT, Pennsylvania	BETTY McCOLLUM, Minnesota
TOM GRAVES, Georgia	TIM RYAN, Ohio
KEVIN YODER, Kansas	C. A. DUTCH RUPPERSBERGER, Maryland
STEVE WOMACK, Arkansas	DEBBIE WASSERMAN SCHULTZ, Florida
JEFF FORTENBERRY, Nebraska	HENRY CUELLAR, Texas
THOMAS J. ROONEY, Florida	CHELLIE PINGREE, Maine
CHARLES J. FLEISCHMANN, Tennessee	MIKE QUIGLEY, Illinois
JAIME HERRERA BEUTLER, Washington	DEREK KILMER, Washington
DAVID P. JOYCE, Ohio	MATT CARTWRIGHT, Pennsylvania
DAVID G. VALADAO, California	GRACE MENG, New York
ANDY HARRIS, Maryland	MARK POCAN, Wisconsin
MARTHA ROBY, Alabama	KATHERINE M. CLARK, Massachusetts
MARK E. AMODEI, Nevada	PETE AGUILAR, California
CHRIS STEWART, Utah	
DAVID YOUNG, Iowa	
EVAN H. JENKINS, West Virginia	
STEVEN M. PALAZZO, Mississippi	
DAN NEWHOUSE, Washington	
JOHN R. MOOLENAAR, Michigan	
SCOTT TAYLOR, Virginia	

¹ Chairman Emeritus

NANCY FOX, *Clerk and Staff Director*

ENERGY AND WATER DEVELOPMENT, AND RELATED AGENCIES APPROPRIATIONS FOR 2018

WEDNESDAY, MARCH 8, 2017.

MEMBERS' DAY

Mr. SIMPSON. The hearing will come to order, and today we have a Members' hearing for Members of the Congress to come testify before—sorry, I didn't put it on. Today we have a Members hearing for Members to come and testify before Congress about areas of importance in the Energy and Water Appropriation bill, and we are happy to welcome all Members of Congress that have comments to make and suggestions for us.

We are happy to welcome two Members today, Rick Nolan from Minnesota, and Francis Rooney from Florida.

Rick, it is your time to give us our testimony. The floor is yours.

WEDNESDAY, MARCH 8, 2017.

WITNESS

**HON. RICHARD M. NOLAN, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF MINNESOTA**

Mr. NOLAN. Thank you, Mr. Chairman. Thank you, members of the committee, and thank you for all the great work you have done.

Mr. SIMPSON. Turn your mic on, please.

Mr. NOLAN. Thank you, Mr. Chairman, and thank you, members of the committee, for hearing from us, and thank you for all the great work that this committee has done for this country. Much appreciated.

I wanted to just briefly talk about the Poe Lock at the Soo Narrows, and I am sure you are probably familiar with it, but I do want to remind you that about a year-and-a-half, 2 years ago, Homeland Security did a study, and they found that 13 percent of the Nation's gross national product goes through the locks at the Soo Narrows, and that is how all the mining in business and agriculture and industry from Lake Superior gets into the Great Lakes and into the Saint Lawrence Seaway. Thirteen percent of Nation's gross national product goes through those locks.

And Homeland Security concluded, among other things, that if those locks failed us for any reason, it would throw the country into a great depression, put as many as 7 to 10 million people out of work, and countless businesses out of business, not just throughout the midwest, but as far west as California and as far east as New York, and as far south as Florida and Texas.

Why? Well, much of that product that goes through there is ore from the mines in Minnesota, Wisconsin; and they, of course, fuel the steel mills of the Great Lakes which, in turn, fund the—or supply the automobile industry and all the manufacturing and industries throughout the Great Lakes region. It is a very, very powerful part of our country. In fact, the study concluded that the economy of the Great Lakes, if it were a nation by itself, would be the fourth most powerful economic nation in the world.

So that is why we have military protection at the Soo Locks to protect us against some kind of, you know, terrorist or asymmetrical military attack. But the simple truth is, the locks are becoming very, very obsolete, and badly in need of repair. They are not large enough to accommodate the—today's most modern Lakers, the ships that haul so much of the grain and the iron ore, and they are badly and desperately in need of replacement. The price tag is enormous. It is estimated to be as much as \$600 million to replace that Poe Lock, which is falling apart, and to create a redundancy and a support of lock to keep that commerce flowing throughout the country.

I want to applaud this committee for appropriating \$1.35 million to do a cost-and-feasibility analysis so that we could get on with repairing this critically important part of our national security and our national economy, but bring to the attention of the committee the profound need to begin the process of funding this new lock, which is so critical to our economy, so that we can protect ourselves, continue to protect ourselves from a military attack, from natural disaster, or something we are totally in control of which is protect ourselves against negligence, and not stepping up to do the kinds of replacements and repairs that are necessary.

So beyond that, Mr. Chairman, I won't take a whole lot of your time. I want to thank you for the work that you have done on invasive species as well. Up in my district in particular, we have the Mississippi watershed, we have the St. Louis watershed going into the Great Lakes, we have the Rainy Lake watershed going up into the boundary waters. We are water rich, and among other things, we need to protect that and protect ourselves from the multitude of invasive species that threaten the health of our fish and wildlife and waters.

So thank you very much, Mr. Chairman. Be glad to take any questions any of you might have, and thank you for the work that you do here. It is very important to our country, our economy, and I would hope that this could be part of President Trump's \$1 trillion infrastructure plan. It certainly needs to be considered.

[The information follows:]

Thank you Chairman Simpson, Ranking Member Kaptur, and distinguished members of this Subcommittee for allowing me to testify this morning regarding this important FY18 Energy & Water Appropriations Bill.

While there are many important issues addressed in the Energy and Water Appropriations bill, I am here today to discuss the Soo Locks, which is the linchpin for Lake Superior's access to the Great Lakes Navigation System and the Saint Lawrence Seaway. And the

importance of constructing a new \$600 million lock to replace the existing facility, which has clearly outlived its usefulness.

To put this into perspective, 13% of our Nation's Gross National Product must clear the Locks, including some 4,000 ships annually – most originating in Duluth.

Roughly 80 million tons of raw goods and materials run through these locks.

So the economic importance of the Soo Locks can hardly be over-emphasized.

The Poe Lock is the only lock large enough to accommodate these huge, 1000-foot long Laker ships. So back in 2015, the Department of Homeland Security (DHS) performed a study of what the catastrophic closure of the Poe Lock due to terrorism, natural disaster, or collapse from obsolescence and neglect would do to our Nation and our economy.

The study's conclusions were deeply concerning. Our Nation would quickly find itself in the midst of another Great Depression.

We are talking about 10 million good-paying jobs lost – not just to the Great Lakes Region, but from border to border – through California, Texas, Arizona and all the way up the St. Lawrence Seaway.

Our automobile industry, our manufacturing production, our steel mills, our mining operations – would be laying off workers and closing their doors.

The reality is – all of these businesses rely on shipping on the Great Lakes because

they have limited or no efficient access to rail or truck.

And even if they did, transporting their bulk-material would not be affordable.

Based on the amount of iron ore steel mills need to maintain business, a truck would have to enter a steel mill, unload, and leave every 2.4 minutes.

That is neither sustainable nor efficient.

There are 13 Lakers on the Great Lakes, each carrying about \$4 million worth of iron ore.

Each one of these Lakers has an economic output of over \$1.6 billion.

So it is clear that the only safe, efficient and sustainable way to move this cargo is by ship.

And as I noted earlier, the only lock at the Soo Locks that can handle the size of these Lakers is the Poe Lock.

And it is clear the Poe Lock is aging; all of the locks are aging.

And even though the Poe Lock is aging and we will need to develop plans for an update or replacement in the future – the current need is to replace the smaller, further aging Sabin and Davis locks with a new lock large enough to handle the big Lakers to complement the Poe.

To start this process, in 2015 we were successful in getting \$1.35 million for a cost-benefit analysis study of a new \$600 million lock.

This is a great first step, but we all know the outcome: the benefit far outweighs the cost.

Therefore, it is vital that the Congress provide sufficient funding for the Army Corps of Engineers' Navigation program, so that projects like this can move forward.

This is a great long-term investment for our Nation.

We are talking about more shipping efficiency; economic growth; more business opportunity and investment; and more good paying middle class jobs.

And that is what this is all about.

Thank you again for giving me this opportunity to testify and I look forward to working with all of you to get this done!

Mr. SIMPSON. Thank you, Congressman. Does any member have any questions? Ms. Kaptur.

Ms. KAPTUR. You know I can't let this moment go by.

Mr. SIMPSON. I knew that.

Ms. KAPTUR. Thank you, Mr. Chairman, and thank you, Representative Nolan. What an outstanding representative you are, including for the Great Lakes, and I just wanted to ask you: Obviously, I am a great supporter of the study that is—we have funded, but I wondered if you have been privy, as a representative from Duluth, of any engineering studies that may have been done by the private sector that talk about the future of the seaway as a modern seaway. It was built during the Eisenhower era. It is over a half century old now.

In terms of the width of the locks, right now you mention in your testimony, 13 Lakers heavily involved in the steel industry hauling ore, but what would be the proper width? What would be the proper dimension of the seaway from your region on down all the way to Messina? Have you seen such an engineering study to modernize the seaway?

Mr. NOLAN. Well, I have seen some of them. I can tell you right now, that the Lakers are operating at only about 80 percent of capacity just because there has not been enough money put into the necessary dredging programs, and the locks are not even capable of handling the larger Lakers or the next generation of Lakers, and this is costing our country, oh, my gosh, the estimates are, you know, up into the billions of economic growth and income to the country.

So I should know this, but is this committee responsible for the Harbor Maintenance Trust Fund?

Mr. SIMPSON. Yes.

Mr. NOLAN. Well, that is what I thought, and you know, I think there is a balance in there of about \$7 billion, and we all applaud bipartisanship, and to be sure, we should. I must say, there are cases where bipartisanship is not necessarily so good, because I think both Democrats and Republicans have raided that fund for other purposes.

So I would strongly urge the committee, when it comes to that Harbor Maintenance Trust Fund, to see to it that more of those monies, which are paid for by the Lakers, that is a use tax, to maintain and upgrade the Great Lakes seaway system, which has just fallen terribly far behind, and I would strongly urge you to use your authority here to make sure that more of those Harbor Maintenance Trust Funds are dedicated to what they were established for, which is maintaining the Great Lakes seaway system. It is so vital to our economy and our well-being and the creation of good-paying jobs in this country.

Ms. KAPTUR. I thank you for making that linkage, and also just to say, in closing, that if you have recommendations of firms, of studies, of individuals on the engineering side that could meet with our Great Lakes task force and provide information to this committee, this subcommittee, I think I would be very appreciative of that.

We have our regular big meeting in May coming up, but I think we need have a vision of the seaway and where the locks you ref-

erenced fit. But there is a bigger vision that, I think, actually, this committee has not been apprised of and of options, and other places in the country are much better organized, speaking very frankly, in terms of a vision for how to modernize their coastal ports or their regional assets, and I think that we need stronger voices, and yours is one of those. So I would just urge you to help us pull together that information in a coherent manner, and I thank you very much for your testimony.

Thank you, Mr. Chairman, for your indulgence and the committee's indulgence.

Mr. SIMPSON. Any other members have any question?

Yeah, and I appreciate your point now. I think it is about \$9 billion that is in the Harbor Maintenance Trust Fund. We haven't used it for anything else. We can't use it within our budget, which is kind of weird, because of budget rules and what it would do to our overall budget and stuff, so we have got to find a way around that.

The Transportation Committee tried to do that last year and was kind of shot down on it, but we are working on it. That is something we still need to do, because you shouldn't be collecting a tax to address a need and just growing more and more money in that if you are not addressing the need. That is something this committee recognizes, and we need to get Congress to recognize that also. So I appreciate your testimony, and thank you for being here today.

Mr. NOLAN. Thank you, Mr. Chairman and members of the committee.

Mr. SIMPSON. Mr. Rooney.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. FRANCIS ROONEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. ROONEY. Yes. Thank you, Mr. Chairman and members of the committee for giving me the opportunity to speak today about the Everglades as well as for all of the important things you have done in the past for the Everglades for so many important infrastructure projects in the country.

The Everglades and Lake Okeechobee watershed include 16 counties and 164 cities. It has a \$2 trillion economic impact on the State of Florida, and supports 55 percent, 1.3 trillion of the real estate value in Florida. For every dollar invested in the Everglades and Okeechobee watershed, \$4 of economic benefits are produced.

Due to a century of development, the greater Everglades' ecosystem is now less than one-half of its original size. The rest of it is Miami and Ft. Lauderdale now, and Lake Okeechobee fills up six times faster than it can be drained, which results in massive discharges into the adjacent rivers and marshes, and sends untreated water down into them.

It also impacts the delicate balance of fresh and saline water in the ecosystem. The Comprehensive Everglades Restoration Plan, or CERP, seeks to restore the balance to these delicate ecosystems

and reduce harmful discharges in the Caloosahatchee and St. Lucie estuaries and send clean water south into the marshes of the Everglades of Florida Bay.

CERP was created by the Congress in the State of Florida in 2000. It includes 68 projects that will combine to create storage, treatment, and flow southward into the marshes of the Everglades; storage and treatment of water entering into Lake Okeechobee from the north, and you all have funded the Kissimmee restoration, which is a big part of that; and balancing of the flows to control salinity. CERP was set up to share the cost 50/50 between the State and the Federal Government, and as of December 2016, the State had expended about \$2.2 billion, and the Federal Government had contributed about \$1.26 billion, so it is a 63 to 37 percent split instead of 50/50, and so we think that the Federal Government has some catching up to do if we could get the money.

In fact, there are three projects that were authorized way back in the 19—in the 2007 WRRDA bill, which are still incomplete, the site 1 impoundment over by Palm Beach in the Loxahatchee Wildlife Refuge, the Picayune Strand project in Collier County, and the Indian River Lagoon, or C-44, along the St. Lucie Canal. The cost to complete these three projects is \$3.3 billion, most of which is centered in the C-44 basin.

Additionally, there are four projects from the 2014 WRRDA bill which have not been completed; the C-43 West Storage Basin in LaBelle; the C-111 Spreader Canal on the east side of Miami—west side of the Miami, and what this will do is keep Miami pollution from seeping back into the Everglades from the east; the Broward County water preserve area; and the Biscayne Bay Coastal Wetlands project. You can see they are all around the lake; it is not just centered in one area. Each of these projects is essential to completing the whole mosaic of restoring the watershed and the Everglades.

The cost to complete these projects is \$1.7 billion, but the State of Florida will pay \$800 million of that to complete C-43. It is worth noting how robust and vibrant is the partnership between South Florida Water Management and the U.S. Army Corps of Engineers. It is a great example of two areas of government working very well together. In the case of C-43, there were no Federal appropriations, so the State decided to go ahead and do the whole thing, and hopefully the Federal Government can catch up on some of these other projects that would offset that.

The 2016 WRRDA bill contained several new CERP authorizations, one of which is the Central Everglades Planning Project, which is six projects for \$1.9 billion, which constructs a whole series of projects to bring 210,000-acre feet of Lake Okeechobee water down into the Everglades into storage treatment basins, and then into the water conservation areas and down into the national park.

The CERP includes several features, including backfilling of some canals that impede the flow of the water, and removing of some old levees and roads, and construction of a 15,000-acre foot Flow Equalization Basin, just west of an existing one that was recently built by the State of Florida. The one that was built by the State of Florida was taking in water of 400 parts per billion of dissolved pollutants, mostly phosphates, and turning it out at 10 or

12. So these are very effective devices, and so this is a great opportunity to expand that.

The second WRRDA authorization project is to finish the Picayune Strand. That is a 55,000-acre of drained wetlands in Collier County, which also has flood control aspects of draining several neighborhoods to the north and it is last 133 million of that.

So and lastly, in addition to these projects, the Corps is responsible for the repair and replacement of the Hoover Dike, which was built in the 1930s to prevent some of the terrible floods that happened then. And it wasn't constructed all that well. Construction back then was done differently than constructions done now, and the Corps has done the first 40 miles, and there is about two-thirds left to complete. That is \$800 million.

So basically, the Corps has supplied a high of \$120 million back in 2010, and we are down to a low of, like, \$69 million last year, so we are hoping that we can continue to demonstrate how important these projects are, and that we try to keep them moving forward to the extent that the committee can fit that into your, I know, very difficult work schedule and great demands for your money, but I appreciate your time today. Thank you very much.

[The information follows:]

Congressman Francis Rooney (FL-19)

House Appropriations Subcommittee on Energy and Water Development Testimony

The Everglades and Lake Okeechobee Watershed include 16 counties and 164 cities. It has a \$2 trillion economic impact on the state and supports 55% (\$1.3 trillion) of the real estate value in Florida. For every dollar invested in the Everglades/Okeechobee Watershed, \$4 of economic benefit are produced.

Due to a century of human development, the greater Everglades ecosystem is now less than 1/2 of its original size and Lake Okeechobee fills up 6 times faster than it can be drained, resulting in massive discharges into the adjacent rivers and coastal areas. These discharges are untreated, and impact the delicate balance of fresh water/salt water in the coastal ecosystems. The Comprehensive Everglades Restoration Plan, or CERP, seeks to restore balance to these delicate ecosystems, ultimately reducing harmful discharges to the Caloosahatchee and St. Lucie estuaries and sending clean water south to the marshes of the Everglades and Florida Bay.

CERP was created by Congress and the State of Florida in 2000. It includes 68 projects that will create (1) storage, treatment and flow of water southward into the marshes of the Everglades and Florida Bay; (2) storage and treatment of water entering Lake Okeechobee from the north; and (3) balancing of flows to control salinity levels between wet and dry years. CERP was set up to share costs between the State and the federal government 50/50. As of December 2016, the State had made expenditures of \$2.165 Billion and the federal government had contributed

\$1.26 billion – these figures translate to a 63/37 split overall. So, we have a lot of catching up to do on the federal end of the agreement.

In fact, three projects authorized by the 2007 WRRDA are still incomplete: (1) Site 1 Impoundment next to the Loxahatchee Wildlife Refuge; (2) the Picayune Strand project in Collier County; and (3) the Indian River Lagoon-South, or C-44, along the St. Lucie Canal. The cost to complete these projects \$3.3 billion, mostly in C-44.

Additionally, four projects from the 2014 WRRDA have not been completed: (1) C-43 West Storage Basin in LaBelle; (2) C-111 Spreader Canal on the east side of Everglades National Park just west of Miami – there is no reason to clean up the Everglades if pollution can creep in from the east; (3) the Broward County Water Preserve Area; and (3) the Biscayne Bay Coastal Wetlands project. Each of these projects play an essential role in the overall CERP and must be completed. The cost to complete these projects is \$1.7 billion but Florida will pay for the remaining \$800 million to complete C-43.

In 2016, the Water Infrastructure Improvements for the Nation Act, or WRRDA 2016, was signed in to law with two new CERP authorizations. The Central Everglades Planning Project (CEPP) includes 6 projects which were originally in the CERP. This critical \$1.9 billion project will construct a series of features to allow redirecting up to 210,000 acre-feet of Lake Okeechobee regulatory discharges southward for storage, treatment and delivery to the Water Conservation Areas and Everglades National Park. This project will also help to reduce damaging freshwater

releases from Lake Okeechobee to the Caloosahatchee and St. Lucie estuaries. CEPP includes several features, including backfilling of canals, removal of levees and roads that impede the flow of water south and construction of another 15,000-acre Flow Equalization Basin (FEB), A-2, just west of the A-1 FEB that was built by Florida under its restoration strategies program, successfully bringing the park in to EPA 10ppb compliance.

The second WRRDA 2016 authorization was for completion of the last \$133 million of the Picayune Strand Restoration Project at a total cost of \$626 million. This will restore over 55,000 acres of over-drained wetlands in Collier County and help to improve the quality, timing and distribution of freshwater flows to the Ten Thousand Island National Wildlife Refuge.

In addition to these important CERP projects, the Corps is also responsible for repair and reinforcement of the Herbert Hoover Dike, surrounding Lake Okeechobee. The Corps efforts to repair the Dike are essential to prevent catastrophic failure during flood periods, especially those caused by Hurricanes. This project is 100% Corps responsibility and is estimated to need \$800 million to be completed.

Table: Corps and DOI Funding for Everglades Restoration, FY2010-FY2017
(in thousands of dollars)

	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017 Proposed
DOI	79,424	70,600	99,884	66,355	70,452	62,272	64,429	63,000
<i>CERP</i>	<i>8,449</i>	<i>8,401</i>	<i>8,347</i>	<i>7,883</i>	<i>8,376</i>	<i>8,408</i>	<i>7,934</i>	<i>8,000</i>
<i>Non-CERP</i>	<i>70,975</i>	<i>62,199</i>	<i>91,537</i>	<i>58,472</i>	<i>62,076</i>	<i>53,864</i>	<i>56,495</i>	<i>55,000</i>
Corps	167,364	131,066	142,486	96,008	47,616	68,551	94,045	106,000
<i>CERP</i>	<i>119,966</i>	<i>79,860</i>	<i>57,886</i>	<i>76,212</i>	<i>38,499</i>	<i>61,001</i>	<i>69,970</i>	<i>75,000</i>
<i>Non-CERP</i>	<i>47,398</i>	<i>41,108</i>	<i>84,600</i>	<i>19,796</i>	<i>9,117</i>	<i>7,550</i>	<i>24,075</i>	<i>31,000</i>
Total	246,788	201,666	242,370	158,683	118,068	130,823	188,000	169,000

Source: Congressional Budget Justifications for the U.S. Department of the Interior and the U.S. Army Corps of Engineers, South Florida Ecosystem Restoration Crosscut Budget Report for FY2015.

Despite the authorization of new projects, Corps funding for CERP has dipped since 2010 as indicated in the chart above. The authorization of CEPP is one of the most ambitious and critical projects to date and must begin as soon as possible. I strongly urge the Committee to provide strong funding for Corps construction to support the continued work on older CERP projects and Herbert Hoover Dike. I further encourage the Committee to authorize new starts so that the Corps can begin as soon as possible on building CEPP projects.

I appreciate the Committee's time today. I continue to encourage the Committee to provide robust funding for the Corps to carry out its crucial Everglades restoration duties.

Mr. SIMPSON. Thank you. I appreciate you, Congressman Rooney. Questions?

Ms. KAPTUR. No questions. I just thank Representative Rooney for being such an articulate spokesman for the Everglades and for your region. You really fight for her. Your constituents are fortunate.

Ms. ROONEY. Thank you, ma'am.

Mr. CALVERT. Thanks for coming down. I am looking forward to entertaining you there and check it out.

Mr. SIMPSON. This committee has a lot to do with it, too. Obviously, from the Interior Subcommittee, so both the committee—the Interior Committee have a lot to do with funding the restoration of the Everglades and trying to get it back into shape, and we will be down there as soon as you get rid of those pythons.

Mr. ROONEY. We might have to get you down sooner than that, Mr. Simpson.

Mr. SIMPSON. Thank you.

Mr. ROONEY. Thank you very much.

Mr. JOYCE. Mr. Chairman.

Mr. SIMPSON. Mr. Joyce.

Mr. JOYCE. I would like to point out that I had the opportunity to go down and tour with the Everglades Foundation, and they have the same algal water problem, algal blooms, that we suffer in Lake Erie, and there are a lot of good projects that are being done, and so any way we could help Congressman Rooney along these lines would be, I am sure, deeply appreciated by the people down there.

It is hard to fathom that they push out a half trillion gallons of freshwater into the ocean every year because they can't contain it in the Everglades, and as we all know, those are nature's kidneys, so the more we can do to help them, the better off the Everglades will be.

Mr. SIMPSON. Thank you. Thank you. I appreciate you being here today, Congressman Rooney.

Congressman Comer.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. JAMES COMER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF KENTUCKY

Mr. COMER. Thank you. Chairman Simpson, Ranking Member Kaptur, thank you for the opportunity to testify regarding the fiscal year 2018 Energy and Water Development and Related Agencies Appropriations bill. I testify to urge adequate funding for two very important projects to the First District of Kentucky, the Paducah Department of Energy cleanup site, and the Kentucky Lock Addition Project.

First, I ask this committee to fully fund the Paducah Department of Energy cleanup site. As you may know, in 1959, the Paducah Gaseous Diffusion Plant opened to support this country's nuclear weapons program, and later transitioned to produce nuclear fuel for commercial power plants. Because of this work, significant

amounts of contaminated soil and groundwater remain at the site. Deactivation and cleanup work began in July 2014, and while much progress has been made, there is still much work yet to do.

Funding closer to the fiscal year 2014 level is imperative to allow the Department of Energy to accelerate the C-400 building cleanout project, which is connected to hazards associated with historic groundwater contamination.

Second, I ask this committee to adequately fund the Army Corps of Engineers' construction account to continue the work of upgrading our waterways infrastructure. The Kentucky Lock Addition Project in my district is an example of a much-needed project that would benefit from adequate funding for Corps construction.

The Kentucky Lock Addition Project was authorized in the Water Resources Development Act of 1996. This project includes design and construction of a new 110-by-1200 lock to be located landward of the existing 110-by-600 lock. Products originated—originating from or designated to 20 States pass through Kentucky Lock.

Since most of the tows are greater than 600 feet in length, they must perform a very time-consuming double lockage to transit through the existing 600-foot—600-foot long Kentucky Lock. As a result, Kentucky Lock has some of the longest average delay times of any lock in the inland waterway system, with the average delay of over 8 hours.

Recently, the Inland Waterways User Board learned that the total project cost would increase by \$380 million to \$1.2 billion due to the uncertainty of sufficient funding. Without sufficient funding, the expected completion date of 2024 will add at least 5 years.

Therefore, I respectfully request that the U.S. Army Corps of Engineers' construction account receive sufficient funding to avoid delays to completion of projects like the Kentucky Lock Addition and escalating project prices.

Thank you for the opportunity to testify today, and if anyone has any questions, I will be happy to answer them.

[The information follows:]

US Congressman James Comer (KY-01)**Testimony before the House Committee on Appropriations, Energy and Water Development Subcommittee**

Chairman Simpson and Ranking Member Kaptur, thank you for the opportunity to testify regarding the Fiscal Year 2018 Energy and Water Development and Related Agencies Appropriations bill. I testify to urge adequate funding for two very important projects to the First District of Kentucky, the Paducah Department of Energy Cleanup site and the Kentucky Lock Addition Project.

First, I ask this committee to fund fully the Paducah Department of Energy Cleanup site. As you may know, in 1952 the Paducah Gaseous Diffusion Plant opened to support this country's nuclear weapons program and later transitioned to produce nuclear fuel for commercial power plants. Because of this work, significant amounts of contaminated soil and ground water remain at the site. Deactivation and cleanup work began in July 2014 and while much progress has been made, there is still much work yet to do. Funding closer to the Fiscal Year 2014 level is imperative to allow the Department of Energy to accelerate the C-400 Building cleanout project, which is connected to hazards associated with historic ground water contamination.

Second, I ask this committee to adequately fund the Army Corps of Engineers Construction Account to continue the work of upgrading our waterways infrastructure. The Kentucky Lock Addition project, in my district, is an example of a much needed project that would benefit from adequate funding for Corps Construction. The Kentucky Lock Addition project was authorized in the Water Resources Development Act of 1996. The project includes design and construction of a new 110'x 1200' lock to be located landward of the existing 110'x 600' lock. Products originating from or designated to 20 states pass through Kentucky Lock. Since most of the tows are greater than 600' in length, they must perform a time-consuming

double lockage to transit through the existing 600' long Kentucky Lock. As a result, Kentucky Lock has some of the longest average delay times of any lock in the inland waterway system – with the average delay of over 8 hours.

Recently, the Inland Waterways User Board learned that the total project cost would increase by over \$380 million to \$1.2 billion due to the uncertainty of sufficient funding. Without sufficient funding, the expected completion date of 2024 will add at least 5 years. Therefore, I respectfully request that the U.S. Army Corps of Engineers Construction account receive sufficient funding to avoid delays to completion of projects like the Kentucky Lock Addition and escalating project prices.

Thank you for the opportunity to testify today.

Mr. SIMPSON. Thank you for being here today and testifying on these programs.

Are there any questions? Mr. Newhouse.

Mr. NEWHOUSE. Thank you, Mr. Chairman. I just wanted to say that I appreciate Mr. Comer's bringing to our attention the nuclear waste issues that you have in your district. I can certainly relate to the challenges and the importance of nuclear waste cleanup. We have a similar situation in my own district, and I just wanted to thank you for pointing that out, and also talking about the urgency of getting that kind of work done.

Mr. COMER. Thank you.

Mr. NEWHOUSE. Thank you, Mr. Chairman.

Mr. SIMPSON. Any further questions? Hearing none, thank you for being here today. We appreciate it very much.

Mr. COMER. Thank you for your hard work.

Mr. SIMPSON. We are waiting for our next witnesses that—we have some breaks in the schedule as people decided not to testify, originally signed up and a few things like that, so we are kind of waiting for the next ones to show up here, but let me just take a moment to welcome the three new members that are here to our subcommittee. Congressman Newhouse from Washington, Congressman Joyce, and Congressman Aguilar, thank you for being here today, and you will find this is an interesting committee when we get into a lot of these different subjects and stuff that a lot of people don't know a lot about, so—

Mr. NEWHOUSE. Thank you.

Mr. JOYCE. Thank you.

Mr. SIMPSON. If nothing else, we will take a brief pause—

Mr. CALVERT. Have a donut.

Mr. SIMPSON. Have a donut—for the others to show up.

[Recess.]

Mr. SIMPSON. Okay. The committee will be back in order. We now welcome to—we are now happy to welcome Mr. Panetta from California to testify before the committee. The floor is yours for 5 minutes.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. JIMMY PANETTA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. PANETTA. Great. Thank you, Mr. Chairman. I appreciate that, Ranking Member Kaptur, other members of the committee. Thank you very much for this opportunity. I appreciate it. It is an honor to be here, as always.

As many of you know or may not know, my family, I represent California's 20th Congressional District on the central coast. My family has deep roots in that area. My grandfather, an Italian immigrant, came to that area, my father was raised in that area, I was raised in that area, and now it is where my wife and I raise our two daughters. I am proud of that area not only because it is my home, but because I feel it has the most beautiful environment as well as the most bountiful agriculture.

With both those traits, as you can imagine, we are constantly trying to find a balance, environmentally, economically, obviously politically, and with both those qualities, though, we are also trying to find effective water infrastructure, which is critical to that area. It ensures the environmental protection and it—which facilitates the economic activity of that area.

And so today, I want to bring to your attention an ongoing Army Corps of Engineering project that does threaten the safety of the residents of a certain area in my district and the viability of the agricultural businesses of that same area. It is the Pajaro River Project. That consists of a series of levees built to protect the cities of Watsonville and Pajaro from flooding. Originally, these towns were settled by a large Croatian, Japanese, and Italian immigrant communities who came there to work the land, and yes, like my grandfather, to live the American dream.

Today, immigrants, mainly of Latino descent, continue to come to this area, work in the fields, and yes, contribute to our community. The Pajaro River Project was originally constructed in 1949 to protect the people of those communities. However, the Corps and the community have recognized that that project's flood protection has been inadequate. Watsonville only has a 25-year flood protection, and the town of Pajaro only has a 7-year protection.

The levees have received a patchwork of repairs over the years, but that does not address the necessary flood protection, nor does it safeguard the citizens from harm, and even the Corps has estimated that there is an 82 percent threat of flood in the next decade.

One of the most glaring examples of this type of threat was in 1995, where there was a large flood that dramatically impacted the locals in that area. It resulted in over \$95 million in damage to the surrounding communities, and hundreds of people were displaced as a result of it.

One local who was personally impacted by that flood was a rose grower named Eugene Tsugi, T-s-u-g-i. His business, 2G Roses, was inundated with floodwaters. His home, as well as his sister's home, were damaged by floodwater. In fact, the damages that he sustained were well over \$1 million. He used to joke that his son, who was born 2 days after the flood, would go to college before the levees in that area were repaired.

Well, unfortunately, due to a lack of action by the Army Corps of Engineers, that prediction was true. His son today is now an All American gymnast and a junior at the University of Washington near Seattle.

In 2015, the Pajaro Project was incorporated into the Corps 3 years SMART planning timeline, with a deadline of March 2018 for the completion of a feasibility study, and environmental impact statement. The Corps has failed to keep the project on schedule. Though the locals have fronted 3.2 million to date to keep the project moving, the project is still an estimated 18 months behind schedule. It is an ongoing threat to the community. In the last 8 months, the community has spent 1.5 million on emergency damage response.

The local non-Federal sponsors would like to keep this project moving, but they feel the Corps are not responsive, and it con-

tinues to be a threat to the safety of its local residents. Although last month, I met with Major General Jackson from the Army Corps to discuss the delays associated with this project, I found him to be very responsive. In fact, he is going to be traveling to the district to witness the project firsthand, and I hope that he sees the communities affected by the flooding, and he gets to hear from individuals who have suffered the damages from flooding, either to the property, and especially the agricultural businesses.

So today, I ask the committee for continued funding for these water projects. It is an investment in these projects that are critical for the communities who rely on them for safety and economic prosperity. When making these investments, we should ensure that we are holding the Corps accountable to their own timelines. I urge the inclusion of report language requiring the Corps to provide an update on the current status and timeline moving forward of all projects subject to the 3-year SMART planning criteria within 90 days of the passage of this act. This would allow for increased oversight for the committee, while also increasing the accountability to local non-Federal sponsors.

To ensure that the value of agriculture land is appropriately calculated when conducting cost-benefit analysis, more work is needed. Agricultural land in the Pajaro Valley is some of the most valuable in the county. When flooding, these farms often miss multiple growing seasons as they address environmental and flood safety concerns.

I have heard from locals that they believe that their agricultural land has been undervalued because the only value of the physical crop damage was accounted for. I also urge the inclusion of report language directing the Corps to incorporate the full economic value of agricultural land when completing its cost-benefit analysis.

This would make projects in rural communities more competitive for adoption into the Corps work plan by more accurately valuing the economic impact of agricultural production.

I thank you for your time. I look forward to working with you to advance the health, safety, and economic liability of our rural communities depending on these investments and our water infrastructure. Thank you.

[The information follows:]

JIMMY PANETTA
20th District, California

COMMITTEE ON
AGRICULTURE

COMMITTEE ON
NATURAL RESOURCES

Congress of the United States
House of Representatives
Washington, DC 20515-0520

228 CANNON HOUSE OFFICE
BUILDING
WASHINGTON, DC 20515
(202) 725-2861

100 WEST ALISAL
SALINAS, CA 92001
(831) 424-2229

701 OCEAN STREET
ROOM 318
SANTA CRUZ, CA 95060
(831) 426-1916

Testimony before the House Appropriations

Subcommittee on Energy and Water Development, and Related Agencies

Honorable Jimmy Panetta, CA-20

March 8, 2017

Though I am a newly elected member to the House of Representatives, I fully respect the responsibility faced by the Appropriations Committee and its critical role in the functioning of the United States government. My home on the central coast of California represents the confluence of pristine coastline and bountiful agricultural land down the Salinas Valley. In both cases, the importance of effective water infrastructure cannot be underscored enough. These resources help facilitate billions of dollars of economic activity every year.

Unfortunately, there is an ongoing water project in my district that threatens the health and safety of my constituents, as well as the overall economic viability of agricultural land, in the communities of Pajaro and Watsonville. Specifically, the Pajaro River has been a concern to many in this area for decades due an aging levee system and ongoing flooding. I am here today to highlight challenges faced by my constituents in the completion of this Army Corps of Engineers (the Corps) project and to advocate for its expeditious adoption into the Corps' work plan due to its potential impacts on health, safety, and economic prosperity.

The Corps, recognizing the damaging effects of floods to these communities, first constructed a system of levees for the Pajaro River in 1949 to help mitigate floodwaters. By

1963, the Corps determined these levees to be inadequate for the communities' original needs since they provided no more than 25-year protection to the city of Watsonville and 7-year protection to Pajaro. These concerns were realized in 1995 when a flood caused upwards of \$95 million in damages and displaced hundreds of local residents. Smaller flooding events have also occurred resulting in a patchwork series of repairs, and the Corps has estimated that there is an 82% threat of flooding in the next 10 years.

The nonfederal local partners are dedicated to finding a solution to this impending, and worsening, threat. By working with the Corps' San Francisco office, they have provided the necessary funds and required information for the completion of a feasibility study and environmental impact statement under the Corps' three-year SMART planning timeline. They have even offered to pay additional funds up front to ensure the feasibility study is completed by the mandated date of March 2018. Throughout this process, delays and uncertainty from the Corps have pushed the project back an estimated 18 months behind schedule even though they have provided over \$3.2 million to keep the project moving. Within the last 8 months alone, Santa Cruz County and Monterey County has expended approximately \$1.5 million in emergency response for damaged caused by flooding.

Additionally, the results of the initial feasibility study do not reflect the true costs of flooding the high-value agriculture land of the Central Coast. When flooded, these plots of land are often out of production for multiple growing seasons as producers work to address food safety and environmental concerns. This is particularly true with organic producers given the strict production restrictions with which they must comply. Original estimates by the Corps only consider the crops that were damaged, failing to take into account the additional costs incurred

by producers. Farmland in the Pajaro Valley is some of the most productive in the country, totaling upwards of \$750 million each year of economic value.

Last month, I had the pleasure of meeting with Major General Jackson from the Corps to discuss this project and to raise these concerns. I was pleased that Major General Jackson expressed an interest in better understanding the delays with this project, and he is planning to visit the project later this month to see the infrastructure concerns firsthand. On this trip, I hope that Major General Jackson can see the current state of these levees, the resulting damage caused by their inadequacies, and speak to agricultural producers on the ground to gain a better understanding of how their operations are impacted by these flood damages.

In continuing with this positive trend, I strongly advocate for continued funding support for these water infrastructure projects. I urge the Committee to include report language requiring the Corps to provide the status and timeline for all projects currently subject to the three-year SMART planning criteria within 90 days of enactment of the Act. Doing so would allow for better fiscal oversight of the Corps' construction projects, while also increasing the level of accountability of the Corps to nonfederal sponsors who have financially supported Corps projects.

Additionally, I urge the inclusion of report language that requires the Corp to consider the full economic value of agricultural lands that are affected by floodwaters when conducting cost-benefit analyses. Currently, agricultural land is often undervalued since the Corps focuses primarily on the physical crops in the field at the time of the flooding, and does not consider future crop losses. Moreover, the cost of agriculture land per acre varies widely from state to state. Capturing these two economic indicators would provide an accurate representation of the

full impact of flooding and make rural projects more competitive when being integrated into the Corps' work plan.

I would like to thank my colleagues for taking time to discuss an issue of such importance to these communities in my district. I urge your support, and I look forward to working with you all to advance the health, safety, and economic viability of our local rural communities through strengthened water infrastructure.

Mr. SIMPSON. Thank you, Congressman. I appreciate you being here today and bringing us up to speed on what is happening in your area per your request.

Are there any questions?

Mr. AGUILAR. Congressman, what crops are at risk directly? What is the kind of the primary—I know there is a lot, a lot there, but can you give us a bit of flavor?

Mr. PANETTA. Of course. Look, in that area, it is the salad bowl of the world, as you know, Pete. It is an area that has, you name it, we got it. Strawberries are the main crop in that area, brussel sprouts, raspberries, artichokes, leafy greens, spinach, you know, I can go on and on. There is over—that area has over 100 crops. More crops on the central coast are grown than any other single State. These are areas that basically feed the Nation. It puts these types of crops onto the shelves of our stores, and eventually onto the tables that our families—so our families can eat it.

Mr. AGUILAR. Thank you

Mr. SIMPSON. You had me till you said brussel sprouts. Ken and I argue about the value of brussel sprouts all the time. If there are no other questions, thank you for being here today. We appreciate it appearing before the committee.

Mr. NEWHOUSE. Mr. Chairman, I just wanted to say that Mr. Calvert, I am sure, would lead a trip. This is a very terrible place in the world to visit at any given point.

Mr. SIMPSON. I understand it is fairly ugly, too.

Mr. AGUILAR. Yes, so it might deserve some more thought.

Mr. NEWHOUSE. Mr. Chairman, just one short question.

Mr. SIMPSON. Mr. Newhouse.

Mr. NEWHOUSE. I appreciate that. Thank you. First of all, I wanted to compliment your constituents' excellent choice of looking north for quality education, but in light—and thank you for your effort to preserve valuable farmland in the State of California. In light of all the precipitation that we have gotten in the West Coast this year, is that exacerbating the problem as far as the flood concerns are right there in that area?

Mr. PANETTA. You know, the obvious answer is yes, there is no doubt about that. But it is funny, during last year, you know, I went to a meeting where hundreds of community members showed up before the rains, and it has been an ongoing issue with them. So it is not just the rains that have highlighted this issue. This is something that if you live in that area, if you work in that area, if you do agriculture in this area, you know the risk that it can pose to that area.

And so, yes, it is obviously highlighted. They had to put \$1.5 million in damage repair because of the flooding that we experienced, but this is going to keep on going and going if it is not fixed any time soon.

Mr. NEWHOUSE. Thank you, Mr. Chairman.

Mr. SIMPSON. I will say this, Congressman Farr, your predecessor, approached me even a couple of years ago about this while it was not all these heavy rains and everything was not the issue. It was that there was no water at the time, but he still recognized the problem that we had there, so thank you for carrying on on that.

Mr. PANETTA. You bet. Thank you. Thank you to the committee.

Mr. SIMPSON. Thank you for being here.

Mr. PANETTA. Thank you, Mr. Chairman.

Mr. SIMPSON. Mr. Mast, Congressman Mast, good to have you here today.

Mr. MAST. Good to be here, sir.

Mr. SIMPSON. The floor is yours for 5 minutes to testify on what you would like to see this committee do.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. BRIAN J. MAST, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. MAST. I appreciate it, sir. Chairman, Ranking Member Kaptur, the rest of you members here, I appreciate you letting me address you. I am here to advocate on behalf of robust funding to for the U.S. Army Corps of Engineers, basically to advance and expand their river and harbor maintenance, flood and storm damage reduction, shore protection, and environmental restoration missions.

In my Florida congressional district, which spans St. Lucie, Martin, and Palm Beach Counties, the most pressing issue that folks face really, there are harmful and unnatural massive discharges, sometimes up to 7 million gallons of freshwater per minute that are directed by the Corps of Engineers out of Lake Okeechobee and into the heart of our coastal saltwater community. These discharges, they are imposed by the Federal Government, and they turn the St. Lucie River and our Nation's—really the Nation's most species-diverse saltwater estuary, the Indian River Lagoon, into an algae-infested toxic waterway that surrounds hundreds of thousands of residents, and the resulting algal blooms, they kill beloved wildlife, like manatees and dolphins.

These toxins that are released by the algal blooms, they hurt people through air and water, children can't go swimming or play near the water, the elderly residents must stay, you know, really inside of their homes if they live near the toxic air. These blooms also destroy our economy, because you can't sell a house that sits on top of toxic water. Nobody wants to go on vacation near toxic water. Nobody wants to go boating or fishing or anything like that in a giant stew of algae.

As a result, local and small businesses, our bars, our shops, our restaurants, paddle board companies, outdoor recreation stores, gas stations, fishing charters, they are all suffering. After fouling our community, the discharged water is simply lost out to sea. It is wasted, when it really could have been put to important use had it not been discharged in the first place.

Every time the Federal Government imposes these discharges, it means that hundreds of millions of gallons of water are less for drought reduction, hundreds of millions of gallons less for Everglades in Florida Bay, hundreds of millions of gallons less to replenish our Florida aquifers, the drinking water source for 8 million south Floridians.

I can tell you these people in the Treasure Coastal of Florida, they understand the critical need for flood protection in the area and other communities surrounding ours, those south of Lake Okeechobee that prompt these discharges. However, my constituents back home, they just can't accept that despite a scientifically sound and decades'-old action plan, the State of Florida is fulfilling its financial responsibilities; the Federal attention and resources don't seem to respond to our water woes in the same way, regardless of how large the problem grows at either end of the Everglades ecosystem.

The lack of responsiveness from Federal Government on Everglades restoration, it stems from one of three different places, different processes, all that feed into one another: project administration, project authorization, and project appropriations, and really delays in any one process. They impose further delays on the other processes, and when you are talking about more than 60 individual comprehensive Everglades ecosystem restoration plan projects, it can really add up in the end.

So administratively, the Army Corps of Engineers is reluctant to marry their flood control mission with their Lake Okeechobee and ecological restoration mission in the Everglades, but coordinating these missions is the key to ensuring that more water is directed towards Everglades National Park, and away from coastal communities like my own.

As vice chair of the Water Resources and Environment Subcommittee, you can count on it being my priority to pass Water Resources Development Act that includes more CERP project authorizations, and from an appropriations standpoint, I can tell you there is more funding is needed to allow the Corps of Engineers to quicken the pace of rehabilitation of Herbert Hoover Dike around Lake Okeechobee. You know, just my ask to you all, let's get this done. Let's get it off the books, and let's get Florida's water system repaired.

More funding is needed to accelerate the construction of these already authorized CERP projects, the Indian River Lagoon-South, the Central Everglades Project, among others. There is a number of CERP projects that are still awaiting authorization in part, because funding and legal limitations on the Corps of Engineers with respect to investigations and studies.

I would respectfully ask that the subcommittee consider increasing the appropriations for the Army Corps investigations and to raise the cap on the number of study starts for environmental restoration projects the Secretary of the Army can green light in each fiscal year. One a year simply isn't sufficient.

And, finally, I would like to welcome the Chairman, the Ranking Member, every member of this subcommittee down to the Treasure Coast to witness firsthand the devastating impacts that we see around Lake Okeechobee discharges and the harmful algal blooms.

I thank you all for your time and your important efforts to craft an Energy and Water Development Appropriations bill that reflects the concerns and the priorities of the American people. Thank you.

[The information follows:]

Rep. Mast (FL-18) Planned Remarks

Oral Testimony before the Energy and Water Development Appropriations Subcommittee
Wednesday, March 8, 2017

Chairman Simpson, Ranking Member Kaptur, and members of the Subcommittee on Energy and Water Development, I'm here to advocate on behalf of robust funding for the U.S. Army Corps of Engineers to advance and expand their river and harbor maintenance, flood and storm damage reduction, shore protection, and environmental restoration missions.

In my Florida Congressional District which spans St. Lucie, Martin, and Palm Beach Counties, the most pressing issue for folks is the harmful and unnatural, massive discharges – sometimes up to 7 million gallons of freshwater per minute – directed by the U.S. Army Corps of Engineers out of Lake Okeechobee into the heart of our coastal community.

These discharges, imposed by the federal government, turn the St. Lucie River and our nation's most species-diverse saltwater estuary – the Indian River Lagoon – into an algae-infested toxic waterway that surrounds hundreds of thousands of residents.

The resulting algal blooms kill beloved wildlife like manatees and dolphins.

The toxins released by the algae hurt people through the water and air – children can't go swimming or play near the water, and elderly residents must stay locked in their homes.

These blooms also destroy our economy because you can't sell a house that sits next to toxic water, and no one wants to vacation near, or boat or fish on, a giant stew of algae.

As a result, local small businesses – our bars, shops, and restaurants, paddleboard and outdoor recreation stores, gas stations, and fishing charters – all suffer too.

And after fouling our community, the Lake water is simply lost out to sea – wasted – when it could have been put to important use had it never been discharged in the first place.

Every time the federal government imposes these discharges it means hundreds of millions of gallons of water less for future drought reduction, hundreds of millions of gallons less for agriculture, hundreds of millions of gallons less for aquifer replenishment for the sole drinking water source of 8 million South Floridians, and hundreds of millions of gallons less for the Everglades and Florida Bay, and the plants and animals that live there.

People in the Treasure Coast of Florida understand the critical need for flood protection for other communities south of Lake Okeechobee that prompt these discharges.

However, what my constituents back home will not accept is that despite a scientifically-sound, decades-old action plan and the State of Florida fulfilling its financial responsibilities, federal attention and resources don't seem to respond to our water woes regardless of how large the problem grows at either end of the Everglades ecosystem.

The lack of responsiveness from the federal government on Everglades restoration stems from one of three different processes that all feed into one another: project administration, project authorization, and project appropriations.

Delays in any one process impose further delays on the other processes, and over the course of more than 60 individual Comprehensive Ecosystem Restoration Plan projects, believe me, it really adds up!

Administratively, the Army Corps is reluctant to marry their flood control mission at Lake Okeechobee with their ecological restoration mission in the Everglades, but coordinating these missions is key to ensuring that more water is directed to Everglades National Park and away from lakeside and coastal communities.

As Vice Chair of the Water Resources and Environment Subcommittee my priority will be to pass a Water Resources Development Act that includes more CERP project authorizations.

And from an appropriations standpoint, more funding is needed to allow the Corps to quicken the pace of the rehabilitation of the Herbert Hoover Dike around Lake Okeechobee.

Let's fund this, get it off the books, and get Florida repaired!

More funding is also needed to accelerate the construction of already-authorized CERP projects including Indian River Lagoon- South, and the Central Everglades Project, among others.

There are also a number of CERP projects that are still awaiting authorization, in part, because of funding and legal limitations on the Army Corps with respect to study investigations.

I would respectfully ask the Subcommittee to consider increasing the appropriations for Army Corps investigations, and to raise the cap on the number of study starts for environmental restoration projects the Secretary of the Army can greenlight each Fiscal Year – one is simply insufficient.

Finally, I'd like to welcome the Chairman, Ranking Member, and any of you, down to the Treasure Coast to witness firsthand the devastating impacts Lake Okeechobee discharges and harmful algal blooms have on Florida.

Thank you all again for your time and for your important efforts to craft an Energy and Water Development appropriations bill that reflects the concerns and priorities of the American people.

Mr. SIMPSON. Thank you. Other questions?

Mr. MAST. Yes, ma'am.

Mr. SIMPSON. Ms. Kaptur.

Ms. KAPTUR. Thank you, Mr. Chairman. Representative Mast, thank you so much for being here this morning. I wanted to ask you, you are in a really important position as vice chair of WRRDA, of the Water Resources and Environment Subcommittee and Transportation and Infrastructure. Your statement in the testimony, reluctant—"Army Corps is reluctant to marry their flood control mission at Lake Okeechobee with their ecological restoration mission in the Everglades," and you specifically mention algal blooms, which is a gigantic problem in the lake that I represent, Lake Erie in the north.

I am interested in that dysfunction. Why do you think that happens? It is really important that you recognize that in your testimony, reluctant to marry their flood control mission with their ecological restoration mission? Is there something wrong with the authorizing legislation?

Mr. MAST. Well, you know, when we look at the flood control mission, they are taking water that naturally flows south towards the Florida Bay, and instead, they are sending it out the East Coast and the West Coast of Florida in a very unnatural way, and that is in the aim of flood protection, but at the same time, that water is, quite literally, needed in the Florida Everglades. The Florida Everglades are dry, they are drying up. They don't have the water that they need.

So at one point we are sending freshwater in directions where it is not naturally meant to go. The coastal estuaries are, by nature, saltwater, and we are releasing freshwater into them. So by nature, it is harmful, before you even talk about the added nutrients that are in the water, and that is water that is actually needed for ecosystem restoration further south, which is where we want to see it head to and where all of these existing projects, should they be brought to completion, they will work towards moving that water south.

And so unfortunately, when it is not prioritized in that way, we end up causing damage to both ecosystems when sending water in one direction would really help both ecosystems.

Ms. KAPTUR. Were they badly designed in the beginning?

Mr. MAST. When you talk about "badly designed in the beginning," we are talking about going back, you know, 100-plus years to when Lake Okeechobee was dammed up to begin with because it did used to naturally flow down to the Florida Bay, so we are talking about a very, very old problem.

But in that, yes. It is badly designed in that these projects are not being allowed to come to completion. The point that I make to people is this often, when you are talking about the design of this. The Hoover Dam, not the Herbert Hoover Dike, that was the Nation's biggest infrastructure project. That was built in 5 years. This project is literally taking decades. And when you consider how much smaller it is, that is something that should trouble every one of us, especially when you are talking about doing that kind of damage to both ecosystems.

We have to prioritize, you know, these projects, get them done, you know, in orders, you know, in the order that they give, so that we can see one after another after another come to completion, and end up not harming both ecosystems in the end.

Ms. KAPTUR. And could you describe the source of the algal blooms?

Mr. MAST. Yes.

Ms. KAPTUR. The nutrients?

Mr. MAST. Yes, ma'am. So during, primarily, the summer months, when there is an excess of rain that fills up the Florida watersheds, as we know, most water flows south, so when you get water north of Lake Okeechobee coming in on the Kissimmee River, which is also an issue. It was straightened by the Corps of Engineers. It used to run like a snake, but it was straightened out, so now the lake fills up something about six times faster than what it was originally designed to fill up at. That is what causes this need for releasing the water to the east and the west, because it can't get that water out of there quick enough. So you know, when we get those summer rains and it fills up that much, and there is added heat and that freshwater comes out into our coastal estuaries, that is how we get those algal blooms combined with the additional nutrients that are in this water to which I would make this point:

For the Florida Everglades largely inhabited by snakes, turtles, alligators, and fowl, waterfowl, there are water standards for 10 parts per billion of phosphorous that can go down into the Florida Everglades. For the water that goes out to the East Coast and the West Coast of Florida where there are hundreds of thousands of residents, there are no water quality standards. Now, that is a State issue, but that is something that should be very troubling.

Ms. KAPTUR. Does agriculture contribute to the nutrients loading?

Mr. MAST. Without question. When you have agriculture in and around, you know, any area that feeds into the watershed, absolutely, anything that goes onto those agriculture products are going to feed into that watershed.

Ms. KAPTUR. Not knowing your area, is it animal agriculture, or is it vegetables or fruits?

Mr. MAST. So there is a plethora of agriculture. As I said, you have a watershed that feeds from, you know, hundreds of miles north, from 100 miles north, you know near the Kissimmee River, that feeds in, all the agriculture surrounding that feeds into Lake Okeechobee, all of the agriculture fields, there is an entire area surrounding Lake Okeechobee called the Everglades Agricultural Area. It is all farming, and all of those areas and what is put on those crops, absolutely, that plays a role into what is going into Lake Okeechobee, and what is spilling out into the coastal estuaries.

Ms. KAPTUR. I thank the gentleman. I thank the chairman for your indulgence because Congressman Joyce and I share a very serious issue in Lake Erie, shallows to the Great Lakes that is moving toward death right now as we sit here, and it drains the largest watershed in the Great Lakes region, and all the instrumentalities we have have not put us on pathway to really solve that problem

fast enough. And, so, I look at your area and I am listening and I am saying, huh, there is some similarities here in this 21st century.

We have to look at these watersheds, and we have to have a different way of approaching them more quickly, and we don't have that mechanism yet that some of our prior witnesses talked about the State government having responsibility for certain projects, working with the Federal Government, and the Federal Government doesn't fund its share, but this is—this is a 21st century problem, and we don't have the proper structure to move quickly enough. So I appreciate your testimony, and I appreciate the Chair's indulgence.

Mr. MAST. Can I give you one other point on that?

Ms. KAPTUR.— Yes.

Mr. MAST. Just on your point just now. You know, when you look at ERDC, energy—rather, Engineering, Resource, and Development where they basically do all the testing for projects surrounding the Corps of Engineers, they don't have, you know, the robust resources to go out there and pursue research into ways to fix your algal blooms, my algal blooms, those that go on down into Louisiana at the massive level that we see them.

When we are talking about cleaning a fish tank, yeah, that is something that we can do, but when we are talking about a rate at 7 million gallons a minute, or whatever it is that you may experience up there, or whatever it is that they experience down, you know, along the Mississippi and other places, I think this would be a great place as well to put research in, being that it is affecting so many different areas.

Ms. KAPTUR. Your statement, that is what I was interested in, "reluctant to marry their flood control mission with their ecological restoration mission." That is a very insightful contribution to thinking about this. In our area, we have the problem that stretches over three States and another—a part of another nation, and so we can't get our arms around it, and yet, we know it is happening and we are not responding quickly enough, so thank you. Thank you, Mr. Chairman

Mr. SIMPSON. Thank you. Thank you for being here today. We appreciate it.

Mr. JOYCE. Mr. Chairman.

Mr. SIMPSON. Mr. Joyce.

Mr. JOYCE. When you talk about Lake Okeechobee, the diversion of the water east and west, is that because of the potential failure of the dike?

Mr. MAST. That is exactly correct, sir. So you have—after Hurricane Katrina, the Corps of Engineers went around and assessed dikes around the country. The dike around Lake Okeechobee was determined to be one of the worst dikes existing around the country, and so that is where they determined—based on there is a lower schedule, Lake Okeechobee regulation schedule that determines the height at which you can keep the lake. They decided they had to keep it a lower level, and that is where they, you know, really, in a massive scale, started distributing water out the East Coast and the West Coast of Florida in a very unnatural way.

Like I said, freshwater, and we all know what a commodity freshwater is in many parts of this country, going out, simply lost into saltwater estuaries where it is very damaging.

Mr. JOYCE. I am one to believe that is our version of oil, freshwater, potable water supply, and the idea that you are sending it out east and west. The other problem would be if it is—if I heard you correctly, that this is a collection, if you will, of agricultural discharge, so therefore, the lake must be loaded with phosphates?

Mr. MAST. That is exactly correct, and that is where, you know, I brought about the point as well where you talk about there is a requirement for the level of phosphorous that goes down to the Florida Everglades where there is, you know, largely wildlife habitat, but there is not a requirement for a standard that go out towards where people are boating, fishing, skiing, playing, jumping in the water out of their backyards, you know, where the bulk of the population is, and that is very troubling to me.

Mr. JOYCE. You also mentioned that there have been some issues with this dike. If the dike should go, all that would be then set loose into the Everglades and the damage would be permanent?

Mr. MAST. Should the dike fail, there is also population south of Lake Okeechobee, and that is where people recognize the need for flood control. Nobody is advocating that we not take into consideration the lives that are south of that dike in Lake Okeechobee because if that were to fail, there would be a massive loss of life, and nobody should overlook that, but that is also where it would be very beneficial.

One of the things that is not being looked at right now is that lower schedule, that Lake Okeechobee regulation schedule, it is one of the most important things that could be looked at because as every one of those 60-plus projects of Everglades restoration in Lake Okeechobee, dike restoration come online, the Corps of Engineers should be assessing can they take the Lake Okeechobee level an inch or 6 inches or a foot higher, because when you are talking about the hundreds of miles of breadth of Lake Okeechobee, every inch, or every foot that you can add to that lake is billions, and sometimes hundreds of billions of gallons of water that you no longer have to release into unnatural areas, and this is another place where the Corps could really work, but we are not seeing a pathway for them to adjust that with every instance of them making an improvement to the area.

They are, instead, looking to wait for about 8 years down the line and just do one adjustment then, and this is that mechanism where you specifically talked about marrying flood control and marrying ecosystem restoration. That is—that is, in my opinion, one of the biggest things that can be done to marry flood control and ecosystem restoration is every time you get something online, look at that regulation schedule and say we can take this many gallons offline going out the East and the West Coast of Florida where it is causing damage.

Mr. JOYCE. Great. Thank you, Mr. Chairman.

Mr. MAST. Yes, sir.

Mr. SIMPSON. Thank you, Mr. Mast. I appreciate you being here today and informing the committee on the issues.

Mr. MAST. Thank you.

Mr. SIMPSON. Mr. Gosar.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. PAUL A. GOSAR, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARIZONA

Mr. GOSAR. Chairman. Well, thank you very much, Chairman Simpson and Ranking Member Kaptur, for the opportunity to testify before the subcommittee. I am Congressman Paul Gosar, and I represent Arizona's Fourth Congressional District. I am also the chairman of the Congressional Western Caucus, the chairman of the House Committee on Natural Resources Subcommittee on Energy and Mineral Resources, and vice chairman of the House Committee on Oversight and Government Reform Subcommittee on the Interior.

Critical programs and oversight activities addressed—

Mr. SIMPSON. Paul, could you turn on your mic?

Mr. GOSAR. Critical programs and oversight activities addressed by the Energy and Water Development and Related Agencies bill fall under the purview as well. I would like to take an opportunity to discuss several of these today.

Last fiscal year's subcommittee bill contained a rider prohibiting any changes to Federal jurisdiction under the Clean Water Act, effectively preventing funds from being spent to implement Waters of the United States, or WOTUS, that rule put forth in 2015 by the U.S. Army Corps of Engineers and the Environmental Protection Agency. The WOTUS rule attempted to assert Clean Water Act jurisdictions over nearly all areas with even the slightest of connections to water resources, including manmade conveyances.

Farmers, ranchers, job creators, and private property owners would suffer under this overreaching water grab. WOTUS contradicts numerous prior Supreme Court decisions and seeks to expand agency control over 60 percent of our country's streams and millions of acres of wetlands that were previously nonjurisdictional.

WOTUS was slated to go into effect August 28 of 2015, and fortunately, the Sixth Circuit issued a nationwide stay that has temporarily blocked implementation of this new rule. Even more promising, just last week, President Trump signed an executive order requiring the EPA and the Corps to rescind and revise any aspects of WOTUS inconsistent with Federal law. This was great news, and I was honored to join the President in the Oval Office for that signing.

While I have great confidence in President Trump and Administrator Pruitt, the review required by the order will take some time and there could be subsequent legal proceedings. Accordingly, Congress must, once again, take a clear position against WOTUS and retain the important provision prohibiting the expansion of the Clean Water Act in this fiscal year's bill.

Another important rider from last year's bill that must be maintained defunds the Obama administration's social cost of carbon models. These flawed metrics can be easily manipulated in order to attempt to justify new job-killing regulations.

For instance, the Obama administration attempted to justify the EPA's methane rule utilizing the social cost of carbon, stating that the rule would supposedly yield climate benefits of \$690 million in 2025. Those speculative benefits, that can be easily manipulated, supposedly outweigh the \$530 million the rule is expected to cost businesses and job creators in 2025 alone.

The House has passed at least 11 different amendments rejecting the social cost of carbon in the last two Congresses alone. We must block these flood models once again in this year's bill.

Now, section 507 of the bill last year, last fiscal year, contained a provision prohibiting the removal of any Federally owned or operated dams in fiscal year 2017. I thank the subcommittee for including this important provision, and, once again, ask that it be retained.

In recent years, extremist environmental groups have increased efforts to dismantle and remove Federal dams. These efforts defy common sense, particularly at a time of major water challenges across the west, and with an increasing need for clean hydropower. Electricity generated from the Corps and reclamation dams—operated dams, is utilized by millions of Americans every day. Many of these dams are essential components for flood control, strategic water storage, and live sustaining irrigation for millions of acres of American agriculture. Tens of millions of Americans rely on these dams to supply their drinking water and support their livelihoods.

The vital water energy, economic, and ecological benefits provided by the Federally owned and operated dams must be protected. I, once again, ask the subcommittee to retain the important provision prohibiting the removal of any Federally owned and operated dams in fiscal year 2018.

Finally, I would like to ask that the subcommittee continue to provide important resources for the Corps of Engineers' construction and investigations budgets. These accounts ensure the timely development of critical water and infrastructure projects that provide benefits for communities throughout the Nation. We must continue to provide adequate resources for the important projects funded by these accounts.

I appreciate the opportunity to testify today. The Western Caucus looks forward to coordinating closely with all of you in the future, and thank you, Chairman Simpson. With that, I yield back.

[The information follows:]

Statement of Congressman Paul A. Gosar, D.D.S (AZ-04)
Appropriations Subcommittee on Energy and Water Development, and
Related Agencies
Members' Day Hearing
March 8, 2017

Thank you Chairman Simpson and Ranking Member Kaptur for the opportunity to testify before the Subcommittee. I'm Congressman Paul Gosar and I represent Arizona's Fourth Congressional District. I am also Chairman of the Congressional Western Caucus, Chairman of the House Committee on Natural Resources Subcommittee on Energy and Mineral Resources, and Vice-Chairman of the House Committee on Oversight and Government Reform Subcommittee on the Interior. Critical programs and oversight activities addressed by the Energy and Water Development, and Related Agencies bill fall under my purview as a result. I would like to take this opportunity to discuss several of those here today.

Last fiscal year's subcommittee bill contained a rider prohibiting any changes to federal jurisdiction under the Clean Water Act, effectively preventing funds from being spent to implement the Waters of the United States (WOTUS) Rule put forth in 2015 by the U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA). The WOTUS rule attempted to assert Clean Water Act jurisdiction over nearly all areas with even the slightest of connections to water resources, including man-made conveyances. Farmers, ranchers, job creators and private property owners would suffer under this overreaching water grab. WOTUS contradicts prior Supreme Court decisions and seeks to expand agency control over 60% of our country's streams and millions of acres of wetlands that were previously non-jurisdictional.

WOTUS was slated to go into effect August 28, 2015. Fortunately, the Sixth Circuit issued a nationwide stay that has temporarily blocked implementation of this new rule. Even more promising, just last week President Trump signed an executive order requiring the EPA and

Corps to rescind and revise any aspects of WOTUS inconsistent with federal law. This was great news and I was honored to join the president in the Oval Office for the signing. While I have great confidence in President Trump and Administrator Pruitt, the review required by the order will take time and there could be subsequent legal proceedings. Accordingly, Congress must once again take a clear position against WOTUS and retain the important provision prohibiting expansion of the Clean Water Act in this fiscal year's bill.

Another important rider from last year's bill that must be maintained defunds the Obama Administration's Social Cost of Carbon models. These flawed metrics can be easily manipulated, in order to attempt to justify new job-killing regulations. For instance, the Obama Administration attempted to justify the EPA's methane rule using the Social Cost of Carbon stating that the rule would supposedly yield climate benefits of \$690 million in 2025. Those speculative benefits, that can be easily manipulated, supposedly outweigh the \$530 million that the rule is expected to cost businesses and job creators in 2025 alone. The House has passed at least 11 different amendments rejecting the Social Cost of Carbon in the last two Congresses alone. We must block these flawed models once again in this year's bill.

Section 507 of the base bill last fiscal year contained a provision prohibiting the removal of any federally-owned or operated dams in fiscal year 2017. I thank the Subcommittee for including this important provision and once again ask that it be retained. In recent years, extremist environmental groups have increased efforts to dismantle and remove federal dams. These efforts defy commonsense, particularly at a time of major water challenges across the West and with an increasing need for clean hydropower. Electricity generated from Corps and Reclamation operated dams is utilized by millions of Americans every day. Many of these dams are essential components for flood control, strategic water storage, and life-sustaining irrigation

for millions of acres of American agriculture. Tens of millions of Americans rely on these dams to supply their drinking water and support their livelihoods. The vital water, energy, economic, and ecological benefits provided by federally-owned and operated dams must be protected. I once again ask the Subcommittee to retain the important provision prohibiting the removal of any federally-owned or operated dams in fiscal year 2018.

Finally, I would like to ask that the Subcommittee continue to provide important resources for the Corps of Engineers' Construction and Investigations budgets. These accounts ensure the timely development of critical water and infrastructure projects that provide benefits for communities throughout the nation. We must continue to provide adequate resources for the important projects funded by these accounts.

I appreciate the opportunity to testify today. I would like to thank the Chairman, Ranking Member and all members of this Subcommittee for your important work. The Western Caucus looks forward to coordinating closely with all of you in the future. Thank you Chairman Simpson and with that I yield back.

Mr. SIMPSON. Thank you, Mr. Gosar. Other questions?

Ms. KAPTUR.

Ms. KAPTUR. Thank you, Mr. Chairman. I would just like to ask Representative Gosar, for your own district, I don't know it, how many counties it covers and from where do you obtain clean water?

Mr. GOSAR. We obtain clean water within the State jurisdiction, which is what I have been talking about is the jurisdiction is subsurface water, which is the jurisdiction of the State.

Ms. KAPTUR. But I am saying for your district, in particular, does it come—

Mr. GOSAR. I am talking to you exactly what the majority of my water is from subsurface water within the State of Arizona.

Ms. KAPTUR. Wells?

Mr. GOSAR. Absolutely, and the jurisdiction of the State.

Ms. KAPTUR. Your district is heavily rural?

Mr. GOSAR. Almost all of it.

Ms. KAPTUR. Almost all of it. All right. So you don't—you don't receive any of these Federal water projects that exist in the west, your district doesn't benefit from any of that?

Mr. GOSAR. We border between Arizona and California, so the Colorado always has those infrastructure processes. I have also initiated one in the southern part with Mexico on the lower Santa Cruz that is federally mandated, absolutely.

Ms. KAPTUR. All right. What percentage of the water that your constituents drink actually then comes from subsurface water, 80, 90 percent?

Mr. GOSAR. Pretty much.

Ms. KAPTUR. Wow. All right. Thank you very much.

Mr. GOSAR. Thank you.

Mr. SIMPSON. Other questions? Hearing none, thank you, Mr. Gosar. I appreciate your testimony and—

Mr. GOSAR. Thank you very much.

Mr. SIMPSON [continuing]. Giving us your views on this upcoming bill.

Congressman Crist, should I call you Governor? Congressman?

Mr. CRIST. I can't hold a job. Charlie always works, though.

Mr. SIMPSON. Welcome to the committee.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. CHARLIE CRIST, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. CRIST. Thank you, sir. Thank you very much, Chairman Simpson, Ranking Member Kaptur, and members of the subcommittee. It is a great honor to appear before you today. As you know, this is my first chance to testify before an Appropriations subcommittee. For me, it is a special opportunity because your former colleague and former chairman of the full committee, and someone I hold in the highest esteem, the late Congressman Bill Young, who served with you for so many years, was my Congressman for decades.

During his time in Congress and on this committee, he did many great things for our Nation, our State and my Pinellas County. Many of those projects live on today, and I would like to talk to you about a few of them this morning.

First is the Pinellas County Shore Protection Project. The Army Corps of Engineers, the State of Florida, Pinellas County, and our local communities, have been tremendous partners in maintaining our 20 beautiful miles of beach coastline to protect the people and property along it. Much of the support of this project was generated by the committee, for which I am grateful. I am here to ask for your continued support.

The funding you provide for the Army Corps is critical in delivering the resources Pinellas County needs for our beaches. Beach nourishment not only protects public and private infrastructure, it is a great economic generator for our region.

A second request I would make of the subcommittee related to fiscal year 2017 is to help us finish a project Congressman Young started back in 2002. The seven members of our Tampa Bay area delegation are sending you a letter asking the committee to help us break through a bureaucratic new start deadlock that has stalled construction of the Port of Tampa's congressionally authorized Big Bend Channel navigation project. This deepening and widening project will improve the movement of goods through the port of the I-4 corridor, essentially, Florida's fastest growing part of the State.

It will set the standard for public-private partnership by turning a mere 20 percent of Federal stake in the project into a \$55 million economic development initiative that will create 8,000 jobs for our region. My Tampa Bay colleagues and I are not requesting any funding for this project. Instead, we seek language for the fiscal year 2017 bill you are finalizing to clarify it.

I want to briefly mention also the Everglades, and I want to give credit to my freshman colleague and one of your new colleagues from Naples, Florida, Representative Francis Rooney. He is championing this effort. He is on the other side of the aisle, and I am grateful for what he is doing. I am incredibly grateful also for the consistent backing by this subcommittee for America's Everglades, and respectfully ask that you continue it. Thank you so much for your time. I appreciate it.

[The information follows:]

Representative Charlie Crist

Florida's Thirteenth District

Testimony before the House Appropriations Subcommittee on Energy & Water

March 8, 2017

Chairman Simpson, Ranking Member Kaptur, and Members of the Subcommittee,

It is a great honor to appear before you today. As you may know, this is my first chance to testify before an Appropriations Subcommittee. For me, it is a special opportunity because your former colleague and former Chairman of the Full Committee - and my good friend, Bill Young - served with you for so many years. During his time in Congress and on the Committee, he did so many great things for our nation, our state, and our community.

Many of those projects live on today and I want to talk about a few of them.

First is the Pinellas County Shore Protection Project. The Army Corps of Engineers, the State of Florida, Pinellas County, and our local communities have been tremendous partners in maintaining our 20 miles of coastline to protect the people and property along it. Much of the support for this project was generated by the Committee, for which I am grateful. And I am here to ask for your continued backing. The funding you provide for the Corps is critical in delivering the resources Pinellas County needs for the periodic placement of sand on our beaches. Beach nourishment projects not only protect critical public and private infrastructure, but are a great economic generator for our entire region.

The Pinellas County beach nourishment project has three distinct segments. One of them - Sand Key - has qualified for funding due to recent damage from Hurricane Hermine. The other two segments are also in need of nourishment; and the State and local sponsors have the funding necessary to pay their share of the full project. It makes sense to provide the Corps with robust funding for shore protection projects across the nation to ensure efficient funding. This would give taxpayers the best bang for their buck by reducing inefficiencies in construction of projects that will protect communities – in the case of my district, the most beautiful one in the country (in my opinion).

A second request I would make of the Committee is to help us finish a project Congressman Young started back in 2002. The seven members of our Tampa Bay Area Congressional delegation are sending you a letter asking the Committee to help us break through a bureaucratic deadlock that has stalled construction of Port Tampa Bay's congressionally authorized Big Bend Channel navigation project. It will set the standard for public private partnerships by turning a 20 percent federal stake in this project into a \$55 million economic development initiative that creates 8,000 jobs for the surrounding region.

Port Tampa Bay has already invested \$30 million in landside infrastructure for the growing Port Redwing maritime complex. However, it will never realize its full potential to serve large cargo ships until this project is completed to provide for a deeper and wider channel. The Big Bend Channel directly connects with Tampa's main federal shipping channel and is integral to the

movement of commodities through the Port to the I-4 corridor, Florida's fastest growing part of the State.

Port Tampa Bay has forged an innovative coalition of public and private sector partners to finance the dredging project. The Port and its partners have committed to provide 80 percent of the total cost to the project. In recognition of the need and tremendous value of this project, the Committee designated it as a "New Construction" start in the 2003 Consolidated Appropriations Resolution (Public Law 108-7). Between Fiscal Years 2003 and 2006, the Committee provided a total of \$17.5 million in construction funding; and as recently as 2014, the project received an Army Corps of Engineers Work Plan allocation as an ongoing project and appropriated construction funds remain available.

Regretfully, because of an internal policy shift at the Army Corps of Engineers, the project designation was abruptly changed to a "New Start" in 2015 because none of the previously appropriated construction funds, much of which has been reprogrammed away from the project, had been used for physical construction.

My Tampa Bay Area colleagues and I are not requesting any funding for this project. Instead, we are seeking language in the Fiscal Year 2017 bill you are finalizing to clarify for the Corps that if construction appropriations remain available for an authorized navigation project in 2017, then no "New Start" decision shall be required to initiate construction of such a project. This would allow available funds to be allocated for these projects, for these projects to compete for additional Work

Plan funding, and for these projects to be eligible for inclusion in future budget requests as ongoing work.

Your former colleague Congressman Bill Young started this Big Bend project more than 14 years ago. And with your help, we can honor him this year by helping Port Tampa Bay see it through to a successful conclusion.

Third, I want to briefly mention my strong support of the Everglades restoration program in Florida. The Everglades is one of the most biologically diverse ecosystems in the country – home to dozens of threatened or endangered species and the source of drinking water for one-third of our State. I am incredibly grateful for the consistent backing by this Subcommittee for America's Everglades over the past decade, and I ask that it continue. We are finally seeing visible restoration progress – the Kissimmee River, improvements to the Herbert Hoover Dike, restoration of Picayune Strand, construction of the C-44 Reservoir, and the bridging of Tamiami Trail – but there is much left to do. I am proud that in my service as Florida's 44th Governor we helped advance many projects and critical land purchases that are paying dividends today. Now, as a Member of Congress, I am committed to working with this Subcommittee and our entire Florida delegation to continue our bipartisan work to restore the Everglades, our precious River of Grass.

And finally, a small community on Boca Ciega Bay in Pinellas County - the City of Gulfport - is engaged with the Army Corps of Engineers on a Continuing Authorities Program (CAP), Section 103 study of their small municipal shoreline. I urge the Subcommittee to appropriately fund the Section 103 CAP program, as well as all CAP programs, so that Gulfport may continue its work

with the Corps and move into construction of a project that will benefit the community. The CAP programs are excellent resources for local governments - particularly given the time and expense of engaging with the Corps on a full-blown study and project - and therefore deserve the Subcommittee's strong support.

Thank you for your time and your attention to these issues. And thank you for allowing me to testify before you today. I appreciate your work on behalf of the Congress and our Nation.

Mr. SIMPSON. Thank you. I appreciate you being here, Congressman Crist. Questions for Congressman Crist? Hearing none, thanks for—thanks for being here today, and we will take those views into consideration as we try to do our 2017 and 2018 budget.

Mr. CRIST. Right. It will go well.

Mr. SIMPSON. It will be a challenge.

Mr. CRIST. Yes, sir, of course. We will do it together.

Mr. SIMPSON. Mr. Tipton.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. SCOTT R. TIPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF COLORADO

Mr. TIPTON. Thank you, Chairman Simpson. I would like to also thank Ranking Member Kaptur and members of the committee. I welcome this opportunity to be able to appear before you and thank you for your interest and priorities of your colleagues as you make difficult decisions on infrastructure and program and investment, particularly in the area of water resources.

The Third Congressional District of Colorado has partnered with the Bureau of Reclamation for at least seven decades, working together to develop hugely important and beneficial multi-use projects in southern and western Colorado. These projects have provided necessary water supply, which has sustained our agricultural, industrial, and recreation economies, and continue to help our small communities grow and prosper.

I am distinctly aware that the mission of the Bureau of Reclamation is changing, and that the construction of large water supply projects with all Federal dollars is likely a thing of the past, but the partnership the Bureau has with the local water districts and providers remains critical in the semi-arid West, where the development and conservation and management of this finite resource is absolutely essential.

The need for this local Federal partnership could not be clearer than the pursuit of the Arkansas Valley Conduit, the last component of the Fryingpan-Arkansas Project authorized in 1962. Since an amendment to that original authorization was enacted in 2009, this committee has provided funding, which has contributed to the completion of the required environmental analysis and the ongoing feasibility work. The current schedule would likely allow for construction to begin in 2019 or 2020.

The purpose of my testimony today is to strongly encourage you to provide sufficient funds to move this project forward in a timely, and, therefore, economical fashion and urge you to recognize the interest and responsibility that the Federal Government has in building this project. The water supply for 50,000 people living in the Lower Arkansas Valley is contaminated with naturally occurring radionuclides. Approximately 40 small water providers face the task of finding new water supply or treating the supply they have.

The Arkansas Valley Conduit, as a regional rather than a piecemeal solution, is a more functional and more fiscally effective way to meet the challenges for safe drinking water. Many of these small

providers from the Colorado Department of Public Health and Environment, for failing to meet the Federal mandated Safe Water Drinking Act standards, should it prove necessary, the State of Colorado has approved a \$60 million loan to move the project forward in a partnership with the Bureau of Reclamation.

The local water providers are paying for administration, planning, and environmental compliance through quarterly assessments, working closely with the Southwestern Colorado Water Conservancy District to move the project forward. I would like it noted that under the provisions of the 2009 legislation, the revenues generated locally can repay the entire cost over the project.

The Fryingpan-Arkansas Project generates revenue by storing nonproject water for a price. Water providers enter into long-term contracts with reclamation to store the water in the Pueblo reservoir. That revenue stream for full repayment makes this project and its financing unique. It should also be noted that the Southeastern District, the State of Colorado, and the Colorado Congressional Delegation are fully aware of the fiscal constraints we face and of the changing mission of the Bureau.

To that end, we are working on meaningful cost-saving measures, including use of existing facilities for treatment and delivery wherever possible, and possibly design-build processes. Both of these efforts will save money and deliver clean drinking water faster to the communities who desperately need it.

The people of the Lower Arkansas Valley deserve no less than that. It is for their health that the Federal Government creates water quality standards, and the Federal Government has the responsibility to help these communities meet those standards.

Thank you, again, for providing me the opportunity to testify today, and I look forward to working with you to ensure the dream of completing the Fryingpan-Arkansas Project as it becomes a reality, and the Arkansas Valley Conduit is built.

[The information follows:]

Statement of Congressman Scott Tipton (CO-03)
Before the
House Appropriations Subcommittee on Energy and Water Development
Regarding Appropriations for the Arkansas Valley Conduit
March 07, 2017

I welcome this opportunity to appear before you, and thank you for your interest in the priorities of your colleagues as you make difficult decisions on infrastructure and program investment, particularly in the area of water resources.

The Third Congressional District in Colorado has partnered with the Bureau of Reclamation for at least seven decades, working together to develop hugely important and beneficial multi-use projects in southern and western Colorado. These projects have provided the necessary water supply which has sustained our agricultural, industrial, and recreation economies, and continue to help our small communities grow and prosper.

I am distinctly aware that the mission of the Bureau of Reclamation is changing, and that the construction of large water supply projects with all federal dollars is likely a thing of the past. But the partnership the Bureau has with local water districts and providers remains critical in the semi-arid West, where the development, conservation and management of this finite resource is absolutely essential.

Like the people of Flint, Michigan, the communities of the Lower Arkansas Valley in Southeastern Colorado deserve access to a safe, reliable source of drinking water. While the threat is not from lead, they face the daunting issue of naturally occurring, cancer-causing radioactive materials in drinking water supplied primarily from wells. The means to address this

problem is construction of the Arkansas Valley Conduit (AVC), an original feature of the Fryingpan-Arkansas Project, authorized in 1962.

The need for this local-federal partnership could not be clearer than in the pursuit of the Arkansas Valley Conduit. Since an amendment to that original authorization was enacted in 2009, this committee and the Administration have provided funding which completed the required environmental analysis and the ongoing feasibility work. The current schedule would likely allow for construction to begin in 2019 or 2020.

When completed, the AVC will serve 50,000 people who rely on nearly 40 water systems. This worthy project to protect rural America is sponsored by the Southeastern Colorado Water Conservancy District (District).

The need for the AVC was recognized when prominent local leaders from the Lower Arkansas Valley banded together in the 1930s. These visionary rural advocates recognized the need to improve their water supply, and that the effort to do so would be a long process. The plan then, as it is today, was to provide clean water to their citizens through a regional approach.

Currently, Lower Arkansas Valley residents get their water from small water systems, all with less than 5,000 customers and some with fewer than 100 taps, and all of them struggling to remain viable in a world where water quality standards are becoming ever more restrictive.

Most of the communities east of Pueblo rely on well water, because the surface flows in the Arkansas River are historically intermittent. The dissolved solids in both the surface and ground water are above the levels for human consumption at most times during the year, a problem that can be overcome by using Pueblo Reservoir as a source of clean water, as is planned with the AVC.

The alternative solution to remove these particles from the water is reverse osmosis, which some AVC participants are already employing. This is costly, energy intensive and produces by-products that require additional disposal methods.

More than one-third of the water systems in the Lower Arkansas Valley already are facing state enforcement actions, guided by federal EPA standards, for naturally occurring radioactive contaminants such as radium and uranium in their water supplies. Several others have elevated levels that do not violate state standards. Those communities could be forced to spend millions of dollars above and beyond the cost of the AVC until the pipeline is built.

More and more towns have found that their groundwater contains naturally occurring cancer-causing radioactive contaminants, such as radium and uranium.

A total of 14 towns have water supplies containing radioactive elements in concentrations that exceed primary drinking water standards, as mandated by the federal Safe Drinking Water Act.

The Colorado Department of Public Health and Environment (CDPHE) has notified these water providers (via enforcement actions) that they must treat water supplies to remove these contaminants or find a better quality water source.

Another seven water providers have elevated levels of naturally occurring radioactive elements, but do not currently violate CDPHE standards.

In addition, water providers in the lower Arkansas are generally having difficulty meeting non-mandatory secondary drinking water standards for salts and sulfate.

The median salts concentration over the past 40 years has been about 3,400 mg/L in lower Arkansas River Basin groundwater, which is nearly 7 times greater than the secondary drinking water standard. Like radionuclides, salts and sulfate are not removed by conventional water treatment methods.

The regional approach is the most cost-effective way to deal with this complex problem.

Were each of these small water providers to fix their water quality issues alone, the cost of meeting the federally mandated standard would cumulatively be much more than the cost of the regional conduit being developed.

However, recognizing the size and scope of the project, the District continues to work with Reclamation to improve both functional and fiscal efficiencies as the AVC nears its final design.

All of the participants of the project, as well as the District and Reclamation, have worked to contain costs for the AVC, by using some existing infrastructure and making appropriate modifications as the project is being designed.

In 2009, the Fry-Ark Project authorizing act was amended to provide that 35% of the construction cost of the AVC would be allocated to local beneficiaries for repayment. The legislation also provided for full repayment of federal costs through miscellaneous revenues from non-federal contracts for excess capacity or water right exchanges using Fry-Ark facilities. In this sense, this federal project would pay for itself over time, with no burden on the general fund of the United States.

Participants in the project continue to fund administration, planning and environmental compliance activities associated with the AVC through quarterly assessments. They remain committed to seeing the AVC built so that it can fulfill its purpose.

While this revenue stream is guaranteed, the District, in cooperation with the State of Colorado and the Bureau of Reclamation, continues to look at every method of reducing the overall cost of the project to build it in a fiscally responsible manner.

Please note that the Southeastern District, the State of Colorado and the Colorado congressional delegation are fully aware of the fiscal constraints we face, and of the changing mission of the Bureau.

To that end, we are working on meaningful cost-saving measures, including use of existing facilities for treatment and delivery wherever possible, and possible design-build processes. Both of these efforts will save money and deliver clean drinking water faster to the communities who desperately need it.

The people of the Lower Arkansas Valley deserve no less than that. It is for their health that the federal government creates water quality standards, and the federal government has a responsibility to help these communities meet those standards and protect these citizens.

I strongly urge my colleagues to continue to provide funding to move the Conduit into the construction phase as soon as possible. The people of the Lower Arkansas Valley deserve no less assistance in having a clean and safe drinking water supply, and in meeting a federally-mandated standard.

Mr. SIMPSON. Thank you, Congressman.

Mr. TIPTON. Thank you for your time.

Mr. SIMPSON. I appreciate you being here today. Are there questions for Congressman Tipton? Ms. Kaptur.

Ms. KAPTUR. I just wanted to ask the Congressman, thank you so much for your testimony. What a name for a project, the Fryingpan. I just wanted to ask you, these elements, radioactive, either radium or uranium, are these new? Or is it just that they have discovered this now?

Mr. TIPTON. These are naturally occurring.

Ms. KAPTUR. Uh-huh. Are there elevated levels of cancer in that particular part of Colorado?

Mr. TIPTON. You know, I am not sure if there are elevated elements, but under the Clean Water Act, it was a responsibility that the EPA put forward to be able to provide safe, clean drinking water for the communities in the Lower Arkansas Valley. This started back in 1962. John Kennedy actually visited Pueblo, Colorado, for the initiation of this project, so it is long term in coming, and I guess, Representative Kaptur, it is really the responsibility of the Federal Government through this mandate for clean drinking water, which I think we all share and understand it is important for our communities to be able to get this project off of center, to be able to move this forward, and to be able to get it completed.

Ms. KAPTUR. Thank you. We learned—I learned a great deal from other members, so I just thank you very much for testifying today.

Mr. TIPTON. Thank you.

Mr. SIMPSON. Any other questions? 1962 to today is only 55 years. That is kind of quick for government work, isn't it?

Mr. TIPTON. I didn't speak for the government.

Mr. SIMPSON. I appreciate you being here today, and thank you for your testimony.

Mr. TIPTON. Thank you, Chairman.

Mr. SIMPSON. We are going to take a short break while we await the next individuals that are coming to testify, so we will be in recess for just a couple of minutes.

[Recess.]

Mr. SIMPSON. The committee will be back in order. We have with us Congressman Foster from Illinois. The floor is yours for 5 minutes.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. BILL FOSTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. FOSTER. Thank you. Thank you, Chairman Simpson.

Mr. SIMPSON. Microphone on?

Mr. FOSTER. Thank you, Chairman Simpson, Ranking Member Kaptur, for holding this Members' Day, and to all the members of the subcommittee for allowing me to testify today. I am here to, first of all, thank you for your past support for the Department of

Energy's Office of Science, and to urge you to continue to prioritize and invest in science.

The United States has been at the forefront of innovation and progress, largely due to its investment in scientific research. It has helped raise the standard of living for millions of Americans in our past and represents the best hope for economic progress in our future. But this scientific progress requires us to take a long view.

Discoveries are not made overnight, and the experiments need sustained attention and resources for us to learn from them. Scientific investments are not like building a road where you can cancel it and restart it at the drop of a hat. The scientific programs have to be built up over decades, but can be destroyed in a single budget cycle by having their project underfunded.

Similarly, our scientific infrastructure requires a long-term sustained funding to ensure that opportunities are not missed. You know, as the only Ph.D. scientist in the United States Congress, I serve as a lightning rod for concerns from science, from high-tech businesses that depend on that science, from academics, and from ordinary citizens who care about the future economic and scientific progress in our country.

And so I have heard from a number of my former colleagues in science in the scientific community who are very worried about what the incoming administration could mean for scientific progress in this country. So I would urge this subcommittee to seize the opportunity to put researchers, the companies that depend on that research, and, you know, all—everyone who cares about science in this country, to put them at ease by providing funding levels that support the critical work for the Department of Energy's Office of Science.

There are two specific projects that I want to highlight here today. Both of these are projects that have to have significant construction start money, you know, in the upcoming cycle, or the teams that put them together and are prepared to make them a reality will dissipate. You cannot—you cannot keep projects on hold forever.

These two projects are Argonne National Labs Advanced Photon Source Upgrade, and the Long-Baseline Neutrino Facility, and the Deep Underground Neutrino Experiment, so-called LBNF/DUNE, which represents a collaboration between Fermi National Accelerator Laboratory in Illinois, and the Sanford Underground Research Facility in South Dakota.

Starting with Argonne first. The experiments conducted at Argonne National Lab's Advanced Photon Source, or APS, support both discovery science fundamental research, and also market-driven research. Its facilities are used by companies that have products to develop.

Pharmaceutical research at the APS has yielded lifesaving new drugs for HIV, for melanoma, and for renal cell carcinoma. Industry chemists have used the APS to develop energy-saving solar shingles, while combustion researchers have developed a process that has led to cleaner diesel engines. And research conducted at the APS led to a Nobel Prize in chemistry in 2012 for the work on what are called G-protein coupled receptors, which are the mecha-

nism at the heart of the addiction mechanism inside people's brain, and so with the heroin epidemic ravaging.

This allows scientists to look at these molecules in action, the ones that are at the very heart signaling the cells, the neurons that make the decisions that are affected by opioids. So this is fundamental research. I am not promising that they are going to cure the opioid epidemic this year, but you know, it is only this sort of long-term research that allows us to actually, dream of a cure for this, as well as Nobel Prizes, which as a scientist, I have a certain fondness for.

The APS needs to be upgraded to ensure that the American scientists and companies continue to have access to the best scientific equipment in the world. The competition in this area is fierce with dozens, literally dozens of competing facilities under construction, and in operation around the world. But the APS upgrade will use next-generation technology to make the APS hundreds of times brighter, which opens up a vast array of scientific frontiers at the nanoscale that are completely inaccessible at any machine anywhere in the world today.

So this upgrade will leverage the existing infrastructure at the Advanced Photon Source valued at about \$1.5 billion, while applying a new technology to create a world—a world-leading facility at substantially less cost than building a facility from scratch. And with this upgrade, the APS will become the ultimate 3-D microscope. Without it, the United States will lose its global leadership in X-ray science to Europe, Japan, and China.

Robust funding for the Department of Energy basic energy science major items of equipment line will enable the APS upgrade to continue and proceed on schedule, and more importantly, on budget. A funding delay, I should say, on a personal note, that my wife was one of the great accomplishments of the Office of Science, was the completion of the last photon source, light source on time and under budget. My wife was the construction manager for that at Brookhaven National Laboratory.

So, but funding delay will add millions of dollars to the total cost of this project. Second critical opportunity where this year's funding is particularly important is the LBNF/DUNE project, which will be critical to maintaining U.S.'s leadership in high energy physics and in fundamental science. This facility, part of which is located a Fermi National Accelerator Laboratory in Batavia, Illinois, where I worked for 25 years, and the other part of which is located in the Sanford Underground Research Facility in Lead, South Dakota, will be the first major international world class facility to be hosted—of its kind, to be hosted by the United States.

So getting foreign money flowing into the U.S., in addition to U.S. money flowing to facilities in foreign countries is, to my mind, you know, essential, to having a healthy international scientific collaboration, you know, just a network of scientific collaboration internationally.

Neutrinos, which will be studied there, are among the most abundant particles in the universe and our understanding of their nature may provide the key to answering some of the most fundamental questions about the nature of our universe. LBNF/DUNE would be the most powerful tool in the world to study these par-

ticles, and would help solidify the Department of Energy's high energy physics program as a world leader.

And so, I am hopeful that the project will receive the \$55 million required in fiscal year 2017 to start construction for this project. Again, facilities like this are always in a grow-or-die situation. If you assemble the team and say we are going to start construction and then say, well, maybe not this year, people leave and they cannot be reassembled. Like I say, it is not like just building a highway where you have millions of competent contractors happy to bid on any new section of the roadway.

So more than 770 scientists from 150 institutes and 26 countries stand ready to contribute scientifically and economically to the LBNF/DUNE project, if we decide to make it go ahead, and I urge the subcommittee to provide full support and robust funding for the Department of Energy's high energy physics account.

Investments in these projects, and in our broader scientific infrastructure, is really the only way to ensure that America remains an international leader in science. You know, we are—in testimony to Congress more than a generation ago, the guy who started—the guy who started Fermi lab was asked, Well, what is all this basic fundamental scientific research that you are doing? How does this contribute to national defense, which is obviously the competition? And he looked back at the committee and said, our research, our fundamental research, has nothing to do with national defense, except perhaps to make our country more worth defending.

And that is the heart of the reason that our country should invest in fundamental research like that at Argonne Lab, like that at Fermi lab. If you look back in history, the reason that we respect what the—you know, what the Manichees did in, well, hundreds of years ago in Italy. It is not because they won their wars against their opponents. It is not because they succeeded in economics and commerce. It is because after doing all of that, they diverted a significant fraction of their GDP to fundamental research by the likes of Leonardo da Vinci, and that is why they will remain in the history textbooks forever. And so we should have no lower goal for our country. Thank you.

[The information follows:]

Congressman Bill Foster
Energy & Water Appropriations Testimony
March 8, 2017

- Good morning and thank you to Chairman Simpson and to Ranking Member Kaptur for holding this Members' Day and to the members of the Subcommittee for allowing me to testify here today.
- I am here today to thank you for your past support for the Department of Energy's Office of Science and to urge you to continue to prioritize and invest in science.
- The United States has been at the forefront of innovation and progress largely due to the investment in scientific research.
- It has helped raise the standard of living for millions of Americans.
- This scientific progress requires us to take a long view.
- Discoveries aren't made over night, and experiments need sustained attention and resources for us to learn from them.
- Similarly, our scientific infrastructure requires long-term, sustained funding to ensure opportunities are not missed.
- I have heard from a number of my colleagues in the scientific community who are worried about what the incoming administration could mean for scientific progress in this country.
- I would urge this subcommittee to seize the opportunity to put our researchers at ease by providing funding levels that support the critical work of the Department of Energy's Office of Science.
- There are two projects in particular that I want to highlight here today; Argonne's Advanced Photon Source Upgrade and the Long-Baseline Neutrino Facility and Deep Underground Neutrino Experiment – or LBNF/DUNE – which represents a collaboration between Fermi National Accelerator Laboratory in Illinois and the Sanford Underground Research Facility in South Dakota.

- Experiments conducted at Argonne National Laboratory's Advanced Photon Source, or APS, support both discovery science and market-driven research.
- Pharmaceutical research at the APS has yielded lifesaving new drugs for HIV, melanoma, and renal cell carcinoma.
- Industry chemists have used the APS to develop energy-saving solar shingles, while combustion researchers have developed a process that has led to cleaner diesel engines.
- And research conducted at the APS led to a Nobel Prize in Chemistry in 2012 for work on G-protein coupled receptors which is helping us develop more effective medications to aid in our fight against opioid addiction.
- The APS needs to be upgraded to ensure American scientists and companies continue to have access to the best scientific equipment in the world.
- The APS upgrade will use next-generation technology to make the APS hundreds of times brighter, opening up scientific frontiers at the nanoscale that are completely inaccessible today.
- The upgrade leverages the existing infrastructure valued at \$1.5 billion while applying a new technology to create a world leading facility at substantially less cost than a new facility.
- With this upgrade, the APS will become the ultimate 3D microscope; without it, the United States will lose its global leadership in x-ray science to Europe, Japan, and China.
- Robust funding for the Department of Energy (DOE) Basic Energy Sciences (BES) Major Items of Equipment (MIE) account will enable the APS upgrade to continue on schedule and more importantly on budget.

- A funding delay will add millions of dollars to the total cost of the project.
- Another critical opportunity to support America's scientific leadership is with the LBNF/DUNE project which is critical to maintaining U.S. leadership in High Energy Physics and fundamental science.
- This facility, located at Fermi National Accelerator Laboratory in Batavia, Illinois and the Sanford Underground Research Facility in Lead, South Dakota, will be the first major international world class facility to be hosted by the United States.
- Neutrinos are among the most abundant particles in the universe and understanding their nature may provide the key to answering some of the most fundamental questions about the nature of our universe.
- LBNF/DUNE would be the most powerful tool in the world to study these particles and would help solidify the Department of Energy's High Energy Physics program as a world-leader.
- I am hopeful the project will receive \$55 million for FY 2017 to start construction.
- LBNF/DUNE will need even higher levels of funding as the project enters the full construction phase in FY 2018.
- More than 770 scientists from 150 institutes and 26 countries stand ready to contribute scientifically to LBNF/DUNE and I urge this subcommittee to provide full and robust funding for the Department of Energy's High Energy Physics account.
- Investment in these projects and in our broader scientific infrastructure is the only way to ensure that America remains an international leader.
- Thank you again and I yield back the balance of my time.

Mr. SIMPSON. Thank you. I appreciate your testimony. Are there questions for the Congressman?

Mr. FLEISCHMANN. Thank you, Mr. Chairman. Congressman Foster, I want to thank you personally. You and I have worked together on a number of initiatives. Also, for the benefit of the entire subcommittee, the super computing initiative has been so critically important to our country and will remain so. We are in very dire competition with the Chinese. At one point in time, we had the fastest super computers in the world. We have now fallen to third, I believe, in that race, from petaflops to Exascale. I know Argonne is very involved in that, Oakridge as well, but I want to personally thank you for your advocacy for the Office of Science. Oakridge is intimately involved.

Mr. FOSTER. A key collaborator in all of these sort of projects. And, you know, there have been a number of Members of Congress who have taken a little time off because their districts have been hit by tornadoes. Any of you who doubt the power of super computers should look at the simulations of tornadoes where you see detailed simulations of tornadoes trying to understand what affects their formation and how to predict and how they will develop.

And so this is just one of the many examples of where super computers at places like Oakridge will really contribute to, the lives of so many in ways that are not often in the front pages of newspapers.

Mr. FLEISCHMANN. Congressman, we thank you for your advocacy and for your help on these key critical areas. Thank you, sir.

Mr. SIMPSON. Thank you. Any other questions?

Ms. KAPTUR. Mr. Chairman, I just wanted to thank Congressman Foster. It must be—just thinking about your life and engagement with all of these very high-level research initiatives and you are a Member of Congress, sometimes it must feel like a fish out of water being in this body.

Mr. FOSTER. I do feel lonely from time to time.

Ms. KAPTUR. But you are a very effective spokesman, and someone who can put visions for new science in understandable terms, and so your presence is truly appreciated, and you have made that transition very nobly for your constituents but also for the country. Thank you.

Mr. SIMPSON. A fish out of water would be an apt description for all of us. Mr. Polis.

Thank you, Congressman Foster.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. JARED POLIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF COLORADO

Mr. POLIS. Thank you, Chairman Simpson and Ranking Member Kaptur. I am coming before a number of the subcommittees to suggest some cuts in appropriations. I know that there are going to be cuts in most of the lines, so I hope to be constructive.

In the past, I have offered various amendments to cut spending on the floor of the House, supported both across-the-board cuts as

well as particular line items cuts, and I have a few ideas for you here today for your line item. The first major spending line that I would like to recommend a cut for is the Fossil Energy Research and Development line item. This is a line item with an expiration. It is a dead end in the sense that our fossil fuels will be depleted, not only in America and around the world. Markets are already turning away from dirty fuels, fuels like coal and oil, not just for economic reasons, but also for the health and safety of our oceans, our air, and our planet. And so, I would hope that the committee would, rather than invest in the past, invest in the future.

The version of this bill that came to the House floor last year actually appropriated \$300 million more pork for the oil and gas industry than even the President requested for the fossil research account. I know you have to make some tough decisions. I think this will be an excellent line item to cut, rather than give more pork to the oil and gas industry. We can cut that out and reduce our budget deficit by \$645 million. That was what the bill included last year. I would encourage you to zero out that line item, or, at the very least, cut it back significantly.

If you do cut the \$645 million back significantly, while I hope that the bulk of it goes to deficit reduction, another account that I would—with part of those proceeds, I would encourage you plus up would be the Energy Efficiency and Renewable Energy Fund, which, actually, invests in the future, the future of energy in our country. If we can increase it a little bit, it will help fund national labs, like the National Renewable Energies Laboratory. From 2009 to 2015, EERE's building technology office finalized 40 new or updated efficiency standards for more than 45 household and commercial products, saving consumers money, so it actually saved consumers billions of dollars, reduced carbon pollution, and helped generate jobs in our country.

So I think if you want to use some of those funds that you save from zeroing out the Fossil Energy Research and Development Fund, that would be a good place to put some of those, and, of course, I know you have to make cuts overall, so I understand some of those cuts, if not all, would go to the bottom line.

I also want to highlight EERE's work with private companies to apply 3-D printing, an additive manufacturing to renewable technologies, particularly making blades of wind turbines. With additive manufacturing, we can reduce the cost of blades, reduce the cost of wind energy, as well as highlight their work on plug-in electric vehicles, particularly the Clean Cities project, which Colorado has been part of, which developed a comprehensive EV and EV supply equipment readiness and implementation plan for our State.

Now, there is another account under fossil fuels that I particularly think should be cut, and that is the one that works on oil shale formations with less than 50,000 barrels per day, and frankly, oil shale is one of the most dirty extraction methods out there, and, in fact, the distillation process releases pollutants into the air, including sulfur dioxide, lead, nitrogen oxides. In addition, it uses enormous amounts of water. The BLM reported that mining and distilling oil shale requires 2.1 to 5.2 barrels of water for each barrel of oil produced. Water is scarce across my home State of Colo-

rado. Driving up cost for consumers and farmers is not the answer and not something that this committee should invest in making a reality.

Finally, I have another cut. I would like to ask that you address the accelerated timeline of the W80-4 nuclear warhead. In 2015, I joined with my colleague, Mr. Quigley, to offer an amendment that would save \$165 million in taxpayer money by placing development of the W80-4 nuclear warhead back to its original acquisition schedule, simply rather than accelerating it.

The existing air launched cruise missile and warhead isn't being phased out until the 2030s. There is no risk of having a gap, a capabilities gap. Yet, the 2015 budget sped up the development for the warhead by 2 years to 2025. Fitting the W80-4 nuclear warhead onto the next generation long-range cruise missiles will free up \$165 million to put towards reducing the definite and cutting your line item. At a time when the budgets are tight, that is very important.

We already have the nuclear scientists disagree on whether our nuclear capability is enough to destroy life on the planet five or seven times. Frankly, I would advocate even deeper cuts in our nuclear capabilities. I would argue that a sufficient deterrent should be blowing up the world once. If you really want to blow up the world twice to be sure, you can do that, but we certainly don't need to blow up the world five to seven times. It is really redundant in terms of offering a deterrence, so that would be another excellent line item to look at cutting as your committee goes about its important work to save taxpayer money. I am happy to yield for any questions.

[The information follows:]

Energy & Water Appropriations Subcommittee
Member's Day Testimony
Rep. Jared Polis (CO-02)

Chairman Simpson & Ranking Member Kaptur,

Thank you for providing the opportunity for members to come before your subcommittee and address our priorities within the FY18 Energy and Water appropriations legislation.

I know that you are always looking to save as much money as possible, and I would like to make a few suggestions for programs that you could shrink or entirely cut for that purpose.

Fossil Fuel R&D

The first major spending line is Fossil Energy Research and Development. Fossil Fuel R&D is a dead end for America, and the world. Not only for our economy, where markets are clearly turning away from dirty fuels like coal, but for the health and safety our communities, our oceans, our air, and planet.

The version that came to the floor last year appropriated almost \$300 million more than the President requested to this Fossil Research account.

We don't know how much the new President will request, but it shouldn't matter because you should be zeroing out the line item. Last year your bill included \$645 million for fossil energy, and I would encourage you to appropriate far less, if not zero. Those funds could be directed to the Energy Efficiency and Renewable Energy (EERA) fund or go to savings in our budget.

Instead of subsidizing the Oil and Gas industry, by throwing hundreds of millions of dollars at Fossil Energy Research, we should focus on shrinking our deficit and leveling the playing field with renewable energy technologies. Even if we gave a few hundred million to EERE, it still wouldn't come close to the funding and subsidies of oil and gas. Currently funded at about \$2.1 billion a year, according to recent reports, EERE would see its allocation slashed by at least \$700 million under a proposal from the Office of Management and Budget. Those funds should not be slashed.

EERE funds national labs such as the National Renewable Energy Laboratory in my home state of Colorado. From 2009 to the end of 2015, EERE's Building Technologies Office finalized 40 new or updated efficiency standards for more than 45 household and commercial products, estimated to save consumers more than \$543 billion and reduce carbon pollution by 2.3 billion metric tons through 2030. Is saving our kids from dirty air that causes asthma attacks or saving consumers and our economy billions of dollars really worth saving a dying industry?

The list of amazing EERE projects is endless, but here are just two examples:

3D Printing Wind Blade Mold

EERE and NREL are working with private American manufacturers to apply 3D printing, AKA additive manufacturing, to renewable technologies. Blades are one of the most costly components of a wind turbine, but the additive manufacturing of these blades could reduce those costs, and thus the cost of producing wind energy.

Plug-in Electric Vehicles

In Colorado, EERE's Vehicle Technologies Office awarded \$500,000 through the Clean City Coalition to support Project FEVER (Fostering Electric Vehicle Readiness in the Rockies), and to foster the development of Colorado state policies to accelerate the adoption of plug-in electric vehicles. The Clean Cities project has helped Colorado develop a comprehensive EV and EV supply equipment readiness and implementation plan for Colorado. Since its inception in 1973, Clean Cities has saved around 8 billion gallons of petroleum.

Taxpayer dollars should be going to these types of programs and projects. Not the many components of the Fossil Energy R & D portion of the budget that we fund today, and that we saw last year, that only serve to dirty our air and our water, and move towards the destruction of the climate. Just one example is funding for the extraction of methane hydrates, which is essentially going to destroy the ocean in a similar way that gas extraction has been a scourge on our lands. Haven't we learned our lesson with natural gas extraction? Experts fear that drilling in hydrate deposits could cause catastrophic releases of methane that would greatly accelerate global warming. Why would we want to invest funds in trying to pull methanes out of the ocean, when we have so many issues around methane in our ozone?

Additionally, there is one account under Fossil Energy that will create technology that allows oil and gas companies to drill in oil shale formations where there is less than 50,000 barrels per day. We should be stopping oil shale drilling, not finding ways to keep drilling in more and more places. Oil shale is one of the most dirty extraction methods out there. The distillation process for oil shale releases toxic pollutants into the air—including sulfur dioxide, lead, and nitrogen

oxides. Current analysis indicates that existing oil shale research projects would reduce visibility by more than 10 percent for several weeks a year. And the Natural Resources Defense Council states that in a well-to-wheel comparison, greenhouse gas (GHG) emissions from oil shale are close to double those from conventional crude, with most of them occurring during production. The BLM reports that mining and distilling oil shale requires an estimated 2.1 to 5.2 barrels of water for each barrel of oil produced—inputs that could reduce the annual flow of rivers across the west. For example, the Colorado’s White River dropped by as much as 8.2 percent.

How does it make sense to spend money propping up oil and gas companies that are making hand over fist right now?

W80-4 Nuclear Warhead

Finally, I would ask that you address the accelerated timeline of the W80-4 nuclear warhead. In 2015, I joined with my colleague Mr. Quigley to offer an amendment that would save \$165 million in taxpayer dollars by placing funding for the development of the W80-4 nuclear warhead back on its original acquisition schedule. The existing air launched cruise missile and warhead isn’t being phased out until the 2030’s, yet the FY2015 budget request sped up the development for the warhead by two years to FY2025. Fitting the W80-4 nuclear warhead onto the next generation long-range cruise missiles will free up \$165 million to put towards deficit reduction. At a time when the budget is so tight, there is no reason for us to waste dollars unnecessarily accelerating the procurement schedule.

Thank you very much for your time today, and I would be happy to answer any questions.

Mr. SIMPSON. Are there any questions for Congressman Polis? If not, thank you for your testimony. We appreciate your insight into this bill and your recommendations.

Mr. POLIS. Thank you.

Mr. SIMPSON. And we will look at those as we try and put this bill together. Thank you.

Mr. Huizenga.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. BILL HUIZENGA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. HUIZENGA. Mr. Chairman, thank you.

Mr. SIMPSON. Good to be here. Thank you.

Mr. HUIZENGA. It is very good to be here. We are all set.

Mr. SIMPSON. Yours for 5 minutes.

Mr. HUIZENGA. Well, thank you, Mr. Chairman. I deeply appreciate the opportunity to be here in front of you, and Ranking Member Kaptur as well, and the rest of the members of the committee. This is, I think, a very important issue and why I come before you today.

I have been very grateful for our work together over the last number of years in efforts to increase the Army Corps of Engineers' harbor maintenance funding, and I think it is important to note that the Consolidated Appropriations Act for 2016 allocated \$1.263 billion for harbor maintenance, meeting of the congressional target overwhelmingly supported from the Water Resources Reform and Development Act of 2014, and I thank you for that—that work on that.

And while I do believe that that is a very strong step in the right direction, the funding level will represent only 69 percent of the harbor maintenance taxes actually collected, and I believe that full use of the harbor maintenance trust fund is urgently needed to support critical maritime economic activity, especially as we are talking about increasing our infrastructure needs here in the United States, or addressing our infrastructure needs here in the United States. And through that glide path that was established in WRRDA, Congress committed to achieve full use of the Harbor Maintenance Trust Fund through incremental increases over a 10-year period.

It is in this spirit that I urge the House Appropriations Committee to stay on a path to full utilization of the Trust Fund and to allocate \$1.333 billion for harbor maintenance in fiscal year 2018. That figure would represent 74 percent of the estimated harbor maintenance taxes collected this past year in 2017.

And during my first year in Congress, our ports and navigation channels were maintained at just 47 percent of the revenue collected through the HMFT, and having a 74 percent target, obviously, would show just how far that we have come. And by following the authorized glide path, we stopped adding to the maintenance dredging backlog. We had had a growing backlog of harbors that needed to be maintained; however, much more work does need

to be done, and I should point that—point out that oftentimes, the Great Lakes doesn't think of—isn't thought of as coastal, or as shipping, or important, but it is a multibillion dollar blue economy that those of us in the Great Lakes region experience every day, and we know the vital importance of having those ports for the economic vitality not only of our States or our region, but frankly, our country and our standing throughout the world.

And it was with great pleasure that I had a chance to work with Janice Hahn, previously from Los Angeles on this issue, and it was sort of strange bedfellows that had come together on that, but we made a good team because we were able to make that argument for the entire country.

Well, tomorrow, the American Society for Civil Engineers will issue their infrastructure report card, and their last report card gave our water freight movement infrastructure a D for navigation channels, and a B for our ports, and tomorrow's grade, we anticipate, will frankly show very few improvements. The inefficiencies resulting from poorly maintained harbors drive up the cost of U.S. exports and imports, which threaten U.S. economic growth, and we can't sell more Made-in-America products, frankly, if we can't have them leave our harbors.

And while many transportation infrastructure programs are struggling to identify beneficiary paid revenue streams to meet those needs, maritime commerce has been paying enough to meet the operations and maintenance of all Federally-authorized harbors for decades. In fact, this funding is especially vital for 140 Federally maintained commercial and recreational ports and harbors in the Great Lakes, many of which are facing a crisis. In fact, 92 of those harbors have not been Federally maintained in years because of a lack of funding directed in that area.

At the same time, the Harbor Maintenance Trust Fund has a balance of nearly \$10 billion, and I believe that instead of increasing the balance of the Trust Fund or spending the money elsewhere, I urge you to dedicate our Harbor Maintenance Trust Fund tax revenue for its intended purpose, and enough of that has been collected, as I had said, that we would be able to deal with those harbors throughout the country, ranging from the Pacific Northwest to the Gulf Coast to the Port of Long Beach to Muskegon, Michigan, which is in my district.

So Chairman Simpson and Ranking Member Kaptur, and the rest of the members, I really do appreciate this opportunity to be in front of you today and to make our case. Thank you.

[The information follows:]

Energy and Water Development Appropriations Member Day Hearing

Remarks as prepared for Rep. Huizenga on March 3, 2017

- Thank you Chairman Simpson, Ranking Member Kaptur, and members of the Energy and Water Development Subcommittee for allowing members to share their priorities and the needs of their district at this member day hearing.
- Harbors and navigation channels are a vital part of our nation's transportation infrastructure and a reduction in their capacity can have significant impacts on local communities, from the coasts to the Great Lakes.
- I am grateful for your efforts to increase U.S. Army Corps of Engineers harbor maintenance funding in recent Energy and Water Development appropriations bills.
- The Consolidated Appropriations Act for 2016 allocated \$1.263 billion for harbor maintenance, meeting the target Congress overwhelmingly supported from the Water Resources Reform and Development Act of 2014.
- While this is a strong step in the right direction, the funding level only represented 69% of the harbor maintenance taxes collected.
- Full use of the Harbor Maintenance Trust Fund is urgently needed to support critical maritime economic activity.
- Through a glide path established in WRDA, Congress committed to achieve full use of the Harbor Maintenance Trust Fund through incremental increases over a ten-year period.
- It is with this spirit that I urge the House Appropriations Committee to stay on the path to full utilization of the trust fund and allocate \$1.333 billion for harbor maintenance in fiscal year 2018. This figure represents 74% of the estimated harbor maintenance taxes collected in 2017.
- During my first year in Congress, our ports and navigation channels were maintained with just 47% of the revenue collected into the Harbor Maintenance Trust Fund. Having a 74% target for fiscal year 2018 shows just how far we have come.
- By following the authorized glide path, we have stopped adding to the maintenance dredging backlog. However, much more work needs to be done to return Federal navigation channels to full width and depth.
- Tomorrow, the American Society for Civil Engineers will issue their Infrastructure Report Card. Their last report gave waterside freight movement infrastructure a 'D' for navigation channels and a 'B' for ports. Tomorrow's grade will show very few improvements.

- U.S. ports serve as a critical link to connect U.S. manufacturers, farmers, and businesses with markets around the world and are indispensable to making the exports of U.S. goods cost-competitive.
- The inefficiencies resulting from poorly maintained harbors drive up the cost of U.S. exports and imports, which threatens U.S. economic growth. We can't sell more Made-in-America products if they can't leave our harbors!
- While many transportation infrastructure programs are struggling to identify beneficiary-paid revenue streams to meet their needs, maritime commerce has been paying enough to meet the operations and maintenance needs of all federally-authorized harbors for decades.
- This funding is especially vital for the 140 federally maintained commercial and recreational ports and harbors in the Great Lakes, many of which are facing a crisis.
- However, 92 of these harbors have not been federally maintained in many years because of a lack of funding.
- At the same time, the Harbor Maintenance Trust Fund has a balance of nearly \$10 billion.
- Instead of increasing the balance of the Trust Fund or spending the money elsewhere, I urge you to dedicate harbor maintenance tax revenue for its intended purpose.
- Enough Harbor Maintenance Tax revenue is collected each year to meet the nation's annual authorized harbor maintenance needs for harbors of all sizes in all regions of our country - from the Pacific Northwest to the Gulf Coast and from the Port of Long Beach to Pentwater, Michigan.
- I am not asking you to fund all of our nation's maritime transportation needs today, but I am urging you to continue on a steady path of incremental funding increases that will soon unlock all of our navigation channels for the free flow of commerce.
- Chairman Simpson, Ranking Member Kaptur, and members of the Subcommittee – Thank you again for offering this opportunity and for working with us to maintain our nation's ports and harbors.

Mr. SIMPSON. Thank you for your testimony, Bill, and thank you for your past work on the Harbor Maintenance Trust Fund. We have had many discussions on this and how we can address it. And as you know, I am a supporter of trying to be able to use the full breadth of the Harbor Maintenance Trust Fund, and somehow relieve it from the budget caps and the weird budgeting rules we sometimes create for ourselves, because if you are only using 74 percent of it and you still have a need out there that means you took 26 percent in the bank—

Mr. HUIZENGA. Yeah.

Mr. SIMPSON [continuing]. And not using it to address the need that you are taxing for us, so it just doesn't make sense. But we still have a ways to go into convincing some of our colleagues that we need to take it off budget, but still subject to appropriation. So I appreciate your work on that.

Mr. HUIZENGA. Thank you, Mr. Chairman. I appreciate that, and I look forward to working with you and the ranking member on this issue continually, so thank you.

Mr. SIMPSON. Further questions?

Ms. KAPTUR. Mr. Chairman, I just wanted to thank Congressman Huizenga for testifying today and being a very strong advocate for proper investment in our ports and waterways, and particularly because the waterborne commerce and transport is the most cost effective means of moving both cargo and people. I guess I have often wondered why we haven't paid more attention to that. We seem to figure out, well, at least partly, how to do roads and bridges, but when it comes to waterborne with our four coasts, we often neglect the Great Lakes, in particular, so I just thank you very much for coming and testifying today, and I know that our chairman is very open to working on both sides of the aisle, and hopefully we will make a difference this year on the Harbor Maintenance Trust Fund. Thank you.

Mr. HUIZENGA. All right. Thank you.

Mr. SIMPSON. Thank you for appearing here today. Congressman Diaz Barragán. Is that right? Did I pronounce that correctly?

WEDNESDAY, MARCH 8, 2017.

WITNESS

**HON. NANETTE DIAZ BARRAGÁN, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF CALIFORNIA**

Ms. BARRAGÁN. Yes.

Mr. SIMPSON. Okay. The floor is yours.

Ms. BARRAGÁN. Thank you, Chairman Simpson, Ranking Member Kaptur, and members of the Energy and Water Subcommittee. I want to thank you for allowing me the opportunity to speak to you this morning. I am going to echo some of my colleague that we just heard from.

I represent California's 44th congressional district. It is the seat that used to be held by Janice Hahn. It includes areas like San Pedro, Compton, and Watts, and it, most notably, has the Port of Los Angeles in the district. It is North America's largest seaport by

container volume and cargo value, and I am proud to have that in my district.

I am proud to represent the thousands of workers that are directly and indirectly associated with the Port of Los Angeles. It is the largest economic engine in the region, and it touches every single congressional district in this country. The San Pedro Bay Ports Complex, which includes both the Port of L.A. and Long Beach, accounts for one-quarter of the Nation's cargo and supports over 3 million jobs nationwide. As we mentioned, the goods that pass through the San Pedro Bay Port Complex touch nearly every facet of this country.

In 2016, the Port of L.A. had its best year in its 110-year history. As our economy grows—continues to grow, so do the size of vessels and freight volumes. When you couple these factors with growing international competition and the fact that the American Society of Civil Engineers gave our ports a C in their report card, it is apparent that more must be done to improve our infrastructure for ports and harbors.

My message today is simple: I urge this esteemed subcommittee to fund the U.S. Army Corps of Engineers' navigation program at \$2.9 billion for fiscal year 2018 and 2017. Specifically, I urge you to fund the donor ports at \$50 million, and to hit the Harbor Maintenance Trust Fund expenditure targets for both fiscal years 2018 and 2017, so that we can remain on the path to utilize 100 percent of the Harbor Maintenance Trust Fund revenues by fiscal year 2025 and thereafter.

In June of 2014, the bipartisan Water Resources Reform and Development Act, also known as WRRDA, was enacted into law. You know, one of the most thoughtful provisions of this law was section 2106, which expand the use of the Harbor Maintenance Trust Fund for donor ports, for ports such as Los Angeles. As you know, in the case of donor ports, Harbor Maintenance Funds do not return to the States and harbors where the taxes are collected.

For example, in California, California receives only 15 percent back of what the shippers at our harbors pay into the Harbor Maintenance Trust Fund. The San Pedro Bay Ports Complex is among the largest collectors of Harbor Maintenance tax funds with an average of \$200 million each year, but we receive only 1 percent back.

Section 2106 of WRRDA addresses some of these tax fairness and donor equity issues. The section also authorized appropriations of \$50 million for each of the fiscal year's 2015 through 2018. Donor ports are authorized to use these discretionary funds for expanded uses, including berths and dredging of contaminated sediments, environmental remediation, or payments to importers or shippers transporting cargo through that port.

The section 2101 of WRRDA sets targets expenditures from the Harbor Maintenance Trust Fund increasing each year so that fiscal year 2025 and each thereafter, 100 percent of the taxes collected will go towards the intended purpose and operation of maintenance activities.

A full utilization of the Harbor Maintenance tax will only occur, however, if the level of appropriations for the Civil Works Program

of the U.S. Army Corps of Engineers is at the fiscal year is increased.

In fiscal year 2016, Congress appropriated \$25 million in donor ports, of which slightly over \$3 million were allocated to the Port of Los Angeles for critical berth maintenance dredging. For fiscal year 2017, the Senate bill contained \$50 million for donor ports, while the House bill only contained \$10 million.

I urge the subcommittee to help our Nation stay internationally competitive by funding donor ports at \$50 million for both fiscal years 2018 and 2017, and to hit the Harbor Maintenance Trust Fund expenditure targets. I thank you, again, for the opportunity to speak before you today.

[The information follows:]

U.S. Representative Nanette Diaz Barragán (CA-44)
Testimony
House Appropriations Subcommittee on Energy and Water
March 8, 2017

Chairman Simpson, Ranking Member Kaptur and Members of the Energy and Water Subcommittee, I want to thank you for allowing me the opportunity to provide testimony today.

I am Nanette Diaz Barragán and I represent California's 44th congressional district which includes San Pedro, Wilmington, South Gate, Watts, Compton and North Long Beach.

Most notably, the Port of Los Angeles, North America's largest seaport by container volume and cargo value, is in my district.

I am proud to represent the thousands of workers that are directly and indirectly associated with the Port of Los Angeles, Southern California's economic engine.

The San Pedro Bay Ports Complex, which includes both the Ports of Los Angeles and Long Beach, accounts for one quarter of the nation's cargo and supports over 3 million jobs nationwide.

The goods that pass through the San Pedro Bay Ports complex touch nearly every corner of this great land of ours and every facet of American life.

In 2016, the Port of Los Angeles had its best year in its 110-year history and as our economy continues to grow so do the size of vessels and freight volumes.

When you couple these factors with growing international competition and the fact that the American Society of Civil Engineers gave our ports a "C" in their report card, it is apparent that more must be done to improve our infrastructure for ports and harbors.

My message today is simple: I urge this esteemed Subcommittee to fund the U.S. Army Corps of Engineers Navigation Program at \$2.9 billion dollars for Fiscal Year 2018 and 2017.

Specifically, I urge you to fund "Donor Ports" at \$50 million and to hit the Harbor Maintenance Trust Fund expenditure targets for both Fiscal Years 2018 (74%) and 2017 (71%) so that we can remain on the path to utilize 100 percent of Harbor Maintenance Trust Fund revenues by Fiscal Year 2025 and thereafter.

In June of 2014, the bipartisan Water Resources Reform and Development Act also known as "WRRDA" was enacted into law.

One of the most thoughtful provisions in this law was Section 2106 which expands the uses of the Harbor Maintenance Trust Fund for donor ports such as the Port of Los Angeles.

As you know, in the case of donor ports, Harbor Maintenance Funds do not return to the states and harbors where the taxes are collected.

For example, California receives only 15 percent back of what the shippers at our harbors pay into the Harbor Maintenance Trust Fund. The San Pedro Bay Port Complex is among the largest collectors of Harbor Maintenance Tax Funds, with an average of \$250 million each year, but receives less than 1 percent back.

Section 2106 of WRRDA addressed some of these tax fairness and donor equity issues.

Section 2106 also authorized appropriations of \$50 million for each of fiscal years 2015 through 2018.

Donor ports are authorized to use these discretionary appropriations for expanded uses including berths and the dredging of contaminated sediments, environmental remediation or payments to importers or shippers transporting cargo through that port.

Section 2101 of WRRDA set target expenditures from the Harbor Maintenance Trust Fund, increasing each year so that by Fiscal Year 2025 and each year thereafter, 100 percent of the taxes collected go towards the intended purpose of operation and maintenance activities.

Full utilization of the Harbor Maintenance Tax will only occur, however, if the level of appropriations for the Civil Works program of the U.S. Army Corps of Engineers in that fiscal year is increased.

In Fiscal Year 2016, Congress appropriated \$25 million to donor ports, of which slightly over \$3 million dollars were allocated to the Port of Los Angeles for critical berth maintenance dredging.

For Fiscal Year 2017, the Senate bill contained \$50 million for donor ports while the House bill only contained \$10 million.

I urge the Subcommittee to help our nation stay internationally competitive by funding donor ports at \$50 million dollars for both Fiscal Years 2018 and 2017 and to hit the Harbor Maintenance Trust Fund expenditure targets.

I thank the Chair, Ranking Member and the rest of the Subcommittee members for their time.

Mr. SIMPSON. Thank you for your testimony. Are there questions? Ken.

Mr. CALVERT. Yeah, I appreciate your coming in and testifying. I knew your predecessor quite well. We had those discussions often about the Harbor Maintenance account, and also about maybe expanding the definition of the Harbor Maintenance account to go beyond the port facility because part of the problem with a part of—on the part of the Port of L.A./Long Beach, is getting the freight out and down the Alameda corridor, which we never really completed east of Los Angeles and down to the—and down and out of the L.A. Basin and through the Inland Empire, where we can move that freight out because right now, we just have an overload of freight that is backed up along the main rail corridors, and a lot of that is grade separations and the rest that need to be improved.

So maybe in the future, Mr. Chairman, we can work together on what the Congresswoman brought up, and also about the improvements on those rail lines. Mr. Aguilar has the same problem in his district, so it is an issue that we need to address.

Mr. SIMPSON. I appreciate that and would be happy to work with you on it. Thank you for you testimony.

Ms. BARRAGÁN. Thank you.

Mr. SIMPSON. You bet. Congressman Crawford.

WEDNESDAY, MARCH 8, 2017.

WITNESS

**HON. ERIC A. "RICK" CRAWFORD, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF ARKANSAS**

Mr. CRAWFORD. Yes, sir. Chairman Simpson, Ranking Member Kaptur, and members of the Energy and Water Subcommittee, thank you for allowing me to appear before you today to provide testimony on the importance of Army Corps of Engineer project funding to the First District of Arkansas.

As you know, the Mississippi River and Tributaries Project, or MR&T, is the largest flood control project in the world. MR&T plays an integral role in protecting the Lower Mississippi Valley from devastating floods and enables continuous navigation along the Mississippi River and its tributaries.

Since its inception in 1928, taxpayers have received a \$46 return for every dollar invested in this project, while preventing \$612 billion in flood damages and protecting 4 million residents of the Lower Mississippi River Valley. MR&T also promotes navigation along the river and its tributaries, and helps support a vibrant and agriculture economy. Over 500 million tons of cargo move on the Mississippi River system each year, saving billions of dollars in domestic transportation costs, and giving U.S. businesses a competitive advantage in the global marketplace.

I appreciate the continued support this subcommittee provides for MR&T, and I understand that our current fiscal environment forces us to carefully evaluate where each dollar goes. For MR&T to meet its current challenges, an increase in funding over the current CR funding level of \$290 million is needed for the program to

reach its full capability to protect lives, property, and to support commerce.

To achieve its objectives, MR&T requires funding of approximately \$500 million. While I recognize the challenging environment of fiscal restraint, I believe that Congress must prioritize the projects that provide taxpayers the best return on their investment. There are few government-funded programs that can boast a 46-to-1 return.

MR&T also supports critical water supply projects needed to alleviate the alarming rate of aquifer depletion in the mid-south region. Examples include the Grand Prairie and Bayou Meto surface water projects that are currently under construction in my district. These projects are critical infrastructure investments designed to address the depletion of the Alluvial and Sparta aquifers. The loss of these aquifers would not only result in a severe disruption in the agriculture economy of the Delta region, but municipal and other industrial water uses would also be severely impacted.

The U.S. Army Corps predicts the Alluvial aquifer will be commercially useless in the near future, and as a result, 66 percent of the Bayou Meto project area will no longer have access to irrigation, while 77 percent of the Grand Prairie project will no longer be able to irrigate.

Unless we deal with this problem now, there will be water crisis in the future that will strike a severe blow to the economy and quality of life in the already distressed Arkansas Delta region. I imagine many of the members of the subcommittee face groundwater problems in the districts they represent, but it is important to note that unlike many Western States, the State of Arkansas does not have access to targeted Federal groundwater protection programs such as those operated by the Bureau of Reclamation.

Quite simply, there are no viable alternatives available to my constituents. While we have not yet seen a detailed fiscal year 2018 presidential budget, I am requesting this committee work with me and my staff to find ways to provide water infrastructure projects and adequate funding stream, including potentially revising the report language that authorized expenditures for ongoing work under the MR&T budget.

Last year, the water supply projects in my strict barely received enough funding to satisfy existing contractual obligations and staffing needs. Hardly any progress was made on project construction, and we currently find ourselves in a protracted holding pattern with no end in sight. The longer the construction process is drawn out, the more costly these projects become to the taxpayer. The current rate of progress is unsustainable.

I understand that the Appropriations Committee has limited resources available, and I certainly applaud the work you are doing to support critical water infrastructure projects. I am very grateful for the subcommittee's continued support for the Army Corps' vital work in the Lower Mississippi River Valley. Please do not hesitate to contact me or my staff as you work through the fiscal year 2018 appropriations process, and I thank you for allowing me the opportunity to testify.

[The information follows:]

**Testimony of Congressman Rick Crawford (AR-01)
before the House Subcommittee on Energy and Water Development
on the FY 18 U.S. Army Corps of Engineers Budget**

March 8, 2017

Chairman Simpson, Ranking Member Kaptur, and members of the Energy and Water Subcommittee:

Thank you for allowing me to appear before you today to provide testimony on the importance of Army Corps of Engineers project funding to the First District of Arkansas.

As you know, the Mississippi River and Tributaries Project, or MR&T, is the largest flood control project in the world. MR&T plays an integral role in protecting the Lower Mississippi Valley from devastating floods and enables continuous navigation along the Mississippi River and its tributaries. Since its inception in 1928, taxpayers have received a \$46 return for every dollar invested in this project, while preventing \$612 billion in flood damages and protecting 4 million residents of the lower Mississippi River Valley.

MR&T also promotes navigation along the river and its tributaries – and helps support a vibrant agriculture economy. Over 500 million tons of cargo move on the Mississippi River system each year, saving billions of dollars in domestic transportation costs and giving U.S. businesses a competitive advantage in the global marketplace.

I appreciate the continued support this subcommittee provides for MR&T, and I understand that our current fiscal environment forces us to carefully evaluate where each dollar goes. For MR&T to meet its current challenges, an increase in funding over the current CR funding level of \$290 million is needed for the program to reach its full capability to protect lives, property, and to support commerce. To achieve its objectives, MR&T requires funding of approximately \$500 million. While I recognize the challenging environment of fiscal restraint, I believe that Congress must prioritize the projects that provide taxpayers the best return on their investment. There are few government-funded programs that can boast a 46 to 1 return.

MR&T also supports critical water supply projects needed to alleviate the alarming rate of aquifer depletion in the Midsouth region. Examples include the Grand Prairie and Bayou Meto surface water projects that are currently under construction in my district. These projects are critical infrastructure investments designed to address the depletion of the Alluvial and Sparta aquifers. The loss of these aquifers would not only result in a severe disruption in the agriculture economy of the Delta Region, but municipal and other industrial water uses would also be severely impacted. The US Army Corps predicts the Alluvial Aquifer will be commercially useless in the near future, and as a result, 66 percent of the Bayou Meto project area will no longer have access to irrigation while 77 percent of the Grand Prairie project area will no longer be able to irrigate.

Unless we deal with this problem now, there will be a water crisis in the future that will strike a severe blow to the economy and quality of life in the already-distressed Arkansas Delta region. I

imagine many of the Members of the Subcommittee face groundwater problems in the districts they represent. But it's important to note is that unlike many Western states, the State of Arkansas does not have access to targeted federal groundwater protection programs, such as those operated by the Bureau of Reclamation. Quite simply, there are no viable alternatives available to my constituents.

While we have not yet seen a detailed FY18 Presidential budget, I am requesting this Committee work with me and my staff to find ways to provide water infrastructure projects an adequate funding stream, including potentially revising the Report Language that authorized expenditures for ongoing work under the MR&T budget.

Last year, the water supply projects in my district barely received enough funding to satisfy existing contractual obligations and staffing needs. Hardly any progress was made on project construction and we currently find ourselves in a protracted holding pattern with no end in sight. The longer the construction process is drawn out, the more costly these projects become to the taxpayer. The current rate of progress is unsustainable.

I understand that the Appropriations Committee has limited resources available, and I applaud the work you're doing to support critical water infrastructure projects. I am very grateful for the Subcommittee's continued support for the Army Corps' vital work in the lower Mississippi River Valley. Please do not hesitate to contact me or my staff as you work through the FY 18 appropriation process.

Thank you for allowing me to testify.

Mr. SIMPSON. Thank you for being here today. Questions?

Ms. KAPTUR. I do have a question, Mr. Chairman, of Representative Crawford, and that is I am from the State of Ohio, and the entire Great Lakes system is threatened by something called the Asian carp.

Mr. CRAWFORD. Yes, ma'am.

Ms. KAPTUR. How do you look upon that issue in your part of our country?

Mr. CRAWFORD. Well, it is actually a very challenging issue, and unfortunately, the introduction of the Asian carp came about as a result of Fish and Wildlife and a management decision they made down in my neck of the woods and without the knowledge of what could happen, and now we see them invading the Great Lakes. They are a very prolific reproductive species.

We are looking at potential commercial uses to harvest the Asian carp and find some—find a market in China. There is actually a market for that fish, and there are other markets available, but it is going to continue to be a challenging problem for us, not only in the Lower Mississippi, but as you have seen, it has migrated north into your area.

Ms. KAPTUR. We have to deal with it in your part of the country in order to prevent it spreading north.

Mr. CRAWFORD. Absolutely.

Ms. KAPTUR. And I know there are different actions being undertaken, but it is completely frightening to our maritime—

Mr. CRAWFORD. It absolutely is.

Ms. KAPTUR [continuing]. And recreational activities up in the Great Lakes.

Mr. CRAWFORD. Well, they are dangerous, quite frankly. They pose a physical threat. I mean, they can jump into the boat, if that is not bad enough, and they do that routinely. But there have been documented cases of severe harm and, even death, by hitting individuals on boats because they are big and they are pretty aggressive feeders.

Ms. KAPTUR. I would hope Representative Crawford and our chairman, who has always been open to our concerns, as we look at this entire Mississippi River corridor, that we assure the various departments and agencies that the State and Federal levels are doing a better job because that is really coming north.

Mr. CRAWFORD. I am glad you brought that up because it certainly is a challenge for us, and in my geography, and it is not stopping there.

Ms. KAPTUR. We almost need an Asian carp task force that—along the entire length of the Mississippi.

Mr. CRAWFORD. That is not a bad idea, and I would be willing to serve on that if such a task force were stood up.

Ms. KAPTUR. Thank you. You have experienced them first. All right. Thank you so very much. Thanks, Mr. Chairman.

Mr. SIMPSON. Thank you. Thank you, Mr. Crawford, for being here today, and we will certainly look forward to working with you and your staff when we start putting this thing together. Thank you.

Mr. Green, welcome.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. GREEN. Thank you, Mr. Chairman and ranking member and members of the committee. I want—

Mr. SIMPSON. Could you turn your microphone on?

Mr. GREEN. Because over my years in Congress, we have worked together on a lot of issues. I represent a very urban district in Houston, but it includes about half of the Port of Houston, and I appreciate your consideration over the last 25 years or so.

Our district is home to the Port of Houston. I share that with Congressman Brian Babin, and the Port of Houston is one of—the number one export terminal in the country. Our port is the major economic engine for eastern Harris County in Texas, responsible for over 56,000 direct jobs, and over \$5 billion in State and local tax revenue from business related to the port.

In order for the Port of Houston and other port facilities in the United States to grow and support economic activity throughout the country, it is critical for Congress to significantly increase funding for the maintenance and dredging operations for the U.S. Army Corps of Engineers for fiscal year 2018. Increasing funding to the Corps—Army Corps civil works operations and maintenance account is the only way to ensure that the Port of Houston is dredged to the authorized depth of 45 feet, and will be able to accommodate the post-Panamax vessels that are larger and are becoming the international norm for maritime container shipping. The same is true to ports along the Gulf Coast, the Atlantic seaboard, who rely on the Army Corps, dredging to keep our terminals open for business.

The other issue in our district and neighboring communities in Harris County surrounding are severely impacted by flooding in recent years. In the past 2 years, the greater Houston region has suffered from two catastrophic flood events on Memorial Day of 2015, and as we call it Tax Day of last year, 2016, that killed 17 local residents and caused billions of dollars in damages.

In fact, many people in Houston directly affected by the 2016 Tax Day flood have only recently recovered from the previous year's flood. In response to the growing frequency of catastrophic flooding in the Houston, Harris County area, my colleagues, Congressman Al Green, Congressman John Culberson, and I, along with 100 other Members of Congress, introduced legislation last year to authorize \$311 million in emergency appropriations for flood control projects. That \$311 million, or the projects that have been approved by the Corps, but we haven't been able to fund, and again, we share 10 Members of Congress around the Houston area, and flooding doesn't matter. It gets all of us because we are the coastal plain, and I have bayous and rivers that go through my area, and we are fortunate to have them, although they do silt up our port, too. That is why we have to dredge.

The legislation was not enacted, and—but it showed the support, and I would urge the subcommittee to significantly increase the Corps of Engineers' Flood Control and Coastal Emergencies Ac-

count. A robust increase in Corps—Army Corps flood projects would greatly benefit communities in Houston and along the Gulf Coast who live in constant fear when the next flood will strike and save billions of dollars in property protected from flood damage.

And again, I want to thank you for the opportunity to testify, and, again, thank you for the relationship our—I have had with this subcommittee for many years. I would be glad to answer any questions.

[The information follows:]

**Testimony for Rep. Gene Green
Member Request Before the Energy-Water Development Subcommittee
March 8, 2017**

Chairman Simpson, Ranking Member Kaptur, and Members of the Energy-Water Development Subcommittee, I thank you for the opportunity to testify this morning.

My name is Gene Green. I have the great honor of representing the 29th District of Texas. The 29th District is a hard-working, minority-majority community in Houston and eastern Harris County.

The 29th District is home to the Port of Houston. The Port of Houston is the number one export terminal in the country. Our port is the major economic engine for eastern Harris County, responsible for over 56,000 direct jobs and over \$5 billion in state and local tax revenue from business activity related to the port.

In order for the Port of Houston, and other port facilities in the United States to grow and support economic activity throughout the country, it is critical that Congress significantly increase funding for maintenance and dredging operations by the U.S. Army Corps of Engineers (USACE) for the 2018 Fiscal Year.

Increasing funding for the Army Corps Civil Works Operations and Maintenance account is the only way to ensure that the Port of Houston is dredged to the authorized depth of 45 feet and will be able to accommodate post-Panamax vessels that are larger and are becoming the international norm for maritime container shipping.

The same is true for ports all along the Gulf Coast and the Atlantic Seaboard, who rely on Army Corps dredging to keep their terminals open for business.

The 29th District and neighboring communities in Harris and surrounding counties have been severely impacted by flooding in recent years.

In the past two years, the Greater Houston Region has suffered from two catastrophic flood events on Memorial Day in 2015 and on Tax Day last year that killed 17 local residents and caused billions of dollars in damages. In fact, many people in Houston directly affected by the 2016 Tax Day flood had only recently recovered from the previous year's flood.

In response to the growing frequency of catastrophic flooding in Houston and Harris County, my colleagues Congressman Al Green, Congressman John Culberson and I introduced legislation last year to authorize \$311 million in emergency appropriations for flood control projects.

That legislation, while not enacted, was cosponsored by over 100 House Members and received strong support from the local business community.

For the 2018 Fiscal Year, I urge this subcommittee to significantly increase the U.S. Army Corps of Engineers' Flood Control and Coastal Emergencies (FCCE) Account.

A robust increase in Army Corps flood control projects would greatly benefit communities in Houston and along the Gulf Coast who live in constant fear of when the next flood will strike next and save billions of dollars in property protected from flood damage.

Thank you all again for the opportunity to testify this morning. Please contact me if I can be of any assistance on these important matters.

Mr. SIMPSON. Thank you, Congressman. I appreciate you being here today, and I know you have got a tough area down there with all the floods that has going on lately, and we look forward to working with you and the other Members from that area to try and address those concerns.

Mr. GREEN. Thank you, Mr. Chairman.

Mr. SIMPSON. Questions?

Ms. KAPTUR. I just want to echo the chairman's words there. Frankly, Houston has just been battered, your coastline over and over. I really congratulate your community, your citizenry for their stalwartness in face of all of that, and I know we will try to do everything we can to help.

Mr. GREEN. Thank you.

Mr. SIMPSON. Thank you for being here today.

Mr. GREEN. Thank you, Mr. Chairman.

Mr. SIMPSON. Mr. Carter.

WEDNESDAY, MARCH 8, 2017.

WITNESS

**HON. EARL L. "BUDDY" CARTER, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF GEORGIA**

Mr. CARTER. Thank you, Mr. Chairman, and it is an honor to be with you, and I thank all the committee members. I appreciate this opportunity to share my priorities and concerns for the First Congressional District of Georgia. It is an honor to represent a district that is so geographically diverse and rich in water resources. I look forward to working with you, Mr. Chairman, and the Energy and Water Subcommittee, to address a number of different challenges we are currently facing.

I would like to start by saying thank you. Thank you for your continued commitment to working with us to complete SHEP, the Savannah Harbor Expansion Project. As you know, it is the most exhaustively studied, deep-draft project in the Nation and represents a significant economic opportunity not just for coastal Georgia and the surrounding areas, but for the region as a whole. Under the Corps of Engineers' original cost estimate, the Federal Government's share would need to be roughly \$100 million annually to keep the project on track and on budget.

It is these major deep-draft navigational projects that will be the stimulus for growing our economy. For this reason, I am respectfully supporting a funding request that would ensure robust funding for the construction of deep-draft navigation projects across the country.

We are also fortunate to have one of the busiest roll-on/roll-off ports in the Nation. The Port of Brunswick has also seen tremendous growth with the majority of their increase being roll-on/roll-off in bulk cargo. While this is great news, it is not without difficulties. For years, we have worked with Corps of Engineers and the Georgia Ports Authority to deepen the river to authorize maintenance depth, but the Federal funding has been below needed levels.

In addition, compounding shoaling and natural disasters have created additional challenges for the operators of these ships. As a

result, I am supporting the need for better funding for maintenance projects across the Nation. With needed attention towards our Nation's operations and maintenance needs, we can keep our water-based infrastructure projects on track.

While I have touched on these two major ports, the issue of harbor maintenance is a concern that both this subcommittee and authorizers have addressed before with the Harbor Maintenance Trust Fund. As we seek to grow our economy, we need to have ports that can sustain adequate depths as we transition to the larger vessels making calls.

I know, Mr. Chairman, that you remain committed to finding a solution to this problem, and I look forward to working with you to remedy this situation. In addition to the previously mentioned projects, the Tybee Island Shore Protection Project is vital to protecting and sustaining the measures needed to keep the residents of Tybee Island safe from further severe weather events.

The recent damage caused by Hurricane Matthew was mitigated thanks to the dune protections that were in place. Phase 2 of the Savannah Channel Impact Study is important to assessing erosion along the shoreline, and to determine the steps necessary to reduce the impacts of future severe weather events.

I support sufficient funding under Additional Funding, Shore Protection Investigations, to ensure that Tybee Island, like many other communities, has the protection it needs to survive another disaster.

Mr. Chairman, I am extremely appreciative of the hard work that you and your colleagues on the subcommittee do in crafting the Energy and Waters Appropriations bill as we discuss infrastructure development and ways to stimulate our economy, and we need to look no further than the water-based infrastructure stimulating global trade. I deeply appreciate your attention to these matters, and thank you for the opportunity to provide this input.

Again, Mr. Chairman, I thank all of you for your work, you and your committee members for your work. These deep-draft navigational ports are extremely important, as you know, and I am not exaggerating when I say that SHEP, the Savannah Harbor Expansion Project, is the most, without question, the most investigated project that we have ever had. It is the most exhaustively studied deep water project that we have had. We have been doing this now for going on 20 years, and still haven't completed that project.

This is funding that we desperately need, not for the First District of Georgia, not only for the State of Georgia but for the whole southeast United States. This is an impact that we can have on the whole southeastern portion of the United States. I thank you, Mr. Chairman, and thank all of the committee members.

[The information follows:]

Member Name: Earl L. ‘Buddy’ Carter

District: First District of Georgia (GA-01)

Members’ Day Testimony – Subcommittee on Energy & Water Development

Thank you for this opportunity to share my priorities and concerns for the First Congressional District of Georgia. It’s an honor to represent a district that is so geographically diverse and rich in water resources. I look forward to working with you, Mr. Chairman, and the Energy & Water Subcommittee to address a number of the different challenges we’re currently facing.

I’d like to start by saying thank you for your continued commitment to working with us to complete the the Savannah Harbor Expansion Project. As you know, it is the most exhaustively studied deep-draft project in the nation and represents a significant economic opportunity not just for Coastal Georgia and the surrounding areas, but for the region as a whole. Under the Corps of Engineers’ original cost estimate, the federal government’s share would need to be roughly \$100 million annually to keep the project on track and on budget. It is these major deep-draft navigation projects that will be the stimulus for growing our economy. For this reason, I am respectfully supporting a funding request that would ensure robust funding for the construction of deep-draft navigation projects across the country.

We're also fortunate to have one of the busiest roll-on/roll-off ports in the nation. The Port of Brunswick has also seen tremendous growth with the majority of their increase being roll-on/roll-off and bulk cargo. While this is great news, it is not without difficulties. For years, we've worked with the Corps of Engineers and the Georgia Ports Authority to deepen the river to authorized maintenance depth, but the federal funding has been below needed levels. In addition, compounding shoaling and natural disasters have created additional challenges for the operators of those ships. As a result, I am supporting the need for better funding for maintenance projects across the nation. With needed attention towards our nation's operations & maintenance needs, we can keep our water-based infrastructure projects on track.

While I've touched on these two major ports, the issue of harbor maintenance is a concern that both this subcommittee and the authorizers have addressed before within the Harbor Maintenance Trust Fund. As we seek to grow our economy, we need to have ports that can sustain adequate depths as we transition to larger vessels making calls. I know, Mr. Chairman, that you remain committed to finding a solution to this problem and I look forward to working with you to remedy this situation.

In addition to the previously mentioned projects, the Tybee Island Shore Protection Project is vital to protecting and sustaining the measures needed to keep

the residents of Tybee Island safe from further severe weather events. The recent damage caused by Hurricane Matthew was mitigated thanks to the dune protections that were in place. Phase two of the Savannah Channel Impact Study is important to assessing erosion along the shoreline and to determine the steps necessary to reduce the impacts of future severe weather events. I support sufficient funding under Additional Funding – Shore Protection Investigations to ensure that Tybee Island, like many other communities, has the protection it needs to survive another disaster.

Mr. Chairman, I am extremely appreciative of the hard work you and your colleagues on the subcommittee do in crafting the Energy & Water Appropriations bill. As we discuss infrastructure development and ways to stimulate our economy, we need to look no further than the water-based infrastructure stimulating global trade. I deeply appreciate your attention to these matters and thank you for the opportunity to provide this input.

Mr. SIMPSON. Thank you for being here today, Mr. Carter. We appreciate it very much. Other questions?

Ms. KAPTUR. Mr. Chairman, I would just like to ask Congressman Carter—thank you for your excellent testimony.

Mr. CARTER. Sure.

Ms. KAPTUR. Could you just explain to us who don't come from your part of the country, how the changing nature of the ecosystem, the weather and everything has impacted your area? You talked about shoaling up, you talked about silting up, what is going on? In a bigger sense rather than just the port, the deep water port, what is happening in the region?

Mr. CARTER. Well, keep in mind where we are. If you know the geography of the United States, Savannah is somewhat inland. Remember that the—Florida comes up and then it kind of shifts east and goes—and the eastern shoreline goes up, so Savannah is accessible to more areas within the southeast, just because of our location on the coast.

We are more inland than the outer ports are, and that causes some problems, in and of itself, when you talk about some of the geographical problems that we have and some of the changes that we have, and particularly in the weather. It is both advantageous, and, at the same time, it can be a hindrance to us. It is advantageous because it makes us closer to a lot of the geographical areas and a lot of cities along the eastern seaboard, along the eastern United States. We don't have to travel as far to get there, but at the same time, it does cause a lot of silting and a lot of filling in of our ports, and we have to have a lot more maintenance.

Ms. KAPTUR. Is there more wave action, or what is happening?

Mr. CARTER. There is. Our tide shift in this particular area is more than just about anywhere else in the United States. We have alternating tides. We have tide shifts of 7, 8 feet at times, and that is just unheard of in other areas in the country.

Ms. KAPTUR. Thank you. Thank you, Mr. Chairman.

Mr. SIMPSON. Thank you. If there are no other questions, thank you, Mr. Carter. We appreciate it. We look forward to working with you on your—

Mr. CARTER. Thank you, Mr. Chairman. I appreciate you especially, and your help on this and all the committee members.

Mr. SIMPSON. You bet. Mr. Johnson, thank you for being here today.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. MIKE JOHNSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA

Mr. JOHNSON. Thank you, Chairman Simpson, and Ranking Member Kaptur, and my colleagues and distinguished members of the subcommittee. I want to thank you for this opportunity to testify in front of the Energy and Water Development Subcommittee on the importance of developing and maintaining Louisiana and the Nation's water infrastructure needs.

Today, I ask the committee to help fund dredging needs that will provide much-needed resources related to flooding and navigation benefit, and not forget the tremendous benefit that shallow draft waterways and ports have in bringing jobs back to the United States.

The role our inland waterway systems play is an integral part of our Nation's maritime system, and it is critically important to our prosperity as a country. In my district, Louisiana's Fourth District, some of our biggest challenges and yet some of our greatest opportunities revolve around port infrastructure and further development of the navigation of our rivers.

We have four shallow draft port authorities which service 485 miles of navigable waterways and shallow draft river miles. As many of you are aware, the Red River in northwest Louisiana experienced an historic flood, even in June of 2015, which affected 21 of our parishes. This flood, along with a series of other recent flooding events, have significantly damaged our navigation structures, and they are currently threatening the maintenance of the channel and the safety of our residents.

An immediate issue that was identified was how far off the actual river's flood stage crest was from the projected crest, which is based on a 1990 flood of record. The flood crest in 2015 was significantly higher than the flood crest in 1990, with less volume of water measured at the Shreveport gauge, which is our primary gauge there. The higher flood stage caused significant damage to homes and agricultural land and businesses, our oil and gas industry, and our public infrastructures.

In order to determine the reasons for these discrepancies, a sedimentation survey and hydraulic model from the Army Corps of Engineers is necessary. The \$1.5 million study is authorized under the existing J. Bennett Johnson Waterway Project, Construction's General Account. Unfortunately, only \$250,000 was allocated in fiscal year 2016. Robust funding is desperately needed to help projects such as this come to fruition.

If this survey and the model are not completed and analyzed, the 350,000 acres, and approximately 58,000 residents of the area, will continue to suffer from future flood events. It is imminent.

A second major issue concerns the protection of our major infrastructure. River levels have come within feet of entering many structures in Bossier City on the other side of the river from Shreveport. Due to the damaged river profile, it is highly likely that levees need to be raised and flood walls constructed to protect existing infrastructure.

FEMA has stated that the Federal methods used to regulate development of the special flood hazard areas would have to be re-evaluated due to ongoing discrepancies, which were on full display during the 2015 flood event. However, in true-to-form fashion, FEMA cannot provide a final base flood elevation, or BFE, or a flood insurance rate map, FIRM, it can't do those updates without the Corps' sedimentation study and the hydraulic model.

Funding the sedimentation survey would allow FEMA to do their job, and, thus, further protect the people of Louisiana by completing updates to the BFE and the FIRM. In addition to these studies, the Red River has several other immediate items which

were in need of Federal action and funding. I ask the committee to continue to work with me on the ongoing needs related to dredging so that river navigation for a 24/7 industry can be maintained.

These funding priorities will not only help protect constituents, but it will improve business development for opportunities not only for Louisiana, but also Texas and Arkansas. Navigation funds through the Corps are truly needed to ensure and maintain a 9 by 200-foot channel. Without this, businesses will not only take elsewhere to invest, those that already have invested in north Louisiana will probably leave.

The planned goal is to get a 12-foot river depth to ensure adequate competition with nearby rivers, such as the Mississippi and Arkansas Rivers. A request for an investigation to change the authorized depth from a 9-foot to a 12-foot channel has been initiated. Repair for damaged buoys, locks, and levees along the Red River are also needed.

The construction features of the J. Bennett Johnston Waterway Project are only 93 percent complete. The Alexandria Front Dike Reinforcement Construction project and the J.H. Overton Lock & Dam 2 Lower Approach project are examples of two that can compete for funding with the construction general account resources for these projects, and those will help to aid in completion of the J. Bennett Johnston Waterway.

A final example of where navigation funds are needed is the Ouchita-Black Rivers Navigation project. Previously, the fiscal year 2017 budget request for the navigation project was 8.5 million, and additional maintenance account funds will allow this project to compete for the additional funds necessary to keep the waterway open for commercial navigation in the next year.

I am out of time. I just want to strongly urge this subcommittee to invest in our ports and waterways so that our local communities can continue to build vibrant economies, and I stand ready to work with each of you and the administration in developing meaningful solutions to better maintain and enhance our Nation's vast water infrastructure system. And I am grateful for your time and your diligence on all these important needs.

[The information follows:]

Testimony of Congressman Mike Johnson (LA-04)
Submitted to the Appropriations Subcommittee on Energy and Water Development
March 6, 2017

Thank you Chairman Simpson, Ranking Member Kaptur, my colleagues and distinguished members of the subcommittee. I want to thank you for this opportunity to testify in front of the Energy and Water Development subcommittee on the importance of developing and maintaining Louisiana and the nation's water infrastructure needs.

Today I ask the committee to help fund dredging needs that will provide much needed resources related to flooding, navigation benefits, and not forget the tremendous benefit shallow-draft waterways and ports have in bringing jobs back to the United States. The role our inland waterway systems play is an integral part of our nation's maritime system and is critically important to our prosperity as a country. In Louisiana's Fourth District, some of our biggest challenges, and yet some of our greatest opportunities, revolve around port infrastructure and further development of the navigation of our rivers. There are 4 shallow draft port authorities which service 485 miles of navigable waterways and shallow draft river miles.

As many of you are aware, the Red River in Northwest Louisiana experienced a major flood event in June 2015 which affected 21 parishes. This flood, along with a series of other recent flooding events, have significantly damaged our navigation structures and are threatening the maintenance of the channel and the safety of Louisianans.

An immediate issue that was identified was how far off the actual river's flood stage crest was from the projected crest, which is based on the 1990 flood of record. The flood crest in 2015 was significantly higher than the flood crest in 1990 crest – with less volume of water measured at

the Shreveport gauge. The higher flood stage caused significant damage to homes, agricultural land, businesses, the oil and gas industry, and public infrastructures.

In order to determine the reasons for these discrepancies, **a Sedimentation Survey and Hydraulic Model from the Army Corps of Engineers is necessary.** The \$1.5 million study is authorized under the existing J. Bennett Johnston Waterway Project, Construction General Account. Unfortunately, only \$250,000 was allocated in FY 2016. Robust funding is needed to help projects such as this come to fruition. If this survey and model are not completed and analyzed, the 350,000 acres and approximately 58,000 residents will continue to suffer from future flood events.

A second major issue concerns the protection of major infrastructure. River levels have come within feet of entering structures in Bossier City. Due to the changed river profile, it is highly likely that levees need to be raised and flood walls constructed to protect existing infrastructure. FEMA has stated that the federal methods used to regulate development of Special Flood Hazard Areas would have to be re-evaluated due to ongoing discrepancies which were on full display during the 2015 flood event. **However, in true-to-form fashion, FEMA cannot provide a final Base Flood Elevation (BFE) or Flood Insurance Rate Maps (FIRM) update without the Corp's sedimentation study and hydraulic model.** Funding the Sedimentation Survey will allow FEMA to do their job and further protect the people of Louisiana by completing updates to the BFE and FIRM.

In addition to these studies, the Red River has several other immediate items which are in need of federal action and funding:

I ask the committee to continue to work with me on the ongoing needs related to dredging so that river navigation for a 24/7 industry can be maintained. These funding priorities will not only help protect constituents, but improve business development opportunities for Louisiana, Texas, and Arkansas. Navigation funds through the Corps are truly needed to ensure and maintain a 9' x 200' channel. Without this, businesses will not only pick elsewhere to invest, those that already have invested in North Louisiana will leave. The planned goal is getting to 12' river depths to ensure adequate competition with nearby rivers, such as the Mississippi and Arkansas rivers. A request for an investigation to change the authorized depth from 9' to 12' channel has been initiated. Repair for damaged buoys, locks, and levees along the Red River are also sorely needed.

The construction features of the J. Bennett Johnston Waterway project are only 93% complete. The Alexandria Front Dike Reinforcement Construction project and the J.H. Overton Lock & Dam 2 Lower Approach project are examples of two projects that can compete for funding within the Construction General Account. Resources for these projects will help to aid in completion of the J. Bennett Johnston Waterway.

Another example of where navigation funds are needed is the Ouchita-Black Rivers Navigation Project. Previously, the FY17 budget request for the navigation project was \$8.5 million. Additional maintenance account funds would allow this project to compete for the additional funds necessary to keep the waterway open for commercial navigation in the next year.

I strongly urge this subcommittee to invest in our ports and waterways so that our local communities can continue to build vibrant economies. I stand ready to work with each of you

and the Administration in developing meaningful solutions to better maintain and enhance our nation's vast water infrastructure system.

Mr. SIMPSON. Thank you, Mr. Johnson. I appreciate you being here today.

Mr. JOHNSON. Yes, sir.

Mr. SIMPSON. Other questions?

Ms. KAPTUR. Mr. Chairman, I gather we don't have another witness right away, so I am just going to take 30 seconds to—

Mr. SIMPSON. Okay.

Ms. KAPTUR [continuing]. Thank Congressman Johnson very much but to ask you if you have any theories about why the flood crest in 2015 was significantly higher than the flood crest in 1990. What is happening in your part of North America?

Mr. JOHNSON. It is an excellent question, and the subject of much conjecture in our district. The prevailing theory seems to be that sedimentation has settled on the bed of the river, and that the Army Corps did not take that into account when they set that flood level, and so it is a substantial rise.

We have lots of sedimentation on the Red River, and it has just built up over time, and so it was just something no one factored in apparently, as crazy as that sounds, and it was a gross underestimation. The—combine this flood with the flood that we had in south Louisiana several months later, we had the fourth most costly flood crises in American history in our State, and we are struggling to recover so—

Ms. KAPTUR. Are you getting more rainfall?

Mr. JOHNSON. Let's hope not catastrophic levels.

Ms. KAPTUR. I guess what I am saying, are you getting more rainfall in shorter periods of time or larger volumes of rainfall? Is that contributing to the problem or not?

Mr. JOHNSON. I don't know that that has been assessed to be the problem. I know there was an historic rainfall event in States just to our north, and, of course, it flowed down to us. And so it wasn't even really the rainfall levels in northwest Louisiana that caught us; it was rainfall in Missouri and Oklahoma and other areas, and it just came to us.

We are doing our best to prepare for future events, and we are deeply concerned, pun not intended, that we could have a catastrophic event if these things happen again, so—

Ms. KAPTUR. Thank you. Thank you very much, Mr. Chairman

Mr. SIMPSON. Thank you. Thank you for being here today. We appreciate your testimony, and we look forward to working with you and your staff.

Mr. JOHNSON. Thank you so much.

Mr. SIMPSON. You bet. We are going to be in recess for just a few minutes. We have three more people that are here to testify, and they should be here shortly. We should be done in the next 25 minutes or so when they get here, so we will take a brief recess until they come.

[Recess.]

Mr. SIMPSON. The committee will be back in order. Thank you, Mr. Wilson, for being here. We look forward to your testimony today. The floor is yours.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. JOE WILSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF SOUTH CAROLINA

Mr. WILSON. Mr. Chairman, thank you, and with Ranking Member Kaptur, what an honor to be here with both of you. This is kind of a show of bright faces here. Thank you. And then, excuse me, Congressman Fleischmann, too. I was not anticipating such extraordinary people, so thank you very much. I appreciate the opportunity to meet with you today.

First, I would like to thank Chairman Mike Simpson for his leadership as chairman of the House Appropriation Subcommittee on Energy and Water. I am grateful to represent South Carolina's Second Congressional District, a diverse and thriving community that is home to vital national security environmental cleanup missions.

Today, I will specifically address the necessity of fully resourcing the very positive and proven missions at the Savannah River site and the Aiken-Barnwell community that I represent adjacent to Augusta, Georgia. The Savannah River site is home to the mixed oxide fuel fabrication facility, MOX facility, a valuable part of our nonproliferation and nuclear security. The MOX facility is currently 70 percent completed, and when completed, will be the Nation's only facility that can convert weapons grade plutonium into green fuel. The—and bring the United States back in compliance with our international nonproliferation agreements.

I am confident that after examining MOX with clear unbiased data, it will be apparent that completing MOX is in the best interest of our national security. The Savannah River National Laboratory conducts cutting edge research supporting our Nation's ability to produce tritium, to monitor and detect capabilities for nuclear nonproliferation, and to conduct nuclear forensics. It researches and provides improved technologies for safely storing and transporting high-level radioactive waste.

Additionally, the laboratory continues to make advancements in electrical grid security, studying electromagnetic pulses, EMPs. The Savannah River site is home to other critical Department of Energy nuclear security and environmental cleanup missions as it safely processes Cold War era nuclear materials into stable materials that can be stored for later disposal.

Last year, the site completed construction of the salt waste processing facility, greatly enhancing the speed and efficiency of the remediation of high-level waste. Other critical facilities include H-Canyon, the Nation's only production scale nuclear chemical separations plant, and both K and L areas where—which safely store nuclear materials.

Now, all the missions at the Savannah River site are vital to bolstering our national security capability and safe environmental stewardship.

Since 1952, the Savannah River site has played a critical role in processing and disposing of high-level defense waste. However, the Savannah River site was never intended to be a long-term option for high-level waste. It lacks the ability to serve as a permanent

repository. The only viable permanent repository is Yucca Mountain, which is environmentally secure.

I strongly urge the Appropriations Committee to allocate funding specifically for the completion of Yucca Mountain license application. Abandoning Yucca Mountain in favor of a nonexistent alternative would leave the communities across the United States, including the South Carolina-Georgia Central Savannah River region to bear the burden of storing nuclear waste the Federal Government has promised to remove.

Additionally, American ratepayers have put enormous resources to completing the nuclear storage facility at Yucca Mountain, including \$1.5 billion from the ratepayers of South Carolina. I believe that the completion of the license application will highlight the technical merits and alleviate any environmental concerns for its neighbors.

I appreciate the difficult decisions the committee must make as we begin the appropriations process for fiscal year 2018. Thank you for your time. I urge you to continue supporting the vital missions at the Savannah River site and at Yucca Mountain. Thank you and would be happy to answer any questions.

[The information follows:]

Energy & Water Appropriations Testimony
Congressman Joe Wilson (SC-02)
March 8, 2017

I am grateful for the opportunity to meet with you today. First, I would like to thank Chairman Mike Simpson for his leadership as Chairman of the House Appropriations Subcommittee on Energy and Water.

I am grateful to represent South Carolina's Second Congressional District, a diverse and thriving community that is home to vital national security and environmental cleanup missions. Today, I will specifically address the necessity of fully resourcing the missions at the Savannah River Site in the Aiken-Barnwell community.

The Savannah River Site is home to the Mixed Oxide Fuel Fabrication Facility (MOX), a valuable part of our non-proliferation and nuclear security. The MOX facility is currently 70 percent complete and, when completed, will be the nation's only facility that can convert weapons-grade plutonium into green fuel. Completing MOX is a secure and sustainable option for weapons grade plutonium, and brings the United States back in compliance with our international nonproliferation agreements. I am confident that after examining MOX with clear, unbiased data, it will be apparent that completing MOX is in the best interest of our national security.

The Savannah River National Laboratory conducts cutting edge research, supporting our nation's ability to produce tritium, to monitor and detect capabilities for nuclear non-proliferation, and to conduct nuclear forensics. It researches and provides improved technologies for safely storing and transporting high-level radioactive waste. Additionally, the Laboratory continues to make advancements in electrical grid security and studying electromagnetic pulses (EMPs).

The Savannah River Site is home to other critical Department of Energy nuclear security and environmental cleanup missions as it safely processes Cold War era nuclear materials into stable materials that can be stored until disposal. Last year, the Site completed construction of the Salt Waste Processing facility, greatly enhancing the speed and efficiency of the remediation of high level waste. Other critical facilities include H-Canyon, the nation's only production scale nuclear chemical separations plant, and both K and L areas, which safely store nuclear materials. All of the missions at the Savannah River site are vital to bolstering our national nuclear capability and safe environmental stewardship.

Energy & Water Appropriations Testimony
Congressman Joe Wilson (SC-02)
March 8, 2017

Since 1952, the Savannah River Site has played a critical role in processing and disposing of high-level defense waste. However, the Savannah River Site was never intended to be a long-term option for high level waste—and lacks the ability to serve as a permanent repository. The only viable permanent repository is Yucca Mountain.

I strongly urge the Appropriations Committee to allocate funding specifically for the completion of Yucca Mountain license application. Abandoning Yucca Mountain in favor of a non-existent alternative would leave communities across the United States, including the South Carolina-Georgia Central Savannah River region, to bear the burden of storing nuclear waste the federal government has promised to remove. Additionally, American ratepayers have put enormous resources to completing the nuclear storage facility at Yucca Mountain. I believe that the completion of the license application will highlight the technical merits and alleviate any environmental concerns.

I appreciate the difficult decision the Committee must make as we begin the appropriations process for fiscal year 2018. Thank you for your time, and I urge you to continue supporting the vital missions at the Savannah River Site and at Yucca Mountain.

Thank you.

Mr. SIMPSON. Thank you, Congressman Wilson.

Mr. Fleischmann.

Mr. FLEISCHMANN. Yes. Congressman Wilson, I want to thank you for your advocacy today, and also, to let everyone here know, the EM mission nationally is so critically important. I know Savannah River has a project, Idaho has a project, Oakridge has literally decades worth of work, Hanford. We can literally look all across the country, and I would like to urge, as you have done, participation in our bipartisan nuclear cleanup caucus. It is one of the fastest growing caucuses in Congress. Ben Ray Luján is my cochairman. We work very well together to advocate, and when a particular site has either had a deficiency or has a need, we have been able to address that in a very effective way.

So thank you for your advocacy. Savannah River is a critically important site as is Oakridge, and I appreciate your testimony here today, sir.

Mr. WILSON. Thank you very much. And indeed, it is so positive to me to see the working relationships between the various sites across the Nation. It is really inspiring to see how positive it is and look forward to working with Congressman Luján, too. I have worked with him on a number of issues, and this can be bipartisan and positive for the national security of the people of the United States.

Mr. SIMPSON. Thank you, Mr. Wilson.

Ms. Kaptur.

Ms. KAPTUR. Thank you. I just wanted also to thank Congressman Wilson for testifying today and bringing forward the importance of waste—nuclear waste disposal. I am hoping that in any new infrastructure bill that is proposed that the cleanup issues will be also considered for inclusion and both for the types of waste that you specify in your testimony as well as spent ordinance, which is a big problem in many places in the country and other ingredients that have been a part of our defense and nuclear complex.

I think this could be a job creator. It is work that we have had backlogged on our accounts for years and years and years, and I think you could be an important voice in that. So along with the rest of us. So I just thank you very much for testifying this morning. I thank you, Mr. Chairman, for the time.

Mr. SIMPSON. Thank you, Mr. Wilson. Thanks for your testimony, and we look forward to working with you on this year's budget.

Mr. WILSON. Again, what leadership here. I am just honored to be in your presence. Thank you very much.

Mr. SIMPSON. Thank you. Again we will be in brief recess until our next witness comes.

[Recess.]

Mr. SIMPSON. The committee will be back in order. We are happy to have the Honorable Sheila Jackson Lee with us today. I look forward to your testimony. The floor is yours.

WEDNESDAY, MARCH 8, 2017.

WITNESS

HON. SHEILA JACKSON LEE, A REPRESENTATIVE IN CONGRESS FROM
THE STATE OF TEXAS

Ms. JACKSON LEE. Thank you very much to Mr. Simpson and Ms. Kaptur. Thank you to this committee for its work that I think strikes an enormously bipartisan and nonpartisan cord, because all of us are concerned about major elements of clean water, clean air, and certainly energy for this Nation. So I wish to highlight the energy, water, and U.S. Army Corps of Engineers programs, which warrant the committee's continued attention and support. I will speak quickly about some initial ones so that I can focus on something that I think you have seen me on the floor confronting, and that is the flooding in Houston, Harris County, and, certainly, flooding that we have seen over the last couple years around the country.

First of all, I support the \$1.26 billion for Harbor Maintenance Trust Fund. Particularly, Houston Port is a manmade port. We face these issues of continuing to have to maintain the port so that it is viable for the major vessels that come in. As you well know, through the opening of the Panama Canal in its full force, the Houston Port will become busier than ever, and the dredging that is necessary is crucial. We continue to debate the question of how much money we send to the United States and how much money we receive, but I support the \$1.26 billion for the importance, if you will, the importance of helping not only the Houston Port, but around the Nation. I support the \$230 million for the Weatherization Assistance Program. WAP helps low income seniors, and I support that greatly as it relates to their energy efficiency. I support \$2 million for the U.S.-Israel Energy Cooperation Program, robust funding for the DOE's Wind Energy Program in the State of Texas. We have taken wings, if I might say that.

The wind program is unbelievable to both the chairman and the ranking member. It is particularly outside of our urban centers. It is in our rural communities. Our farmers are welcoming the windmills and asking, how many more can be placed on my land while I continue to do my—the commitment to the agriculture business that I have? So I am really supportive of expanding this program as a continuing substitute, or complement, to energy needs in the United States.

I support \$2.9 billion for energy efficiency; \$5.672 billion for DOE Office of Science, in particular, working with the NIH and the President BRAIN Initiative, we will develop the next generation tools and technology to support research into the brain. I support \$84 million for the National Network for Manufacturing; support \$70 million for the State Energy Program.

And now to the U.S. Army Corps of Engineers. This is a lifeline in Harris County. We have the Harris County Flood Control District. We just had a report assessing that some of the work that we have done may have helped, or may be helping a neighborhood that has suffered flooding almost two years straight, with loss of life. And that is really striking in an urban area. This is a residential area where people were lost by their vehicles, either flooding into the bayou, which is what we have, or they themselves flooding into the bayou.

One particularly sad incident was firefighters who rescued two seniors and another individual. These seniors had just from come the graduation of their granddaughter, and because the storms

were so bad, the family said, why don't you head home, not wait till the program is over, and they, unfortunately, got flooded out, I think even as they were getting out of their car. They were rescued by firefighters, but the boat toppled over, and they—both of them lost their lives.

So this is in the urban area of Houston. And so the Army Corps of Engineers does vital work. The appropriations funds studies to determine the need, engineering feasibility, and economic and environmental return to the Nation of potential solutions to water and related land-resource problems, pre-construction engineering and design, and related data collection, interagency coordination research are very, very important. The Army Corps of Engineers plays a critical role, and it certainly is important to us.

I was pleased that the fiscal year 2017 energy and water spending bill provided that the Secretary of the Army may initiate up to six new studies, and that five of those studies should be in areas where the majority of benefits are derived. I am optimistic that these provisions will be retained in fiscal year 2018, and that one of these new studies selected will be the Houston Regional Watershed Assessment Flood Risk and Management Feasibility Study that I have advocated for. Such a study is certainly needed to give the frequency and severity of historic level flood events in recent years in and around the historic Houston metropolitan area. I have asked for this for \$3 million. We have never had a study of whether—how the bayous work together, and whether our improvements really work, and so this would be a great necessity.

Let me quickly try to conclude by noting on April 15, 2016, an estimated 240 billion gallons of water fell in the Houston area over a 12-hour period, which resulted in several areas exceeding the 100- to 500-year flood area. The May 2015 Houston flood destroyed 3,015 homes, left eight persons dead. The economic damage caused by the 2015 Houston flood is estimated at \$3 billion. The damage from 2016 is estimated at above \$2 billion. Not a hurricane; just rain. And our city is filled with bayous.

So, Mr. Chairman and Ranking Member, minimizing the risk of flood damage to the Houston and Harris County metropolitan area, the Nation's fourth largest, is a matter of national significance, because the region is one of the Nation's major technology, energy, and financial report—export, and medical centers.

So I support \$2.8 billion for operation and maintenance; \$6 billion for coastal ocean data system; but, particularly, advocate for the study that I hope we can receive and so that we can assess the effectiveness of the tax dollars that we have received, the tax dollars that we hope to receive, and the effectiveness of making sure that we could be even a model for how you address the question of urban flooding in a location that is 50 feet below sea level, even though we are a few miles in from the Gulf.

So I thank you all very much for the work that you do and ask your consideration. Thank you so very much.

[The information follows:]

CONGRESSWOMAN SHEILA JACKSON LEE (TX-18)

**STATEMENT BEFORE THE
COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON ENERGY, WATER, AND RELATED AGENCIES**

**MEMBER DAY HEARING ON
ENERGY, WATER, AND RELATED AGENCIES APPROPRIATIONS ACT FOR FY2018
WEDNESDAY, MARCH 8, 2017
2362-B RAYBURN
10:00 A.M.**

Chairman Simpson, Ranking Member Kaptur and distinguished Members of the Subcommittee:

- As the Ranking Member of the Judiciary Subcommittee on Crime, Terrorism, Homeland Security, and Investigations, let me offer my appreciation and thanks to Chairman Simpson and Ranking Member Kaptur for the difficult work and choices that must be made to produce a truly bipartisan Energy and Water spending bill, and for their commitment to producing a bill that fairly reflects the interests and priorities of the American people.
- Mr. Chairman, I understand that my entire statement will be made part of the record so I will keep my remarks brief.
- In the few minutes allotted I wish to highlight the energy, water, and U.S. Army Corps of Engineer programs which warrant the Committee's continuing attention and support.

ENERGY AND WATER PROGRAMS

I support \$1.263 billion for Harbor Maintenance Trust Fund

The Harbor Maintenance Trust Fund (HMTF) is collected to ensure reliable maintenance and operation of our nation's ports. I strongly support full utilization of the Harbor Maintenance Trust Fund, and urge the Committee to fund harbor maintenance activities at the highest possible level.

I support \$230 million for the Weatherization Assistance Program

WAP helps low-income families, seniors, veterans, and individuals with disabilities improve the energy efficiency of their homes, freeing up limited resources for other essentials like food and medicine

I support \$2 million for U.S.-Israel Energy Cooperation Program

Provide \$2 million for implementation of the U.S.-Israel Energy Cooperative Agreement. This funding will be utilized to further implement Section 917 of the Energy Independence and Security Act, P.L. 110-140, and the May 2008 agreement between the U.S. and Israel on energy cooperation. The funding will provide for ongoing collaborative U.S. and Israeli research and development efforts in the fields of energy technologies and increased energy efficiency.

I support robust funding for DOE's Wind Energy Program

The Wind Energy Program improves our nation's renewable energy goals by furthering advancements in wind energy research and technologies, including wind energy project design, optimization, and testing. The program also conducts important research to increase capacity for distributed wind, which has the ability to harness the full potential of rural America to play a major role to lower the costs for consumers.

I support \$2.9 billion for Energy Efficiency and Renewable Energy

The DOE Office of Energy Efficiency and Renewable Energy (EERE) and its critical programs partner the federal government with industry, academia, and research facilities to secure America's energy future.

I support \$5.672 billion for DOE Office of Science

This request provides funding to operate the scientific user facilities at optimal levels in support of more than 31,000 researchers from universities, national laboratories, industry, and international partners. The request funds activities that, in close

coordination with the NIH and the Presidential BRAIN Initiative, will develop next-generation tools and technologies to support research into the brain.

I support \$84 million for National Network for Manufacturing Innovation

The National Network for Manufacturing Innovation (NNMI) provides scientific and technical resources to universities and manufacturing firms for research, technology transfer and job training. There is a federal role in supporting research into clean energy applications as well as technology transfer and workforce training particularly for well-paying skilled jobs in the field of Science, Technology Engineering and Math (STEM).

I support \$70 million for State Energy Program

This funding will allow states to take on energy efficiency and renewable energy projects and grid modernization projects, including: starting rebate programs to encourage purchasing energy-saving appliances; efficiency improvements of hospitals and school; working with utilities and energy service companies to install wind, solar and energy efficiency projects and to improve resilience and modernize the grid.

U.S. ARMY CORPS OF ENGINEERS

I support \$85 million for Army Corps of Engineers Investigations

The Army Corps of Engineers does vital work that requires cooperation with other agencies. This appropriation funds studies to determine the need, engineering feasibility, and economic and environmental return to the Nation of potential solutions to water and related land resource problems; preconstruction engineering and design; and related data collection, interagency coordination, and research.

I support the \$2.8 billion for Operation and Maintenance

This funding will go towards the study, design, construction, operation and maintenance of inland and coastal navigation projects. It funds capital investments

on the inland waterways based on the estimated revenues to the Inland Waterways Trust Fund. The Budget gives priority to coastal harbors and inland waterways with the most commercial traffic. It also funds harbors that yield significant commercial fishing and public transportation benefits.

I support \$6 million for Coastal and Ocean Data System (CODS)

CODS provides high-resolution observations and models of coastal ocean waves and shoreline change. Through a network of over 50 wave buoys, CODS measures, models, forecasts and publicly disseminates real-time coastal wave information in 14 states and island territories. Without these data, life and property would be at risk.

CONCLUSION

Mr. Chairman, I thank you and the Ranking Member for your leadership and for extending me this opportunity to share my major priorities with the Subcommittee.

Mr. SIMPSON. Thank you, Representative Jackson Lee. We appreciate you being here today. And Marcy, do you have anything?

Ms. KAPTUR. I just want to thank Congresswoman Jackson Lee for her excellent work and her indefatigability—is that a word? Did I say it properly there? —on many fronts. And I have to say, all of the members of this committee, or the subcommittee, are very concerned about Houston and what has happened to you, the stalwartness it has taken for your people to come through the flooding, and wondering, you know, what the proper solutions are for—the proper engineering solutions are for an area like yours. We have also heard from witnesses from Georgia, Louisiana, and Florida, all along the southern part of the United States, the silting up of ports, the severity of storms, and now you are here as one of our final witnesses today. So it does make us wonder how to prepare our country for the future in this century, and so your information is very valuable to us.

And I only have one question. In addition to that general concern about what is happening to our general weather patterns and environmental security along the southern part of our country, the entire question of your deep water port at Houston and how what is happening in the Panama Canal is impacting you? Could you expound on that just a little bit for it record, please?

Ms. JACKSON LEE. I would be delighted. And I would say it is a positive impact, and that is because of the new potential direction of the ships getting through much faster. Our port, which is now very close to the Panama's new route, so the Panama Canal's new routes that allow these ships to come through coming from the west and the east. We are seeing an increased use and higher tonnage coming into the Houston Port, which is a very large port, we are 10th in the world, but we are a manmade port, and we have to have dredging on a regular basis. And in order to maintain the viability of those ships and the income that comes in there, and also to be a contributor to the Nation's economy, because we do, we need to have the kind of maintenance that is intense and we need funding for that intense maintenance.

So what I was saying is that it is a positive impact, but we are not a natural port, and that means we have to work at maintaining the port. And the port leaves the larger waters and comes into us up a 50-mile run that we have dredged to create the port, which is really right almost inside Houston, Texas, so inside city limits; our port comes into the city limits of Houston, and surrounding neighborhoods are there as well.

So we have had a number of other issues that we have dealt with with the port being there, but the surrounding residential neighborhood has accepted the port, the port has tried to be a good neighbor, but all those concerns face us as a manmade port.

Ms. KAPTUR. Thank you very much.

Mr. SIMPSON. Thank you. We appreciate your testimony and look forward to working with you as we put this budget together.

Ms. JACKSON LEE. I thank you, Chairman. Might I have a special appreciation to Ranking Member Kaptur, who took note the \$3 million study in the last debate on the floor and her staff was very helpful to our office, and we are most grateful to you and for your

leadership here, and to the chairman, for both of you working so well together. Thank you.

Mr. SIMPSON. Thank you.

Ms. JACKSON LEE. I yield back.

Mr. SIMPSON. And, again, we will be in recess for a couple minutes as we are waiting for our last individual to come and testify.

[Recess.]

Mr. SIMPSON. The committee is back in order, and will receive testimony from Congresswoman Watson Coleman. The floor is yours.

WEDNESDAY, MARCH 8, 2017.

WITNESS

**HON. BONNIE WATSON COLEMAN, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF NEW JERSEY**

Mrs. WATSON COLEMAN. Thank you so much, Chairman. And thank you, Ranking Member Kaptur. I want to thank you for this opportunity to testify today on the agencies and programs under the jurisdiction of the Energy and Water Development Appropriations Subcommittee.

The Army Corps' Civil Works Program covers a wide range of water resources activities that are essential to the public health and safety. I appreciate the important work this subcommittee has done in ensuring adequate funding for the Army Corps programs in previous years, which has benefited many of our communities and constituents. In past years, groups like the Greenbrook Flood Commission have used targeted Federal investments under the Civil Works Program to improve quality of life by expanding on water resource development activities like recreation and flood risk management. The Civil Works Program has also allowed the U.S. Army Corps of Engineers to strengthen its relationship with our communities through its projects that have enhanced quality of life for thousands of people.

The Greenbrook Flood Commission, which supports 13 different municipalities in my district, has already provided rejuvenation and relief to residents by completion of components of the Greenbrook sub-basin project through flood control programs. This project encompasses an area that has been ravaged by extreme flooding, which has caused extensive property damage, and even the loss of life.

Over the course of nearly 40 years, the U.S. Army Corps of Engineers project manager for this project has worked to ameliorate the extreme flooding conditions through the construction of extensive levees, flood walls, and pump stations. In fiscal year 2016, the Army Corps Civil Works Program received approximately \$6 billion in funding. Providing the Corps with the sufficient funding for fiscal year 2017 and 2018, it is critical to keeping projects like this moving forward, especially knowing that certain projects like this one have previously languished due to a lack of funding.

Projects like this one also help build a stronger and safer America by constructing durable and sustainable infrastructure that prioritizes the protection of life and property. They also help mod-

ernize our communities and reduce the risk of damage from natural resources, while promoting job creation and environmental stewardship.

So, again, I want to thank the chairman and the ranking member for this opportunity to testify, and hope that Congress will continue to support the robust funding for such critical programs. And with that, I yield back.

[The information follows:]

BWC WRITTEN TESTIMONY
APPROPRIATIONS COMMITTEE
Subcommittee on Energy and Water Development
March 8, 2017 @ 12:35 PM

Chairman Simpson and Ranking Member Kaptur, thank you for the opportunity to testify today on the agencies and programs under the jurisdiction of the Energy and Water Development Appropriations Subcommittee.

The Army Corps' civil works program covers a wide range of water resources activities that are essential to public health and safety. I appreciate the important work this subcommittee has done in ensuring adequate funding for the Army Corps programs in previous years, which has benefitted many of our communities and constituents.

In past years, groups like the Green Brook Flood Commission have used targeted federal investments under the civil works program to improve quality of life by expanding on water resource development activities like recreation and flood risk management. The civil works program has also allowed the U.S. Army Corps of Engineers to strengthen its relationship with our communities through its projects that have enhanced quality of life for thousands of people.

The Green Brook Flood Commission, which supports 13 different municipalities in my district, has already provided rejuvenation and relief to residents by completion of components of the Green Brook Sub Basin project through both structural and non-structural flood control programs. This project encompasses an area that has been ravaged by extreme flooding, which has caused extensive property damage and even the loss of life. Over the course of nearly 40 years, the US Army Corps of Engineers Project Manager for this project has worked to ameliorate the extreme flooding conditions through the construction of extensive levees, floodwalls, and pump stations.

In Fiscal Year 2016, the Army Corps' Civil Works program received approximately 6 billion dollars in funding. Providing the Corps with the sufficient funding for FY 2017 and 2018 is critical to keeping projects like this moving forward, especially knowing that certain projects like this one have previously languished due to a lack of funding.

Projects like this one also help build a stronger and safer America by constructing durable and sustainable infrastructure that prioritizes the protection of life and property. They also help modernize our communities and reduce the risk of damage from natural disasters while promoting job creation and environmental stewardship.

Again, I want to thank the Chairman and Ranking Member for the opportunity to testify and hope that Congress will continue to support robust funding for such critical programs.

Mr. SIMPSON. Thank you. We appreciate your testimony today. Questions, Ms. Kaptur?

Ms. KAPTUR. No, Mr. Chairman, but I do want to thank Congresswoman Watson Coleman for testifying today and for your support of the Corps. As we move forward here this year, we are expecting something on infrastructure from the administration, completion of many of these projects, augmentation around the country of work already underway could be a part of that measure, so I just wanted to put that on the table as we accept your excellent testimony.

Mrs. WATSON COLEMAN. Thank you very much.

And, Mr. Chairman and Madam Ranking Member, I just—I want to apologize for being a bit late. I was testifying downstairs. It is just one of those days.

Mr. SIMPSON. It is one of those days. We appreciate it. You weren't late, actually.

Mrs. WATSON COLEMAN. Oh, good. Thank you.

Mr. SIMPSON. But we appreciate you coming. We appreciate all the members that came to testify today. Their comments will be included in the record.

And I would also remind members that might be listening that our member request day is closed on April—database closes on April 6, so have the individual member requests in to the subcommittee so they can start working on them.

But thank you very much, Bonnie—

Mrs. WATSON COLEMAN. Thank you.

Mr. SIMPSON [continuing]. For coming here today and testifying before us. And we look forward to working with you and your staff as we put this bill together.

Mrs. WATSON COLEMAN. Thank you.

Mr. SIMPSON. Thank you.

Mrs. WATSON COLEMAN. Appreciate it very much.

Mr. SIMPSON. The hearing is adjourned.

**TESTIMONY OF INTERESTED INDIVIDUALS AND
ORGANIZATIONS**

WEDNESDAY, MAY 3, 2017.

CITY OF TYBEE ISLAND

WITNESS

JASON BUELTERMAN, MAYOR, CITY OF TYBEE ISLAND

Mr. SIMPSON. The hearing will come to order. Thank you, all of you, for being here today. This is the first time this Committee, I think, at least in my memory, and I have been on it for a long time, has had public witnesses. And I think it is a good idea and we have—also, because we have had the time this year, because we have not been able to have any other witnesses because we have not got a budget yet and probably will not until the end of this month, so we thought it was a good time to have the public witness hearing and hear what all of you thought is important in this bill and things we ought to be considering as we draft this bill.

I would like to welcome everyone to the Energy and Water public witness hearing. This morning members of the public will testify on issues that are important to them under the jurisdiction of this subcommittee.

Each witness will have 5 minutes to present their testimony. Remember that your full testimony, the written statement, will appear in the hearing record. Members of the subcommittee may ask questions of the witnesses, but we would have a better chance of staying on schedule if we all work to keep this moving. We have to be done at 12:30 and we have 27 witnesses it looks like, so I am going to keep to the 5-minute rule.

So, would Ms. Kaptur have an opening statement?

Ms. KAPTUR. Thank you, Mr. Chairman. I am just so happy we can all be together this morning. I want to thank you for your leadership and for this public witness day. I welcome these days in particular, of the testimony that will come before us, and they are both valuable and I would say quite motivating for those of us on this subcommittee. I look forward to hearing from all of the interested parties today on what you believe important to be in our bill. And with that, I will close my remarks.

And thank you, Mr. Chairman, for arranging this important opportunity for all of us to work together on behalf of the Nation's best interest.

Mr. SIMPSON. Thank you. Our first panel is Mayor Jason—pronounce your last name for me.

Mr. BUELTERMAN. Buelterman.

Mr. SIMPSON. Buelterman, kind of throws my tongue in the middle, Buelterman, okay. Mayor and Derek Brockbank, welcome to the committee and the time is yours. Mayor, first.

Mr. BUELTERMAN. Thank you very much. Good morning. I want to start by thanking Subcommittee Chairman—

Mr. SIMPSON. Is the microphone on?

Mr. BUELTERMAN. I want to start by thanking you all for the opportunity to present before you today. My appearance before you is to underscore the need for increased appropriations to the U.S. Army Corps of Engineers investigations account, specifically additional funding for shore protection investigations that the committee has provided in the past.

I want to use an example for my own city of Tybee Island, Georgia, to demonstrate what I believe is a pressing need for these funds across many coastal regions of the country. For those who may not be aware, Tybee is a barrier island located about 18 miles east of Savannah, Georgia.

It is the eastern most point in the State of Georgia and is known for being a popular recreational destination for the region, as well as a vacation spot among tourists from outside the Savannah metropolitan area and is also home to about 3,000 full-time residents.

The sandy shoreline of Tybee is of significant value. While it is important to the city and region as a recreational venue, its primary purpose, the beach that is and the dunes, is to provide protection against damages caused by storms and coastal flooding.

Recently my community suffered significant damage due to Hurricane Matthew. The total damage to Tybee amounted to at least \$3.4 million. Those damages would have been far greater had our Federal Shore Protection Project not been in place.

The Tybee Island Shore Protection Project was authorized by Section 201 of the Flood Control Act of 1965. It provides periodic renourishments estimated to be every 7 years until the end of the 50-year project life, which expires in 2024.

The city of Tybee is working to extend the project's authorization and bolster its dune system. The Savannah district office of the Corps, at the request of our city, made a funding request for the President's fiscal year 2018 budget to fund what is called Phase II of the Savannah Channel Impact Study.

Phase I of this study determined that approximately 73 percent of the erosion of Tybee shelf and shoreline is caused by impacts from the manmade federally authorized Savannah harbor shipping channel.

Under law, the Federal Government is responsible for mitigating damages caused by its own navigation projects.

Phase II of this study, which is one of the reasons I am here, will determine what measures will be recommended to address the erosion. The study will be all encompassing, including assessing adding dunes to the existing Federal Shore Protection Project and assessing the severe erosion that has occurred along the shoreline of the northern end of our island.

This portion of our island, although it is adjacent to the shipping channel, is not part of the current Federal Shore Protection Project and has been severely impacted by shipping traffic using the Sa-

vannah channel and will face even greater erosional impacts due to the channel's ongoing deepening.

I urge the House Committee on Appropriations to provide sufficient funding to enable the funding of the Phase II study.

I also want to highlight another issue that I respectfully ask the subcommittee to keep in mind as you determine future funding needs for shore protection projects.

One of the major lessons of Hurricane Matthew and Superstorm Sandy was a massive amount of money that did not need to be spent in Federal post-disaster and flood insurance costs due to the existence of manmade dunes.

I have given all a one-page—two pictures here on one sheet of paper. These two photos you have before you illustrate my point. The top photo is of a beach town right up the coast from the second photo at the bottom of a town called Harvey Cedars, New Jersey.

Both aerial shots were taken right after Superstorm Sandy. The town in the top photo, and I am not going to identify which one that is, did not have manmade dunes. The bottom photo is of a town that wisely did have manmade dunes.

These dunes were built as part of a newer Federal Shore Protection Project by the Army Corps of Engineers. It is estimated that about \$1.3 billion in Sandy-related damages were saved by the existence of Federal Shore Protection Projects in New York and New Jersey alone.

Dunes are not part, however, of many older Federal Shore Protection Projects, such as the one on Tybee. Because of the time of the creation of projects, dunes were not considered in the 1970s to be a big deal and to be essential for protection for coastal communities.

I urge the subcommittee to consider adding additional shoreline protection funding with the appropriate report language, noting that a portion of the additional money is to be used to expedite adding a dune element to older projects using the existing cost-sharing percentages for those projects.

If the Corps is required to produce a straight forward report on those projects designed prior to 1986 where dunes were not included in the project design, you will see that Tybee Island is not alone.

Thank you again for the opportunity to appear before you today.

So the slow erosion of our beach is caused by the fact that sand that would otherwise drift to our beach naturally, gets stuck in the manmade shipping channel. Whereas the immediate impact from Hurricane Matthew had a very significant one-time event.

[The information follows:]

**Statement of the Honorable Jason Buelterman, Mayor
City of Tybee Island, Georgia
Submitted to the House Appropriations Committee
Subcommittee on Energy and Water Development
May 3, 2017**

Good morning. I want to start by thanking Committee Chairman Frelinghuysen, Subcommittee Chairman Simpson, and for all the members of the Subcommittee for giving me the opportunity to speak before you today.

My appearance before you is to underscore the need for increased appropriations to the U.S. Corps of Engineers' investigations account, specifically the additional funding for "shore protection investigations" that the Committee has provided in the past. I want to use an example from my own city of Tybee Island to demonstrate what I believe is a pressing need for these funds across many coastal regions of the country.

For those who may not be aware, Tybee Island is a 3.5-mile-long barrier island located 18 miles east of Savannah, Georgia. It is the easternmost point in the state of Georgia and is known for being a popular recreational destination for the region as well as a vacation spot amongst tourists from outside the Savannah metropolitan area.

The sandy shoreline of Tybee Island is of significant value. While it is important to the City and the region as a recreational venue, its primary purpose is to provide safety in that it protects people and infrastructure against damages caused by storms and coastal flooding. Recently, the City of Tybee Island suffered significantly due to Hurricane Matthew. The total damage to Tybee Island amounted to at least \$3.4 million. Those damages would have been far greater had our Federal shore protection project not been in place.

The Tybee Island Shore Protection Project was authorized by Section 201 of Flood Control Act of 1965, Section 156 of WRDA 1976, Section 934 of PL-662 in 1986, and Section 301 (b)(4) and Section 506 of PL 104-303 in WRDA 1996. The Section 934 Report, approved by the Assistant Secretary of the Army in 1998, provided periodic nourishments, estimated to be every 7 years until the end of the 50-year project life in 2024.

The City of Tybee Island is working to extend the project's authorization and bolster its dune system. The Savannah District Office of the Corps, at the request of the City of Tybee Island, made a funding request for the President's FY'18 budget to fund Phase 2 of the Savannah Channel Impact Study. Phase 1 determined that over 73% of the erosion of the existing Federal project was caused by impacts from the Savannah Harbor Ship Channel. Under law, the Federal government is responsible for mitigating damages caused by its navigation projects. Phase 2 will determine what measures will be recommended to reduce the erosion. The study will be all-encompassing, including assessing adding dunes to the existing Federal shore protection project and extending that project to include the shoreline at the north end of the island.

The Phase 2 study will also assess the severe erosion that has occurred along the shoreline of the northern end of Tybee Island. This portion of the island, although it is adjacent to the ship channel, is not a part of the current Federal shore protection project. It has been severely impacted by ship

traffic using the Savannah Channel and will face even greater erosional impacts due to the Channel's ongoing deepening.

I urge the House Committee on Appropriations to provide sufficient funding under the Additional Funding – Shore Protection Investigations programmatic line to enable the funding of the Phase 2 study. We face stiff competition for funding because the overall Investigations budget of the Corps is lower than it was five years ago, while demands for feasibility studies, economic reevaluations, and the like have increased.

I also want to highlight another issue that I respectfully ask the Subcommittee to keep in mind as you determine future funding needs for shore protection projects. The lesson of major storms such as Hurricane Matthew and Superstorm Sandy is the amount of money that did not need to be spent in Federal post-disaster and flood damage costs due to the existence of man-made dunes. I've been told that dunes are the cheapest part of a beach nourishment project. Nevertheless, dunes are not a part of many older Federal shore protection projects, such as the one on Tybee Island, because at the time of the creation of the projects, dunes were not considered to be an essential protective measure for coastal communities.

I urge the Subcommittee to consider adding additional shoreline protection construction funding with the appropriate report language noting that a portion of the additional money is to be used to expedite adding a dune element to older projects using the existing cost-sharing percentages for those projects. If the Corps is required to produce a straightforward report on those projects designed prior to 1986 where dunes were not included in the project's design, you will see that Tybee Island is not alone.

Thank you again for the opportunity to appear before you today.

Mr. SIMPSON. Mr. Brockbank.

WEDNESDAY, MAY 3, 2017.

**AMERICAN SHORE AND BEACH PRESERVATION
ASSOCIATION**

WITNESS

**DEREK BROCKBANK, EXECUTIVE DIRECTOR, AMERICAN SHORE AND
BEACH PRESERVATION ASSOCIATION**

Mr. BROCKBANK. Thank you. Thank you for having me. My name is Derek Brockbank. I am the executive director of the American Shore and Beach Preservation Association. Founded in 1926, ASBPA is dedicated to preserving, protecting, and enhancing our coast by emerging science and public policy.

We represent the Nation's coastal practitioners—the industry, the local government officials, and academics who build, restore, and maintain our Nation's coastline. The City of Tybee Island has been a member for many years now.

I am here today also to speak for natural coastal infrastructure, why beaches, high vegetative dunes, and vibrant wetlands protect communities from coastal flooding and storms, saving lives, protecting property, and reducing disruptions to the local economy.

Simply put, natural coastal infrastructure is a wise fiscal investment, saving the Federal Government money by reducing post-disaster recovery costs.

As you heard from the mayor, the Army Corps of Engineers has estimated that investment in shore protection saved \$1.3 billion of damage in New York and New Jersey and \$1.9 billion in damage total during Hurricane Sandy.

Coastal protection is also a jobs bonanza. In addition to construction jobs, restoring and maintaining coastal infrastructure supports lifeguards, fishermen, hotel workers, waiters, and the plumbers and technicians who work in coastal towns.

So what needs to be funded? To protect our coastal communities and support coastal economies, the United States needs to, A, construct coastal protection and restoration projects; B, manage sediment as a resource, not a waste product; and, C, collect data and do coastal research to ensure that coastal projects will protect the people and assets they were designed to protect.

To meet long-term funding needs, Congress should invest \$5 billion over 10 years in beaches, dunes, and wetlands as part of a national infrastructure package. But to maintain existing capacity, we respectfully request that the fiscal year 2018 Energy and Water Appropriation includes the following:

One, provide at least \$75 million to the Army Corps for shore protection. Shore protection or coastal flood risk management are the funds the Corps uses to construct and renourish beach and dune systems that protect vulnerable coastal communities.

While the administration's budget has consistently left shore protection unfunded, Congress has reliably added funding to this critical Corps mission. After steady declines in shore protection appropriations, we were pleased to see a slight increase to 50 million in the fiscal year 2017 omnibus.

However, with our Nation's coastal communities increasingly vulnerable to severe coastal storms and the inevitability of the next major hurricane, we ask that you return shore protection funding levels to at least that of fiscal year 2014.

The current Army Corps capacity for shore protection is \$165 million annually, which was requested in a Dear Colleague letter led by Representative Wasserman Schultz as well as Congresswoman Frankel and fully supported by ASBPA.

Our request of at least \$75 million is less than half what the Army Corps could accomplish and should be the minimum appropriated.

Two, provide \$5 million for implementation of the beneficial use of dredge material pilot program that was authorized in the WIND Act and provides \$6 million increase to regional sediment management to develop sediment management strategies for the South Atlantic Coastal Study also authorized in the WIND Act.

The WIND Act was a major bipartisan success last December and authorized a number of good coastal programs that require the Corps to manage sand and sediment, which are the building blocks of coastal protection projects as a resource, not a waste product.

The Beneficial Use of Dredge Material Pilot Program authorizes 10 projects around the country to innovatively use sediment dredged from navigation channels for coastal protection and/or environmental restoration.

ASBPA has heard that Corps districts have submitted more than a hundred projects for this new program. Clearly the interest is there. What the program lacks is funding. We request \$5 million for the full implementation of Beneficial Use of Dredge Material Pilot Program.

This South Atlantic Coastal Study covers one of the most vulnerable regions in the world for hurricanes from North Carolina, to Mississippi, and the Caribbean Islands. The full cost of the study is estimated to be 10 to \$14 million, but an initial Federal investment of \$6 million to the Corps' Regional Sediment Management Program would allow parts of this study that were previously authorized to begin in earnest and cut the cost of the study in half.

Finally, we request that you maintain funding for coastal data collection, including coastal ocean data systems, national coastal mapping programs, and Coastal Field Data Collection Program. Without good coastal data, Federal projects and even local projects cannot be properly designed.

Given the Federal jurisdiction over the ocean and coast, this data acquisition must be via Federal agencies. So we ask you to at least maintain current funding levels for these key programs.

ASBPA is grateful to your subcommittee and Congress for funding the Coastal Flood Risk Management Mission of the Corps. Of course these programs are but a few small pieces of a much larger investment needed to prepare our coastal communities for increasingly intense coastal storms and hazards.

Improved coastal resilience will take coordination across multiple Federal, State, and Local authorities. It will also take a large-scale dedicated funding investment in coastal infrastructure. However, a good first step in protecting coastal communities is ensuring all

shore protection, regional sediment management, and coastal data acquisition are appropriately funded. Thank you.
[The information follows:]



**Testimony for Energy & Water Appropriations Sub-Committee hearing:
 “Funding Coastal Infrastructure at the U.S. Army Corps of Engineers”
 May 3, 2017**

Derek Brockbank

Executive Director, American Shore and Beach Preservation Association (ASBPA)

Executive Summary:

The American Shore and Beach Preservation Association (ASBPA) supports proactive federal investment in our nation’s beaches, dunes, and wetlands. Natural coastal infrastructure protects 50% of the U.S. population who live in coastal counties from storms and sea level rise; it supports the economy of coastal communities and our nation as whole; and it sustains healthy coastlines for people and the environment. Investing upfront in our natural coastal resources saves money in rebuilding upland infrastructure after storms. To meet long-term funding needs, ASBPA believes Congress should invest \$5 billion over 10 years in beaches, dunes, and wetlands as part of a national infrastructure package, but for annual energy and water appropriations in the FY18 budget we respectfully request you include the following:

- 1) Provide at least \$75 million in U.S. Army Corps of Engineers-Civil Works (USACE-CW) construction account for shore protection.**
- 2) Provide \$5 million for implementation of Beneficial Use of Dredged Material (BUDM) pilot program authorized in Water Infrastructure for the Nation’s Improvement (WIIN) Act (Sec. 1122) – this should most likely go to the USACE-CW Continuing Authorities Project, Section 204.**
- 3) Increase USACE-CW Operation & Maintenance (O&M) Remaining Item, “Regional Sediment Management (RSM),” from \$1.8 million to \$7.8 million to assess sediment**

availability and coastal resilience on the South Atlantic coast, which will be critical to the South Atlantic Coastal Study authorized in the WIIN Act (Sec.1204).

- 4) Maintain or increase funding levels for coastal data collection including:**
- a. **O&M item, “Coastal Data Information Program (CDIP),” at the FY15 & FY16 amount of \$5.4 million;**
 - b. **O&M item, “National Coastal Mapping Program,” at the FY16 amount of \$6.8 million;**
 - c. **Investigations item, “Coastal Field Data Collection Program,” at the FY16 amount of \$1 million.**

Testimony

Founded in 1926, ASBPA is a 501(c)3 nonprofit that advocates for **healthy coastlines** by promoting the integration of science, policies and actions that maintain, protect and enhance the coasts of America. We represent the nation’s coastal practitioners: our members are the industry, local government officials, and academics who build, restore, maintain, and study our nation’s coastlines.

Natural coastal infrastructure, in the form of beaches, dunes, and wetlands, protect communities from coastal flooding – saving lives, protecting property, and reducing the disruption to the local economy from coastal storms. Wide beaches and high vegetated dunes protect upland property and infrastructure from storm-driven waves and flooding. Strong coastal infrastructure means local businesses are still in business after a storm, and coastal residents can return to their homes quickly and with fewer repairs. Coastal restoration also creates and supports a tremendous number of jobs. Studies of estuarine restoration – from the Gulf of Maine to the Chesapeake to North Carolina – consistently show that for every \$1 million invested, approximately 30 jobs are created or protected¹.

Beaches, dunes, and wetlands are, simply put, wise fiscal investments. Proactively investing in coastal infrastructure will save the federal government money by reducing post-disaster recovery costs. One estimate says federal investment in shore protection saved \$1.9 billion in

¹ http://www.habitat.noaa.gov/pdf/RAE_Restoration_Jobs.pdf

damages during Hurricane Sandy². With a \$65 billion recovery price tag, imagine how much we could have saved if we'd invested a fraction of that money to update our coastal infrastructure before the storm rather than after.

While the nation needs a massive coastal infrastructure upgrade, annual appropriations ensure our most basic coastal protection is maintained. Many federal agencies have a role to play in safeguarding coastal communities, but none more so than the Corps of Engineers. USACE coastal projects, hurricane- and storm-damage risk-reduction projects, and related coastal resilience studies are the cornerstone of the federal government's role in protecting and promoting coastal resilience. Key to these projects' success is a strategic plan for proper management of sediment, which is a finite and valuable resource, and up-to-date coastal data. ASBPA supports appropriations for all three of these important elements (project construction, planning and studies, and data collection) in the following programs:

1. Provide at least \$75 million in USACE-CW construction account for shore protection

Coastal shoreline counties contribute \$6.9 trillion to our GDP³. Coastal habitats -- including beaches, wetlands, mangroves and estuarine systems -- are some of the most ecologically productive and economically important on earth⁴. But, perhaps most important to communities along a coast, **a healthy coastline provides protection of life and property from the hazards of living by the water** – storm surge, waves, and sea level rise.

With this in mind, we ask you to **support the USACE's shore protection initiatives in the FY18 budget**. While the administration's budget has consistently left shore protection (coastal flood risk management) unfunded, Congress has reliably added funding for this critical USACE mission. After steady declines in shore protection appropriations -- \$75 million in FY14, \$45 million in FY15, and \$40 million in FY16 – we were pleased to see a proposed increase to \$50 million in FY17 Energy & Water appropriations legislation. However, with our nation's coastal communities increasingly vulnerable to severe coastal storms and the inevitability of the next major hurricane, we ask that you return shore protection funding levels to at least that of FY14.

²<http://www.nad.usace.army.mil/Portals/40/docs/ComprehensiveStudy/Estimate%20of%20Sandy%20damages%20avoided.pdf>

³ NOAA, State of the Coast, 2012. <http://stateofthecoast.noaa.gov/>

⁴ Barbier, Et al, "The value of estuarine and coastal ecosystem services", Ecological Monographs, 2011. <http://www.esajournals.org/doi/pdf/10.1890/10-1510.1>

The current USACE capacity for shore protection construction is \$165 million, which was requested in a “Dear Colleague Letter” led by Reps. Lois Frankel and Debbie Wasserman Schulz and supported by ASBPA. The requested \$75 million is less than half of what USACE could accomplish, and should be the minimum appropriated. **Please provide at least \$75 million in USACE-CW construction account for shore protection.**

2. Provide \$5 million for implementation of BUDM pilot program authorized in WIIN Act (Sec. 1122)

The WIIN Act established a pilot program for the beneficial use of dredged sediment without the USACE being constrained by the Federal Standard. The placement of dredged sand and sediment on beaches, dunes, and coastal wetlands can serve multiple benefits, including flood and storm risk reduction, ecological restoration, and adaptation to sea level rise. As sediment sources for beach, dune, and wetlands restoration become increasingly scarce, managing sediment as a resource is essential for the USACE to achieve its multiple missions. This pilot program requires the USACE to choose 10 project areas to beneficially use sediment with a federal cost-share (rather than have the beneficial placement paid for entirely by local sponsors). ASBPA has heard that USACE districts have submitted more than 100 projects to be considered for this program, so clearly the interest is there. What the program lacks is funding.

ASBPA is encouraging the USACE to use innovative budgeting to implement some pilot projects through cost-savings by combining projects. In other words, USACE districts should jointly budget multiple projects across navigation, flood risk, and ecosystem restoration in order to create efficiencies and cost-savings while removing sediment from where it isn’t wanted (in a navigation channel) and placing it where it is (a beach or marsh). However, this will not always be possible and the cost-savings won’t always cover the entire cost of the federal contribution to the project. **So we request \$5 million for the full implementation of the BUDM pilot program.**

3. Increase USACE-CW (O&M) Remaining Item, “Regional Sediment Management (RSM),” from \$1.8 million to \$7.8 million, to assess sediment use and availability and coastal resilience in the South Atlantic division.

The WIIN Act authorized a South Atlantic Coastal Study (Sec. 1204), which is a comprehensive study to proactively address the flood risks of vulnerable coastal populations within the South

Atlantic Division (North Carolina to Mississippi). The study would address coastal risk management, coastal resilience, and sustainability, and be modeled closely after the North Atlantic Comprehensive Coastal Study (NACCS) (implemented after Hurricane Sandy) with extensive leveraging of lessons learned, tools, and process applied. The goal of the South Atlantic Coastal Study (SACS) is to identify the risks to and vulnerabilities of South Atlantic coastal areas and opportunities to enhance resiliency and lower risks to population centers, economic development, and environmental resources.

The full cost of the study is estimated at \$10 million-14 million, but an initial federal investment of \$6 million would allow parts of the study that were previously authorized and do not need a federal cost-share to begin in earnest. This will also provide usable tools and metrics for coastal communities. **The quickest and most efficient way to begin working on the SACS is to increase the RSM Program by \$6 million.**

4. Maintain funding for coastal data collection including: “Coastal Data Information Program (CDIP),” “National Coastal Mapping Program,” and “Coastal Field Data Collection Program”

The CDIP maintains wave buoys on the Atlantic, Gulf, and Pacific coasts that provide data such as wave height, direction and sea surface temperatures. The Coastal Mapping Program is essential to measure shoreline change across the nation. Coastal Field Data Collection supports the work of the USACE Field Research Facility in Duck, NC, which provides coastal data and research support to all federal agencies. This data is critical to engineering coastal projects, and can provide essential information about long-term coastal trends.

ASBPA is grateful to your subcommittees and Congress for making sure the critical missions of the USACE, in particular that of coastal flood risk reduction and shore protection, are funded.

Of course, shore protection, RSM, and long-term data collection are only a few small pieces of a much larger investment in preparing our coastal communities for increasingly intense and frequent coastal storms and hazards. Improving the resilience of coastal communities will take coordination across multiple federal agencies working together with state and local authorities. It will also take a large-scale dedicated investment in coastal infrastructure. However, a good first step in protecting coastal communities is ensuring shore protection, regional sediment management, and coastal data acquisition are appropriately funded.

Mr. SIMPSON. Thank you.

Ms. Kaptur.

Ms. KAPTUR. Yes. I want to thank Mr. Brockbank for your excellent testimony. I really agree with you on beneficial reuse, but I have a question.

On page 5 of your testimony, you mentioned the Atlantic, the Gulf, and the Pacific coasts. Why did you not include the Great Lakes in the Coastal Data Information Program request?

Mr. BROCKBANK. Pure error and I apologize.

Ms. KAPTUR. I just wondered. That is really important.

Mr. BROCKBANK. You are absolutely right and I apologize for that.

Ms. KAPTUR. Thank you. Thank you, Mr. Chairman.

Mr. SIMPSON. Thank you. Thank you for your testimony. We look forward to working with you.

Mr. Pete Rahn, the Maryland Department of Transportation.

WEDNESDAY, MAY 3, 2017.

MARYLAND DEPARTMENT OF TRANSPORTATION

WITNESS

HON. PETE RAHN, SECRETARY, MARYLAND DEPARTMENT OF TRANSPORTATION

Mr. RAHN. Good morning, Mr. Chairman, Ranking Member, members of the committee. Thank you for inviting me to discuss the importance of the U.S. Army Corps Engineers Civil Works funding to the Helen Delich Bentley Port of Baltimore, an economic engine not just for Maryland and the region, but for our Nation.

Ports are the key links to U.S. access, to the global transportation network, and Federal navigation channels provide access to these facilities.

I thank the Committee for continuing to invest in maritime infrastructure and commerce, especially with respect to essential dredging projects that keep our shipping channels, our maritime highways safe and open for business.

This is a high priority for the Hogan administration, which is why the Maryland Department of Transportation requests that Congress ensure adequate funding in the fiscal year 2018 budget, including \$75 million for the Poplar Island and its expansion, \$800,000 to initiate design for the Mid-Chesapeake Bay Island Project, \$30.4 million in operations and maintenance funds for dredging the Baltimore harbor and channel's 50-foot project, and \$12 million to maintain a depth of 35 feet in the C&D Canal and approach channels.

The Port of Baltimore generates about 13,000 direct jobs and about 128,000 jobs linked to port activities. It is noteworthy that the average income for a port direct job is 16 percent higher than the average Maryland salary.

The Port of Baltimore was just recognized for the third consecutive year as the most efficient U.S. container port. We handle more cars in roll on, roll off, heavy farm, and construction machinery than any other U.S. port.

The Port of Baltimore ranks first among all national ports in handling many commodities that are essential to our economy, such as aluminum, sugar, gypsum, cars, trucks, and equipment. We are ranked second in the Nation for exporting coal.

Out of 190 major U.S. ports, Baltimore ranks 9th in the value of foreign cargo and 14th in foreign cargo tonnage. Our public-private partnership agreement with Ports America Chesapeake and the availability of a 50-foot deep container berth has positioned the Port of Baltimore to attract cargo growth associated with last year's Panama Canal expansion.

Our tonnage increased 9.3 percent in the first 8 months since the Canal opened. The port's coal business has also increased significantly over the same period, as these ships need deep water, too.

It is critical that the Port of Baltimore deliver sufficient long-term dredge material placement capacity to support maintenance of a 50-foot deep channel in terms of both depth and width to capitalize on that anticipated growth and maintain our existing business.

If the Port of Baltimore is the economic heart of Maryland, our shipping channels are the arteries. With more than 130 miles of dredged channels, we work with the Corps of Engineers to keep our channel system open.

Maintaining the shipping channels is critical to the continued success of the port. Approximately 4.3 million cubic yards of sediment must be removed annually to maintain Federal channels and anchorages at their authorized depths and widths.

Keeping the main Chesapeake Bay channels open for shipping relies on placement of dredge material at Poplar Island and its expansion as well as construction of the Mid-Chesapeake Bay Island Project. The Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island will provide an additional 28 million cubic yards of dredge material placement.

The Mid-Chesapeake Bay Island Project is critical, because it will provide 40-plus years of capacity. Federal funding is essential to enable Mid-Bay Project at the time it is needed and to avoid deauthorization in calendar year 2021.

Federal funding for Corps dredging has been constrained over the last several years, and continued constraints will negatively impact the port. We believe that \$25 million per year is needed to fully dredge the channels to Baltimore.

The C&D Canal is also an essential part of the port's shipping channel system providing the shortest route to open water for vessels traveling between Baltimore and points north.

Maryland remains fully committed to working with our Federal partners to deliver safe, efficient, and cost-effective maritime commerce infrastructure in Maryland.

Thank you again for the opportunity to testify. I would be happy to answer any questions.

[The information follows:]

STATEMENT OF
PETE RAHN
SECRETARY
MARYLAND DEPARTMENT OF TRANSPORTATION

BEFORE THE
HOUSE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT,
AND RELATED AGENCIES
U.S. HOUSE OF REPRESENTATIVES

*The Importance of U.S. Army Corps of Engineers – Civil Works Funding to the
Port of Baltimore*

May 3, 2017

Chairman Simpson, Ranking Member Kaptur, and Members of the Committee, thank you for inviting me to appear before you today to discuss the importance of U.S. Army Corps of Engineers - Civil Works funding to the Helen Delich Bentley Port of Baltimore, an economic engine, not just for Maryland and the region, but for our nation. Ports are the key links in U.S. access to the global transportation network and federal navigation channels provide access to these facilities. I thank the Committee for its interest in continuing to invest in maritime infrastructure and commerce – especially with respect to essential dredging projects that keep our shipping channels, our marine highways, safe and open for business. This is a high priority for me and for the Hogan Administration in Maryland. Specifically, the Maryland Department of Transportation's Maryland Port Administration (MPA) requests that Congress ensure adequate federal funding in Federal Fiscal Year (FFY) 2018 as follows:

- \$75 million for Poplar Island and Poplar Island Expansion;
- \$800,000 to initiate design for the Mid-Chesapeake Bay Island project;
- \$30.4 million in Operations and Maintenance funds for dredging the Baltimore Harbor and Channels 50' project; and

- \$12 million to maintain a depth of -35 feet in the C&D Canal and approach channels.

The Port of Baltimore generates approximately 13,650 direct jobs and about 127,600 total jobs are linked to Port activities. The Port generated jobs represent \$2.9 billion in salaries, \$2.2 billion in business revenues, and \$310 million in State and local tax revenues. It is noteworthy that the average income for a Port direct job (\$61,877) is 16 percent better than the average Maryland salary.

The Port of Baltimore was just recognized for the third consecutive year as the most efficient U.S. container port. We handle more cars and Roll-on/Roll-off heavy farm and construction machinery than any other U.S. port. The Port of Baltimore ranks first among all national ports in handling many commodities that are essential to our country, such as: aluminum, sugar, gypsum, cars, trucks, and Roll-on/Roll-off equipment. We are also ranked second in the nation for exporting coal. Out of 190 major U.S. ports, the Port of Baltimore ranks 9th in the value of foreign cargo (\$49.9 billion in 2016) and 14th in foreign cargo tonnage (31.8 million tons in 2016).

Our public-private partnership agreement with Ports America Chesapeake and the availability of a 50 foot deep container berth has positioned the Port of Baltimore to attract cargo growth associated with last year's Panama Canal expansion. Our containerized cargo tonnage increased 9.3 percent in the first eight months since the Canal opened the third set of locks. The Port's coal business also increased significantly over the same period, as these ships need deep water too. It is critical that the Port of Baltimore deliver sufficient long-term dredged material

placement capacity to support maintenance of its 50-foot deep channel in terms of both depth and width to capitalize on that anticipated growth and maintain our existing business.

If the Port of Baltimore is the economic heart of Maryland, our shipping channels are the arteries. With over 130 miles of dredged channels running the length of the Chesapeake Bay, the MPA works with the U.S. Army Corps of Engineers in the Baltimore and Philadelphia Districts each year to keep our channel system open. Maintaining the shipping channels is critical to the continued success of the Port of Baltimore. Approximately 4.3 million cubic yards (mcy) of sediment must be removed annually to maintain federal channels and anchorages at their authorized depths and widths.

Keeping the main Chesapeake Bay channels open for shipping relies on placement of dredged material at Poplar Island and its Expansion, as well as construction of the Mid-Chesapeake Bay Island project. The Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island, generally known as Poplar Island, is cost shared 75 percent federal / 25 percent non-federal and will provide an additional 28 mcy of dredged material placement capacity for our 50-foot deep channel. Sufficient funding within the Corps' budget to complete expansion of the project continues to be a key focus for the MPA. I ask this Sub-Committee to support federal funding of approximately \$75 million for Poplar and the Expansion in FFY 2018.

One of the strategies for providing capacity needed for Chesapeake Bay channel dredged material after Poplar Island and its Expansion have been fully used is implementing other island protection and restoration projects south of Poplar Island, in the Mid-Chesapeake Bay. The Mid-

Chesapeake Bay Island Project (James and Barren Islands) is critical to preserving and growing waterborne cargo through the Port of Baltimore's channels because it will provide 40+ years of dredged material placement capacity. This project is cost shared at 65 percent Federal / 35 percent non-Federal. Federal funding is essential to enable opening the Mid-Bay Project's James Island to dredged material placement by the time it is needed *and* to avoid deauthorization in calendar year 2021 (seven years after its authorization in the Water Resources Reform and Development Act (WRRDA) of 2014). I ask this Sub-Committee to support federal funding of approximately \$800,000 to begin pre-construction engineering and design on Mid-Bay in FFY 2018.

Federal funding for Corps dredging has been constrained over the last several years and continued constraints in funding will negatively impact the channels and business at the Port of Baltimore. The MPA believes that \$25 million per year is needed to fully dredge the channels to the Port of Baltimore. With larger ships calling than in the past, it is imperative that Baltimore harbor and channels be maintained at full authorized depths and widths on a year-round basis to facilitate efficient and safe maritime commerce in a very competitive environment and avoid costly environmental damage that could accrue from grounding. We look forward to working together to ensure adequate federal Operations and Maintenance (O&M) funding in the amount of \$30.4 million for dredging (including \$5.4 million for tipping fees) to maintain the Baltimore Harbor and Channels project in FFY 2018.

The C&D Canal is also an essential part of the Port of Baltimore's shipping channel system, providing the shortest route to open water for vessels traveling between Baltimore and points

north. We look forward to working together to ensure sufficient O&M funding (exclusive of the Bridge Maintenance funding) in the amount of \$12 million to maintain a depth of -35 feet in the C&D Canal and approach channels on a year-round basis.

Maryland remains fully committed to working with our federal partners to deliver safe, efficient, and cost-effective maritime commerce infrastructure in Maryland that contributes to the 26 percent of U.S. Gross Domestic Product (GDP) and 23 million American jobs* attributable to ports.

We support the American Association of Port Authorities (AAPA) recommendation that Congress fund Harbor Maintenance Tax-related work at \$1.33 billion for FFY 2018 to hit the target established in WRRDA 2014 and continue the path to full utilization of the Harbor Maintenance Trust Fund (HMTF) revenue for its intended purpose by FFY 2025.

Thank you again for the opportunity to testify, and I will be happy to answer any questions.

*Source: American Association of Port Authorities statistics

#

Mr. SIMPSON. Thank you, Mr. Rahn. I appreciate you being here today and this is not the first time, or the last time, I suspect I will hear about port—harbor maintenance and dredging.

Mr. RAHN. I would suspect not, Mr. Chairman.

Mr. SIMPSON. Thank you.

Mr. RAHN. All right. Thank you.

Ms. KAPTUR. Mr. Chairman? Might I just say that the fact that you have named your port in memory of our dear Congresswoman Helen Delich Bentley gets my attention. She was one of my closest friends during my congressional service and I congratulate you for that. So my eyes are wide open on your request.

I wanted to ask you, what do you do with your dredge material?

Mr. RAHN. If I may first comment on your first comment about Helen and having the port named after her, she was actually alive for the last 12 years that it has been named after her. So she was able to actually know the honor that had been bestowed upon her for her huge activity in developing the Port of Baltimore. She was an amazing woman with an amazing vocabulary.

The question where we put it, so we have two sites, or three, for the Feds, for Federal placement? Three.

So we have three sites for Federal placement, but for the Corps, and then we have two additional sites that we use for the harbor dredging that we do as a State to keep the harbor open.

Ms. KAPTUR. Do you use it or do you just store?

Mr. RAHN. Right now we are storing it, but we are looking for ways to reuse it. In fact, our State Highway Administration is changing their regulations to allow the placement of the dredge material into highway projects.

Thank you, Mr. Chairman.

Mr. SIMPSON. Thank you. Mr. Frazier.

WEDNESDAY, MAY 3, 2017.

SOUTHEASTERN FEDERAL POWER CUSTOMERS, INC.

WITNESS

MICHAEL FRAZIER, SECRETARY, SOUTHEASTERN FEDERAL POWER CUSTOMERS, INC.

Mr. FRAZIER. Thank you, Chairman Simpson, Ranking Member Kaptur, and members of the subcommittee. My name is Michael Frazier and I am appearing today on behalf of the Southeastern Federal Power Customers in support of funding for Southeastern Power Administration, also known as SEPA, and the hydropower program administered by the U.S. Army Corps of Engineers in the Southeast.

The Southeastern Federal Power Customers is a not-for-profit corporation that was formed over 25 years ago to support the interest of electric taxpayers that received the benefit of the Federal Power Program in the Southeast.

The members of the Southeastern Federal Power Customers are customer-owned municipal utilities and rural electric co-op that purchased the Federal resources provided by the Army Corps hydropower projects and use that hydropower with other generation to keep electric rates as low as possible.

As you are aware, the power generated by the Army Corps hydropower projects in the Southeast is marketed by a separate agency under the umbrella of the Department of Energy. That agency, Southeastern Power Administration, SEPA, markets, sells, and arranges transmission for the power that the Army Corps projects provide.

Our request to the subcommittee today is straightforward. The Southeastern Federal Power Customers are asking the subcommittee to authorize the use of receipts of at least \$6 million to allow SEPA to continue to meet its statutory mission of providing the power in the southeast to consumer-owned utilities at the lowest possible rate consistent with sound business principals.

This request to the subcommittee can be easily met, because of the authorization for SEPA to use its receipts is considered neutral from a scoring proposition. In other words, funding this organization does not cost the subcommittee in terms of allocated dollars.

Funding SEPA makes sense from a number of other perspectives as well. Authorizing SEPA to use receipts for program direction leverages revenues for the U.S. Treasury. Over the past four years SEPA has returned over \$1 billion to the U.S. Treasury.

Over the same period of time, it has been authorized to use roughly 28 million for program direction. It is a program that works for the Federal taxpayers. The program also includes other components such as the authorization to use receipts to wield the power and firm up power supply contracts.

The subcommittee approves funding for these activities through the authorization to use receipts for purchase power and wielding activities.

Like program direction, this funding authorization is also neutral from a scoring prospective, because the receipts or payments for these activities are received in the same year in which the expenditures are made.

The payments for these activities are typically passed through charges on a customer's bill, which means that the expenditures are reimbursed rather than absorbed by SEPA.

Let me emphasize an important point about the Federal power program that SEPA administers. The cost of the Federal power program are recouped and paid for by the ultimate beneficiaries. There are too few Federal programs that can make that point.

For those of us that endeavor to keep the electric rates as low as possible for our taxpayers, our rate payers, we truly appreciate the support that this subcommittee has traditionally given to SEPA.

We are also grateful for the support that this subcommittee has provided to the Army Corps hydropower program in the Southeast. As I mentioned earlier, the power market by SEPA comes from the Army Corps projects.

The Army Corps' costs associated with hydropower are recovered in the rates charged by SEPA. However, Congress must still appropriate the funding for the Army Corps' operations and maintenance programs in the first instance to keep the power plants running.

Although these expenditures are not treated the same as SEPA's direct program authorizations for scoring purposes, the subcommittee should be aware that the appropriations for the Army

Corps hydropower program come back to the U.S. Treasury and the receipts paid for by the hydropower customers in the southeast.

Every dollar put into the hydropower projects is returned to U.S. Treasury over time. In fact, I would encourage the members of the subcommittee to consider that funding the Army Corps hydropower program facilitates the payments to the Treasury, because the hydropower—if the hydropower equipment is not maintained, SEPA cannot sell the power which generates the revenues that I mentioned earlier.

In conclusion, we ask that the subcommittee support SEPA's direct program, be it no less than \$6 million, no less than \$80 million for purchase power and welding activities, and no less than \$75 million for the Army Corps hydropower programs to be used in the Southeast.

Thank you for listening and I will be happy to answer any questions.

[The information follows:]

Statement of Mike Frazier**Chairman of the Southeastern Federal Power Customers, Inc.
Operations and Maintenance Committee****Request for Support for the Southeastern Power Administration and U.S.
Army Corps of Engineer Hydropower Program****April 26, 2017**

Mr. Chairman and Members of the Subcommittee:

On behalf of the Southeastern Federal Power Customers, Inc. ("SeFPC"), I am providing testimony in support of funding for the Southeastern Power Administration ("SEPA") and the hydropower program in the Southeast administered by the U.S. Army Corps of Engineers ("Corps"). I appear before the Subcommittee to ask for support for funding for no less than \$ 6 million for SEPA's program direction and no less than \$ 80 million for purchased power and wheeling activities. In addition, we ask for support for \$ 75 million for the Operations and Maintenance ("O&M") expenditures by the Corps which supports hydropower generation at several multipurpose projects in the Southeast.

As the Chair of the Operations and Maintenance Subcommittee of the SeFPC, I am quite familiar with the funding needs for the Corps hydropower program in the Southeast. In addition, as the Director of Engineering and Power Supply of the Piedmont Municipal Power Agency, I can also attest to the value of the power resources marketed by SEPA. The funding authorized by this Subcommittee facilitates the marketing of the Federal Power resources in the Southeast. More importantly, the funding of SEPA has a multiplier effect for the U.S. Treasury. Authorizing net-zero spending authority for SEPA in the amount of \$ 6 million assists with the annual recovery of more than \$275 million for the U.S. Treasury. In fact, this small agency in Southeast Georgia has brought in over \$1 billion for the U.S. Treasury over the past four years.

In practical terms, the actions of this Subcommittee assist with the collection of these revenues for the Federal Treasury.

The revenues that SEPA collects each year for the U.S. Treasury also provide the funding source for its operations as well. Each year, the President's Budget request contains a suggested level of expenditures for SEPA that are drawn from the revenues that SEPA collects in the rates. Technically, SEPA does not receive an appropriation from Congress for expenditures in an upcoming fiscal year. Rather, Congress authorizes SEPA to use revenues that it collects in the rates charged for power to fund its program direction and purchased power and wheeling expenses as applicable.

The authorization of program direction and purchased power and wheeling spending reflects the fiscal reality that provides the foundation for SEPA. By law, SEPA sets rates that are designed to collect all of the costs of managing the marketing and sale of power from the Corps resources. Every month, the rates collected by SEPA contain monies sufficient to pay for program direction and purchased power and wheeling expenses as applicable. In this arrangement, the U.S. Treasury collects the receipts for the expenditures, in essence keeping the Federal Treasury neutral.

The Senate and House budget committees, along with the Office of Management and Budget ("OMB") and the Congressional Budget Office ("CBO") have recognized the "budget neutrality" of the authorizations for SEPA's spending in determining that there is a neutral "score" for the SEPA program. Indeed, starting with the 2001 Fiscal Year, the receipts associated with purchased power and wheeling activities for all of the Power Marketing Administrations ("PMAs") were reclassified as discretionary. The end result is that the receipts and expenditures of SEPA are netted out in the appropriations process. In other words, Congress,

OMB, and CBO recognized that the spending on purchased power and wheeling was already contained in the rates charged for the power customers. The amounts spent were (and are today) collected in the rates charged.

The scoring for purchased power and wheeling as well as program direction has served the Subcommittee well in deliberations on the use of the budget allocations. To the extent that the authorizations for SEPA have no scoring impact, SEPA can continue to meet its statutory obligation to market the power resources at the lowest possible cost consistent with sound business principles. The only uncertainty associated with this arrangement is whether the power resources will be available.

The hydropower resources in the Southeast are subject to any number of variables which can affect hydropower generation. Drought conditions can reduce hydropower generation, which reduce revenues for the Federal Treasury. Indeed, there is little that SEPA or the Corps can do to address lack of generation due to lack of precipitation. However, there are also instances where reservoirs are full, yet the Corps is unable to generate power because equipment has failed. In these situations, hydropower is not generated because of an outage at a Corps' facility.

In fact, outages can occur for any number of reasons. In some instances, the Corps will take a project off line to perform routine maintenance, or undertake major rehabilitation activity. These are necessary steps to ensure the continued reliable operation of the projects and future generation of hydropower. On a rare occasion, equipment may also fail, necessitating emergency repairs by Corps contractors before hydropower generation can re-start. In each of these circumstances, the Corps requires funding for O&M. In selective situations, the Corps needs capital funding too.

In many respects, this Subcommittee provides the starting point for the continued success and operation of the hydropower program in the Southeast. If Congress provides funding sufficient to meet O&M needs and capital for major rehabilitations, the Corps will continue to generate the hydropower that SEPA sells to consumer owned utilities in the Southeast. Therefore, we ask for the Subcommittee's support for the funding necessary to maintain the Corps hydropower program in the Southeast.

As the Subcommittee considers the funding levels necessary for the Corps hydropower program in the Southeast, we also highlight for the Subcommittee that the investment that the Corps makes in hydropower plant is recovered in the rates charged by SEPA. Notably, the rates charged by SEPA include components for Corps O&M and the capital investment that is commercially operable. In this regard, it is important for the Subcommittee to recognize that all of the investment in the Federal Power Program in the Southeast is recovered in rates charged.

In conclusion we ask for the funding necessary to maintain SEPA's operations and the Corps hydropower program in the Southeast. We thank the Subcommittee for prior support of these important programs as previous investments continue to serve electric consumers well in the Southeast. I am happy to answer any questions that the Subcommittee may have.

Michael Frazier
Chairman
Operations and Maintenance Committee
Southeastern Federal Power Customers.

Mr. SIMPSON. Thank you. We look forward to working with you and the other PMAs in trying to get some power that actually works. Thank you for your testimony today.

Ms. KAPTUR. Thank you, Mr. Frazier. Could I just ask over how many States does your authority exist, just Georgia?

Mr. FRAZIER. The Southeastern Federal Power Customers, we—all the States that the SEPA covers, so North Carolina, South Carolina, Georgia, Alabama. There is probably a couple more.

Ms. KAPTUR. All right. Thank you.

Mr. SIMPSON. Thank you.

Mr. Bean, welcome to the committee. It is good to see you again. Time is yours.

WEDNESDAY, MAY 3, 2017.

PUYALLUP TRIBE OF WASHINGTON STATE

WITNESS

DAVID BEAN, COUNCILMAN, PUYALLUP TRIBE OF WASHINGTON STATE

Mr. BEAN. [Speaking native language.] Good day, honorable relatives and friends. My name is David Bean. I am from the Puyallup Tribal Indians. I am here today on behalf of my chairman, Mr. Bill Sterud.

We appreciate the opportunity to testify regarding the fiscal year 2018 U.S. Army Corps of Engineers Civil Waterworks Resources Construction Budget. We especially want to thank Mr. Chairman Simpson for your continuing support of Indian Country, both in your capacity here on this committee as well as your former capacity as chair of the Interior Appropriations Committee.

We are continuously taught by our late uncle, Billy Frank, to tell your story. I am here today to tell you our story about our treaty right and the resource. We are also taught by his father, Billy Frank, Sr., that all natural things, our brothers and sisters, we have a responsibility to take care of them. If they take care of the fish, the fish will take care of us.

In particular we ask the subcommittee's support for the Army Corps' work to replace the Buckley Diversion Dam and Buckley fish trap on the White River in Washington State. This work is necessary, so the United States can honor our treaty rights and meet its obligations under the Endangered Species Act.

The estimated cost of this work right now is 50- to \$100 million. In addition to funding, we request report language to direct the Army Corps not to consider this project a new start construction project.

This is necessary, because right now even if the Corps received the funding, there is a current directive by OMB not to engage in any new start projects.

This seems ridiculous to us, since the planning and design for this project has been ongoing for more than a decade. To put this into perspective, Mr. Chairman, we started this process with your former colleague, Congressman Norm Dicks.

In addition to the existing facility, 77 years old, far exceeding its intended service life and replacement structures would be more accurately referenced as updates.

Since time immemorial, my Tribe has fished for salmon in the White River and the Puyallup River. My family has fished on these rivers for generations. We continue to do so this very day as treaties guarantee our right to fish from these rivers. My Tribe relies on salmon for subsistence, ceremonial and cultural purposes, as well as an economic resource. Now, three species of salmon are listed under the Endangered Species Act. They include the spring chinook, bull trout, and steelhead.

Putting our treaty right in jeopardy, if there are no fish, simply there are no rights to exercise. Together the Buckley fish trap and Buckley Diversion Dam compose one facility located on the White River, which empties into the Puyallup River farther downstream.

Since the dam completely obstructs the salmon's migration to their spawning grounds, the Corps installed the fish trap in a hold facility to serve as a pathway for the fish to prevent their extinction. Now the fish trap is 77 years old. It is completely outdated.

It was never designed to accommodate the runs of pink and coho salmon, which quickly overwhelmed its limited handling capacity. The limited fish handling capacity often creates delays where fish are backed up for a mile or more at the facility. This causes stress, delay, injury, and ultimately spawning mortality for all the fish, including those on the endangered species list.

It is long past time to replace the facility and several studies and biological opinions agree. Pursuant to the most recent National Marine Fisheries Service biological opinion, the Corps is required to replace the Buckley Diversion Dam and fish trap by 2020. If funding is not provided to continue the planning and construction of this project, this simply will not happen.

Because of the state of this facility, fishing season on both Puyallup and White Rivers was almost entirely closed to both Tribal and sports fishing last year. Thus, the impact of the Corps' failure to do its job, honor its trust responsibility to try to end Endangered Species Act, not only directly impacts Tribes' guaranteed treaty right, but the sports fishing industry in Washington State as well.

Fishing is a multimillion-dollar industry in the region and the health of these runs is critical, not only to the Tribes, but to the economy of the Northwest. One thing we are taught by elders that what affects one of us, affects all of us.

We respectfully request that Congress include funding in the fiscal year 2018 Army Corps of Engineer civil works budget for the Buckley Diversion Dam and fish trap by 2020 sufficient to ensure that construction of this facility is complete by 2020. This is necessary to ensure the Puyallup Tribes treaty rights are protected.

With that, I want to close by saying thank you. We are appraisingly thankful to you for this opportunity to talk with you here today.

[The information follows:]

**Testimony of the Puyallup Tribe of Indians
David Bean, Councilman
House Committee on Appropriations on
Energy and Water Development and Related Agencies
Fiscal Year 2018**

May 3, 2017

The Puyallup Tribe of Indians, a federally recognized tribe from Tacoma, Washington, appreciates this opportunity to testify regarding the FY 2018 U.S. Army Corps of Engineers, Civil Works Water Resources Construction budget. Specifically, we request that Subcommittee on Energy and Water Development provide funding in the FY 2018 budget for the U.S. Army Corps of Engineers to replace the Mud Mountain Dam and the Buckley Fish Trap, so that the Army Corps can meet its obligations under the Endangered Species Act and the U.S. can honor our Treaty Rights. Funding for replacement of the Dam and Buckley Fish Trap is an urgent need as further delay will cause irreparable harm to various species of salmon in the Northwest which we need for subsistence, economic, and cultural purposes. In addition to funding, we request report language to direct the Army Corps not to consider this Project a “new start” Project, as it has been ongoing for more than a decade.

Since time immemorial, our Tribe has fished salmon from the Puyallup and White Rivers. We continue to do so this very day as the treaties guaranteed our right to fish from these Rivers both on and off our reservation. Our Tribe relies on salmon for subsistence, ceremonial and cultural purposes, as well as an economic resource. Now, unfortunately, three species of salmon are listed under the Endangered Species Act—Spring Chinook, Bull Trout and Steelhead.

Together, the Buckley Fish Trap and Mud Mountain Dam compose one facility which is located on the White River and empties into the Puyallup River farther downstream. Since the Dam completely obstructed salmon's migration to their spawning grounds, the Corp installed the Fish Trap to serve as a new pathway for the fish and prevent their extinction. Now, the Fish trap is seventy-seven years old and completely outdated. It was not designed to accommodate the large runs of pink and coho salmon, which quickly overwhelm its limited handling capacity. This creates over a mile of backup at the facility, which causes stress, delay, injury and ultimately spawning mortality for all the fish including those on the Endangered Species list.

A decade ago, in 2007, the National Marine Fisheries Service ("the Service") issued a Biological Opinion ("BiOp") under the ESA that required the Army Corps to replace and repair the dilapidated facility and included provisions to install a new fish trap. The Army Corps had already been working with Tribes and other stakeholders at least 5 years prior to the opinion. However, by June 2012, the Corps had not made any meaningful progress with facility repairs, forcing the Service to initiate yet another consultation under the ESA. Two years later, in 2014 the Service issued its Final BiOp, demanding that the Corps replace the Buckley Fish Trap by 2020.

Impacts to Fish from the Outdated Facility

1. **Fish Mortality**. Endangered Species, particularly spring Chinook salmon, are delayed in spawning, which leads to stress, injury and reduced reproductive rates. The Fish Trap is simply not able to accomplish the job of moving fish smoothly and efficiently and meet the ninety-five percent (95%) survival rate as required by the Corps' operation of Mud Mountain Dam. It is estimated that there is a twenty percent (20%) mortality rate for fish listed under the ESA. This is far too high to meet standards for incidental take and results in a violation of the Endangered Species Act.

2. Loss of Fishing Opportunity and the Economic Benefits from Fishing. The impacts to fish cause a loss of fish for both Tribal and Sports Fishermen. The Corps' failure to comply with the Biological Opinion directly interferes with our Tribe's Treaty Right to fish. This past year, fishing season was almost entirely closed to both Tribal and Sports Fisherman because return predictions were so poor. The Sports Fishing industry is a multi-million dollar industry in the region, and the depleted runs on both of these rivers is depleting our economy.
3. Liability under the Endangered Species Act. The failures of the Army Corps of Engineers could lead to substantial liability for the agency under the Endangered Species Act. Further failure to comply with the Biological Opinion and the timelines set therein will give rise to additional liabilities.

Request for Funding

The Service's Final BiOp requires the Corps to replace the Mud Mountain dam and Fish Trap by 2020. For the past three years, our Tribe, the Corps, and other interested parties have been working to complete a facility design. The design is virtually complete and once Congress makes funding available, the Corps is prepared to put the construction of the Facility out to bid and move forward with construction. We respectfully request that Congress include funding in the FY 2018 Army Corps of Engineers Civil Works budget for this project sufficient to ensure that the construction of this facility will comply with the Service's BiOp and the Endangered Species Act.

Mr. SIMPSON. Thank you, David. It is always good to see you again and hear your testimony.

Any questions?

Ms. KAPTUR. I have no questions, but thank you very much for being here today.

Mr. SIMPSON. Thank you. We look forward to working with you on this.

Joseph Pavel.

WEDNESDAY, MAY 3, 2017.

SKOKOMISH TRIBE OF THE WASHINGTON STATE

WITNESS

JOSEPH PAVEL, TRIBAL NATURAL RESOURCE DIRECTOR, SKOKOMISH TRIBE OF THE WASHINGTON STATE

Mr. PAVEL. Good morning, good afternoon. I am Joseph Pavel, natural resources director for the Skokomish Indian Tribe. Thank you, Chairman Simpson, Ranking Member Kaptur, for this opportunity to testify on behalf of Army Corps of Engineers' appropriation in the amount of \$13,168,000.

This is the result of the development of an Ecosystem Restoration Project, one of three that was approved and authorized by Congress, and the recent Watershed Improvements Infrastructure Nations Act—Improvements for the Nation Act, that is as much as I am going to read.

I would like to stress that this particular project addresses issues in the Skokomish River, the most frequently flooded river in Washington State, if not the Nation. You may have observed, or noticed, this is the river famous for the salmon swimming across the road. You have seen it. It is true and it is real and it is often.

So we signed on with the Army Corps in 2006, a cooperative financing arrangement with our partner, Mason County, and let me stress, this is a cooperation between Tribal government and local government of Mason County of Washington State, so I believe I could speak on their behalf in support of the project as well.

Then in 2012, we kind of got the first results of that that it would not be practical as a flood control project, but we could continue to develop the feasibility as an ecosystem restoration project.

As I mentioned, we started in 2006. These Army Corps general investigation studies have a reputation to tend to run long and over cost, so this particular general investigation is the first one that was completed under a new edict of 3 by 3 by 3: \$3 million, 3 years, 3-inch binder. So this is the poster child of the new and improved and efficient Army Corps of Engineers.

As far as I am aware, this is the farthest any of these ecosystem restoration projects has gotten. We are just looking to get this funding. The local school sponsors are responsible for a matching cost share. We have developed the resources to meet that obligation. Timing is of the essence, though. We have built momentum. We need to keep this moving. We need to get this project done.

I would like to also mention that the Tribe, the county, and others have made significant investments in the watershed most nota-

bly. The city of Tacoma is a hydro project. We did an FERC relicensing of those. It is quite well known.

But we were able to secure significant contributions from the city of Tacoma. This watershed has been worked really hard. We hold that the United States, the Federal Government, sanctioned the actions of the city of Tacoma and they have some responsibilities to step up and assist with the remediation and the restoration of this watershed, as well as that hydro project.

The upper watershed has logged 90 percent clear-cut dense roads, very heavily impacted environmental from Federal Department of Agriculture lands. So there is some accountability there.

Great wealth has been obstructed from this watershed and has supported the industry of the city of Tacoma, their tax base, supported the industry, the forced products industry, and that has generated a great tax base. So it is time to return some of that wealth, put some of that wealth back to work on behalf of the resources that the Skokomish Indian Tribe depends on, essential to our recovery of Chinook, summer trim salmon, bull trout, steelhead.

The Skokomish River is a significant contributor to Puget Sound recovery. We will not ever have a recovery of our endangered species at Puget Sound until we can address these recovery efforts in the Skokomish River. Thank you.

[The information follows:]

**TESTIMONY OF JOSEPH PAVEL,
NATURAL RESOURCES DIRECTOR FOR THE
SKOKOMISH TRIBE, WASHINGTON STATE
BEFORE THE
HOUSE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON ENERGY AND WATER**

MAY 3, 2017

My name is Joseph Pavel. I am the Natural Resources Director for the Skokomish Tribe and former Chairman of the Tribe. I want to thank the Subcommittee, Chairman Simpson and Ranking member Kaptur for the opportunity to present testimony on a project that is critical to not only the Skokomish Tribe, but the entire Puget Sound in Washington State. I also want to thank our Congressman, Derek Kilmer, for his support of the Tribe and our partners the Mason County Conservation District on the Skokomish River Restoration Project. I am requesting Congress' support for \$13,168,000 in the Army Corps of Engineers, Ecosystem Restoration Budget.

Since time immemorial, the people of the Skokomish Indian Tribe have occupied and controlled lands adjacent to the Skokomish River and Hood Canal on the Olympic Peninsula of Washington State. In 1855, the Skokomish Indian Tribe entered into a treaty with the United States government, which reserved a permanent homeland for the Skokomish people near their ancestral villages along the Skokomish River. The Skokomish River Basin is located on the Great Bend of Hood Canal, a natural fjord-like arm of the Puget Sound. The Skokomish River is the largest source of freshwater to the Hood Canal and is of critical importance to the overall health of Hood Canal and the entire Puget Sound.

The location of the Skokomish Reservation was intended to facilitate easy access to the Skokomish River, its tributaries, and the tidelands and salt water of Hood Canal that sustained the Skokomish people for generations. These are among the areas where the Tribe also holds treaty-reserved rights to fish. The Skokomish people continue to rely on natural resources of the Skokomish River for subsistence, ceremonial, cultural, religious, economic and other purposes. In fact, many tribal members derive all or a part of their income from the fish and shellfish that are sustained by the Skokomish River system.

In short, the Skokomish River is both the cultural foundation for the Tribe and the primary source of the Tribe's exercise of its treaty-protected fishing rights under the 1855 Treaty of Point No Point. Thus, the health of the Skokomish River is vital to the life, culture and economy of the Skokomish Tribe. Unfortunately, the River has been substantially damaged, including by the effects of upstream hydropower development and other federally sanctioned activities on the River.

Specifically, as discussed in the Army Corps EIS on the Proposed Skokomish River Restoration Plan, "high sediment load, reduced flows, and encroachment on the floodplain by man-made structures are causing continued degradation of natural ecosystem structures, functions, and processes necessary to support critical fish and wildlife habitat throughout the [Skokomish River] basin. The decline in Skokomish River ecosystem health has resulted in the listing of four anadromous fish species under the Endangered Species Act (ESA) (Chinook salmon, chum salmon, steelhead, and bull trout) that use the river as their primary habitat." Further, according to the Army Corps "the impaired ecosystem has adversely affected riverine,

wetland, and estuarine habitats that are critical to these and other important fish and wildlife species such as bears, bald eagles, and river otters to name a few.”

Last year as part of the Water Infrastructure Improvements for the Nation Act (WIIN), Congress authorized the Skokomish River Restoration, as one of only three ecosystem restoration projects in the Country authorized as part of WIIN. This project is supported by the Army Corps of Engineers, which prepared the feasibility study and in December, 2015 submitted a report to Congress recommending the Restoration Plan, which was subsequently authorized by Congress in WIIN. The total federal contribution of this Restoration Plan as authorized by Congress is \$13,168,000 and the nonfederal share is estimated at \$7,091,000. The Skokomish Tribe and Mason County Conservation District are the non-federal cost-sharing sponsors and we are working jointly to secure our contribution.

The Restoration Plan would address the condition of the River, thereby improving aquatic habitats for the fish and wildlife species found in the Skokomish River, including for the four ESA listed species: Chinook salmon, chum salmon, steelhead trout, and bull trout. According to the Army Corps the Restoration Plan “maximizes environmental benefits considering cost effectiveness and incremental cost analyses, significance of outputs, completeness, efficiency, effectiveness, and acceptability.”

The Plan as authorized by Congress was carefully considered by the Army Corps, the Tribe, the Mason County Conservation District and all other stakeholders. This Plan will restore the ecosystem of the Skokomish River Watershed Basin, one of the most important watersheds

in the Puget Sound and the Nation. It is time to do this work and bring life and vitality back to our River and the entire Skokomish River Basin Watershed.

Mr. SIMPSON. Thank you, Joseph.

You going to ask him?

Ms. KAPTUR. As I listened to the testimony this morning, including Mr. Pavel, I just have to say how important I believe an infrastructure bill is to this country. I will be one of the chief advocates for the backed-up projects for the Corps across this country. It could be one of the greatest job creators we could have. Let us hope we can move the country toward that point. Thank you.

Mr. SIMPSON. Thank you. Jackson Brossy?

WEDNESDAY, MAY 3, 2017.

NAVAJO NATION WASHINGTON OFFICE

WITNESS

JACKSON BROSSY, EXECUTIVE DIRECTOR, NAVAJO NATION WASHINGTON OFFICE

Mr. BROSSY. Hello. My name is Jackson Brossy and I am the executive director of the Navajo Nation Washington Office. Thank you for this time to be here. I think it is important that we are here. Energy and water are two of the biggest issues facing the Navajo Nation today, so thank you.

I want to address four different areas that impact the Navajo Nation, and this committee can help us grow our economic infrastructure. First, we see an area for the Bureau of Reclamation to help us out to support funding for an economic transition in light of the closing Navajo Generating Station. Second, we see an opportunity for the Bureau of Reclamation to support us in existing and building out new water infrastructure. Third, we see an opportunity for the U.S. Army Corps of Engineers' water programs to assist in further expanding our water infrastructure. And finally, the U.S. Army Corps of Engineers can help us with abandoned mine remediation. So I will start with the Navajo Generating Station.

The generating station is a public-private partnership of coal-powered electrical generation on the Navajo Nation. And Congress was involved in creating this public-private partnership. And the reason we are here before you is the United States Government is an owner in this public-private partnership through the Bureau of Reclamation.

However, less than a year ago, these non-Navajo owners decided that they wanted to divest and shut down this plant. So closure of this plant would be devastating. A recent Arizona State study estimated that closure would—the impact could be \$18 billion over a span of 30 years. So any investment in this project has the potential to save billions of dollars in an area where there is an untenable 40 percent unemployment rate.

So we seek a number of different proactive areas, including building out a railroad that will give us access to outside markets. We seek assistance with training for potential job losses in the thousands. And Congress is uniquely positioned to help us in this issue.

I would like to transition into water infrastructure, another problem we have. There are about 15,000 homes in the Navajo Nation or about 30 percent in the Navajo Nation live without access to

running water. That situation is absolutely untenable in 2017. And the Navajo Nation has been and continues to do everything we can to address this.

We look at several different funding sources, including our own, and we put our money where our mouth is. And recently, this Congress passed—well, two Congresses ago passed the Navajo-Gallup Water Settlement. We ask for continued funding of the Navajo-Gallup Water Settlement in fiscal year 2018, and we also ask that the expired Rural Water Act of 2016 be reauthorized, so that we can work with the Bureau of Reclamation on different projects, including a 990,000 agreement we have with the Bureau of Reclamation to connect with other existing water sources, so that we can get access to water for these folks on the Navajo Nation that do not have access to running water.

The Navajo Nation also requests funding for the Bureau of Reclamation Native American Affairs Office. The Navajo Tribe, as well as other Tribes, take advantage of this office, and they help plan and coordinate and assist in a variety of projects.

Transitioning to the U.S. Army Corps, Section 205 of the Flood Control Act of 1986 authorizes the Corps to assist local communities in reducing flood risk through their Small Flood Risk Management Program. We support reauthorization and funding for that program.

The Navajo Nation also requests funding for Section 520 of the Water Resource Development Act for the Navajo Nation flood plain mapping. There are currently unspent Navajo Nation funds tied to this authority, so are our own funds, that the U.S. Army Corps of Engineers cannot spend without additional appropriations. The Navajo Nation requests that \$500,000 be appropriated into this authority to match Navajo Nation funds that we are already planning on investing.

And finally, transitioning to mining, there are a number of abandoned mines in the Navajo Nation that were created during the Cold War. Some of these mines were not properly decommissioned and some of them are still open today. This has created a tremendous health crisis on the Navajo Nation and we ask that the abandoned mines reclamation program be fully funded so that we can build out a database.

Thank you.

[The information follows:]



THE NAVAJO NATION

RUSSELL BEGAYE PRESIDENT
JONATHAN NEZ VICE PRESIDENT

**Testimony from the Navajo Nation, Executive Director Navajo Nation Washington Office
Jackson Brossy for the House Appropriations Committee Subcommittee on Energy and Water
Testimony on May 3, 2017**

Hello my name is Jackson Brossy the Executive Director for the Navajo Nation Washington Office. I am here today to provide testimony to request funding for the U.S. Bureau of Reclamation (BOR) to support funding an economic transition in light of the pending Navajo Generating Station (NGS) closure in the amount of \$150 million, the BOR programs in the amount of \$97 million, the U.S. Army Corps of Engineers (USACE) water programs in the amount of \$4.5 million, and the USACE remediation mine funding in the amount of \$500,000 or an increased amount. The NN's federal funding request supports the national infrastructure initiative and promotes economic development within the NN, where the unemployment rate is approximately 42% of the population.

Navajo Generating Station

The NGS is a public private partnership coal-fired electrical generating station located on the NN. The NGS is owned by Salt River Project (SRP) (42.9%); the BOR (24.3%); Arizona Public Service Co. (14.0%); Nevada Energy (11.3%); and Tucson Electric Power (7.5%). The SRP is also the operator of the NGS. Congress, through the *Colorado River Basin Project Act of 1968*¹, authorized the Department of the Interior (DOI) to create electricity for the Central Arizona Project (CAP) using NGS. The use of NGS has allowed the federal government to operate and maintain CAP at a revenue neutral cost.² The sole NGS supplier of coal is Peabody Kayenta Coal Mine (Mine),³ located on NN and Hopi Tribe. Conversely, the Mine's sole customer is NGS. The NN leases land to the NGS owners and participants, which ends in 2019. In 2013, after years of negotiation, the NN approved a lease amendment extending the lease through the year 2044. Sometime in 2016, the NGS owners and participants began discussions to prematurely close

¹ P. L. 90-537.

² President FY 2017 Department of the Interior Bureau of Reclamation Budget Book.

³ The mine operates under a permanent program permit issued by the DOI Office of Surface Mining Reclamation & Enforcement's Western Region in 1990 pursuant to the *Surface Mining Control and Reclamation Act of 1977* (P. L. 95-87).

NGS. While the NN would like to see the NGS operate through 2044, as previously understood, in light of selective catalytic reduction (SCR) that need to be installed in 2030 at the NGS, the NN's current position is that it would like to see NGS remain open through at least 2029. There have been some small successes in keeping NGS open past this year such as: on February 13, 2017, the NGS owners voted on the future of NGS and the closure of NGS was delayed until December 2019 pending the development and execution of necessary documents.⁴ In addition, with new Administration, the NN has been working with federal stakeholders, NGS owners, effected Indian tribes, and Congress to delay the immediate closure of the NGS. There have been two stakeholder meetings organized by the DOI and one upcoming meeting.⁵ The meetings have allowed stakeholders to discuss the possibilities and realities of the NGS. The meetings have allowed stakeholders to discuss the possibility of NGS operating past 2019, and at the same time has allowed stakeholders to begin discussions on what economic development opportunities exist if NGS closes in 2019.

Community Economic Impact Losses. In 2018, there is expected to be approximately \$44 million in revenue from NGS. An Arizona State University study estimated that NGS would have a \$18B total impact to the NN (including jobs) from 2012-2044.⁶ The NGS directly provides more than 500 jobs, of which 90% belong to Navajo tribal members.⁷ The closure of the Mine, would result in an additional 400 direct jobs lost.⁸

Proposal for Funding an Economic Revitalization Package as a Result of the Premature NGS Shutdown. In order to avoid the catastrophic economic impact to the NN and the surrounding

⁴ Lease negotiations between the NN and the operator are continuing to occur and final language should be completed by May 1, 2017 in order pass NN Council by July 1, 2017.

⁵ On March 1, 2017, the DOI BOR conducted a stakeholders meeting to find economical solutions to move forward. The DOI established taskforces to work on finding new owners, new customers, etc. The meeting also identified that in order to continue operations, new owners for NGS need to be established by September 1, 2107. On April 12th, 2017, several ideas for continued operations were discussed including coal subsidies, water rights transferred, building a rail line to export coal, potential of outside investors, subsidize labor for \$260 million, and subsidize power for customer's benefit. A future meeting has been set for May 16, 2017 in Arizona.

⁶ This assumes the plant operates at the same level. Navajo Generating Station & Kayenta Mine: *An Economic Impact Analysis For The Navajo Nation*. Evans, Anthony, Tim James, Melissa Gamez and Eva Madly L. William. *Saidman Research Institute, W. P. Carey School of Business, Arizona State University*. April 9, 2013.

⁷ Navajo Generating Station. <https://www.ngspower.com/howngshelps/community.aspx>. Accessed on Feb. 7, 2017.

⁸ Peabody Energy. <http://www.peabodyenergy.com/content/276/media-center/fact-sheets/kayenta-mine>. Accessed on Feb. 7, 2017.

community, the NN requests that Congress consider an economic development revitalization package. In addition to the economic development revitalization package transition, the stakeholders at the DOI meetings discussed the potential to build a railroad and support other infrastructure to support additional markets for Indian energy and economic development. The NN request Congress to consider funding a railroad routed from the Kayenta, AZ coal mine to Interstate-40 to provide options for the future of coal and other product exports.

Navajo Nation Water Infrastructure

Most NN residents raise livestock and farm on small form plots for their livelihood and survival. More than 15,000 Navajo homes on the Navajo Reservation lack access to drinking water. With diverse funding, including federal funding, the NN continues to construct, maintain, and operate water systems. Some of the needed continual work includes drilling, rehabilitation, flood plain management, repair and maintenance of water wells, buying storage tanks, maintaining windmills, inserting waterlines, maintaining earthen dams, and providing irrigation. This work throughout the NN provides direct water service to NN residents. In addition, the NN seeks funding for abandoned mine remediation.

BOR Water programs. On March 30, 2009, the Secretary of the Interior was authorized to enter into the *New Mexico San Juan River Basin Water Rights Settlement Agreement* and the Navajo-Gallup Water Supply Project (NGWSP), was authorized for construction.⁹ The NGWSP is comprised of two laterals, the Cutter Lateral and the San Juan Lateral, which will convey treated San Juan River water to NN communities in New Mexico (NM) and Arizona (AZ); the southwest area of the Jicarilla Apache Nation, and the City of Gallup for domestic, commercial, municipal and light industrial purposes. The NN requests \$87 million in FY17 and requests that continue in FY18.

⁹*Northwestern New Mexico Rural Water Projects Act* (P.L. 111-11: 123 Stat. 1367).

In order to assist with the connection of the Project to existing local water systems, the NN has a \$990,000 agreement with BOR to complete Preliminary Engineering Reports along the San Juan Lateral. These connections are not part of the NGWSP and will need additional funding in future years when the costs are determined. With the expiration of the *Rural Water Act in 2016*, the vehicle to fund such connection projects is currently absent, the NN provided letters to the Commissioner and others to seek additional avenues to assist with funding of NN water delivery projects. The NN requests that the *Rural Water Act* be extended to continue much needed appraisal and feasibility studies or similar authority be established. The NN requests that \$5 million be allocated toward this purpose on an annual basis.

The NN requests \$5 million for BOR the Native American Affairs Office, which provides technical assistance for various projects. The NN is working to re-establish a contract with BOR to obtain future funding for small projects.

USACE Water programs. Section 205 of the *Flood Control Act of 1986*¹⁰ authorizes the USACE to assist local communities in reducing flood risk through the Small Flood Risk Management Project program. Recent floods in several major NN communities will need assistance through this program. The USACE will soon be visiting the community of Crownpoint, NM to begin assessing the options to address the flooding.

Section 203 refers to a section of the *Water Resources Development Act of 2000*¹¹ called the Tribal Partnership Program authorizes the USACE to assist Indian tribes with a flood damage reduction, environmental restoration and protection, and preservation of cultural and natural resources, watershed assessments and planning activities and other water projects. The NN supports full funding of the USACE Tribal Partnership Program. In addition, to the full funding the NN has submitted to the House Natural Resources Subcommittee on Indian, Insular, and Alaska Native Affairs and the Senate Committee on Indian Affairs and the Senate Environmental and Public Works Committee a list of seven water projects

¹⁰ 33 U.S.C. 701s.

¹¹ P.L.106-541.

specifically for NN that need over \$4 million of funding. The NN requests \$2 million in appropriations for the USACE Tribal Partnership Program to address the dire need for infrastructure and watershed planning. The NN has provided funding to match this program for a watershed planning project in the southwestern portion of the NN.

The NN requests full funding of the USACE Flood Plan Management Service Program¹², the Response and Contingency Operations program¹³, and Planning Assistance to States.¹⁴ The USACE has been diligently working with the NN to delineate floodplains for several communities on the NN for the last several years through this program. These floodplain delineations are critical to expend federal funds for housing and other developments that support economic growth. The NN requests \$2 million be annually appropriated to this authority to continue this work.

The NN request funding of Section 520 of the *Water Resource Development Act* for NN floodplain mapping. Section 520 was authorized specifically for the NN and requires a 75 percent cost share from the United States. There are currently unspent NN funds tied to this authority that the USACE cannot spend without additional appropriations. The NN requests that \$500,000 be appropriated into this authority to match the NN funds.

USACE Mine Funding. There are a large number of abandoned mines on the NN, many of which are uranium mines that were not properly decommissioned. This has caused a huge health crisis on the NN. The NN seeks federal funding to assist in operation to remove hot uranium left over from mining to improve the health on the NN. The NN requests that the USACE receive federal funding to be used for the Remediation of Abandoned Mine Sites ongoing database development and analysis addressing multiple abandoned mines across NN. The NN receives \$500,000 with no cost share requirements. If the USACE were to receive a larger appropriation that would mean expanded assistance.

¹² Section 206 *Flood Control Act of 1960*, P.L. 86-645.

¹³ P.L. 84-99, 33 U.S.C. 701n.

¹⁴ Section 206 *Water Resources Development Act of 1974*, P.L. 106-541.

Mr. SIMPSON. Are these mostly uranium mines?

Mr. BROSSY. There are more than—there are about 500 uranium mines in the Navajo Nation and about half of them have not been remediated. And the United States was the sole customer of these, and so, obviously, the Federal Government has the responsibility to clean this up.

Mr. SIMPSON. Thank you.

Mr. BROSSY. Yeah.

Ms. KAPTUR. Mr. Chairman, I want to thank the gentleman for testifying and just ask, could you repeat the number of homes on the Navajo Reservation that lack access? What percentage of the individual—

Mr. BROSSY. Fifteen thousand homes, about 30 percent of the homes in the Navajo Nation.

Ms. KAPTUR. A third?

Mr. BROSSY. Yep.

Ms. KAPTUR. Thank you.

Mr. BROSSY. It is an untenable problem, and we are putting our money where our mouth is, but we asked for additional help from every single source possible.

Mr. SIMPSON. Yeah, we saw that firsthand when we were out there.

Mr. BROSSY. Yeah.

Mr. SIMPSON. What was it, the year before last, I guess?

Mr. BROSSY. Yeah, you rode on our dirt roads and—

Mr. SIMPSON. Yes, I did.

Mr. BROSSY [continuing]. Last year.

Mr. SIMPSON. Yes.

Mr. AZURE. How are the mines secured currently? How are the abandoned mines secured currently?

Mr. BROSSY. Many of them are not secured. Some of the larger ones are covered. I am not, obviously, an engineer in the space, but there are mines that our Navajo Nation president saw last year that were wide open. They had doors that had been broken and people and kids and animals could go in there.

Mr. AZURE. Thank you.

Mr. SIMPSON. Thank you, Mr. Jackson. Mr. Floyd Azure.

WEDNESDAY, MAY 3, 2017.

ASSINIBOINE AND SIOUX TRIBES OF THE FORT PECK RESERVATION

WITNESS

FLOYD AZURE, CHAIRMAN, ASSINIBOINE AND SIOUX TRIBES OF THE FORT PECK RESERVATION

Mr. AZURE. Thank you. Thank you for allowing me to be here. Good afternoon, Chairman Simpson, Ranking Member Kaptur, and the members of the subcommittee. My name is Floyd Azure. I am twice-elected chairman of the Assiniboine and Sioux Tribes of the Fort Peck Reservation, located in northeast Montana. Please continue to do the good work you have done in the past years to finance the completion of the Fort Peck Reservation Rural Water System. The project is a joint Tribal/non-Indian rural water project,

which Congress authorized in 2000 with enactment of Public Law 106-382. The legislature authorized the construction of a rural water system to ensure a safe and adequate supply of municipal, rural, and industrial water for some 10,000 residents of the Fort Peck Indian Reservation, and the citizens of Roosevelt County, Sheridan County, Daniels County, and Valley County, which border our reservation. At full build-out, the project is estimated to serve 30,000 Montanans.

For fiscal year 2018, we seek approximately \$27 million, with \$14.7 million of those dollars for the Tribal portion of the water system, and \$12.2 million for the Dry Prairie part. We hope that you will act favorably on our request, even though we do not have a congressman. Our congressman, Mr. Ryan Zinke, you will have his back and we will look out for his Montana constituents while he serves the entire country as Secretary of Interior.

Mr. SIMPSON. That is somebody more important.

Mr. AZURE. To fund our request for fiscal year 2018, I ask the subcommittee to support an appropriations of \$50 million for additional funding for ongoing rural water projects, a modest \$3 million increase above the level this subcommittee recommended fiscal year 2017. This fund would supplement the specific funding for the Fort Peck Dry Prairie Rural Water system that is included in the President's annual budgets. This project grew out of necessity. Harmful levels of sulfates, irons, and brine contaminated our groundwater. We needed an alternate water source. We operate the water intake located in the Missouri River pumping station, a 3,000 square foot water treatment plant, and hundreds of miles of pipeline. Our two systems are interconnected and pump through our treatment plant. We are making our Tribal water rights available to Indian and non-Indian communities as our contribution to this effort. If our fiscal year 2017 construction funding is close to the \$16 million we received for the project in fiscal year 2016, we will be two-thirds complete with the \$300 million project, with 16 years of Federal appropriations totaling just over \$2 million.

We learned last month that our project is now ranked second by the ABOR among the Tribal rural projects. I ask that you do not abandon your work to complete the construction. We have completed two of the three main trunks of the rural water system connecting the Dry Prairie on the west and the east of our reservation, and continue to lay hundreds of miles of water lines to serve our new communities.

As appropriators, you know that any delay in completing a project such as this only increases the cost to American taxpayers. It makes no sense to cut Federal spending for authorized rural water projects when the president, States, and union Tribes are all calling for infrastructure projects to be completed to help create American jobs and promote economic development, especially in rural communities. Safe and reliable water is essential to our communities' health and economy.

In conclusion, I urge this subcommittee to reject the administration's request to cut fiscal year 2018 appropriations for Bureau of Reclamation rural water projects and other nondefense agency appropriations critical to rural America. Federal appropriations are

required to finance the completion of this important rural infrastructure project. Thank you.
[The information follows:]

Testimony of Floyd Azure
Chairman, Assiniboine and Sioux Tribes
Before the House Committee on Appropriations
Subcommittee on Energy and Water Development and Related Agencies
Concerning the FY 2018 Budget
May 3, 2017

On behalf of the Assiniboine and Sioux Tribes of the Fort Peck Reservation and the Dry Prairie Rural Water System, we request FY 2018 appropriations of \$26.988 million for the joint Fort Peck Reservation Rural Water System Project (Assiniboine and Sioux Rural Water System and Dry Prairie Rural Water System), part of the Bureau of Reclamation (BOR) Rural Water Program construction allocation. The FY 2018 federal funding request is comprised of \$14.730 million for the Assiniboine and Sioux Rural Water System (ASRWS) and \$12.258 million for the Dry Prairie Rural Water System (DPRWS). See Table 1 below.

The Project received \$16.06 million in FY 2016. A similar funding may be possible in FY 2017 if Congress retains FY 2016 levels through September 30, 2017. Project completion by December 31, 2020, the authorized completion date, will not be possible at recent funding levels. Congress will need to increase annual appropriations for the Project to \$37.2 million for each of the next three fiscal years (FY 2018 through FY 2020) to complete the Project by 2020.

Successive annual Presidential budgets have reduced construction funding for the rural water program from a high of \$51.5 million in FY 2013 to less than \$20 million in recent years. As a result, the Tribes and Dry Prairie request a \$3 million increase (to \$50 million) for discretionary allocation by Reclamation as “additional funding for ongoing rural water projects” to restore funding within the rural water program to more reasonable levels. We are encouraged that the President’s budget outline for FY 2018, despite overall reductions, “invests over \$1 billion in safe, reliable, and efficient management of water resources throughout the western

United States,” and does not appear to represent a reduction from current funding levels for Bureau of Reclamation water projects. We oppose any reductions for rural water projects.

FY 2017 funding will permit the Tribes to connect residences around Wolf Point to the ASRWSS and begin construction of the third trunk north to interconnect with DPRWS in Sheridan County, Montana. At the end of FY 2017, ASRWSS and DPRWS will serve 86% and 68% of the current project populations, respectively.

FY 2018 funds will be used to construct critical elements of the Project. The request is within the capability to spend funds in FY 2018. Design, cultural resource surveys, wetland surveys and easements related to all proposed project features will be completed by the Tribes and Dry Prairie and approved by Reclamation in 2017 in advance of the use of FY 2018 funds. As a result, the project will have supplemental capacity to absorb additional appropriations by Congress for infrastructure, including additional appropriations that Congress may include in a \$1 trillion infrastructure measure that finances rural water projects.

The Tribes’ and Dry Prairie’s \$27 million FY 2018 request is below the average funding needed to complete the two systems in 2020 (\$37.2 mil.), the year scheduled for completion by the Consolidated Appropriations Act, 2014, PL 113-76, Division D, Title II, Sec. 209. At a present funding level of \$16 million, the underlying authorization, the “Fort Peck Reservation Rural Water System Act of 2000,” Pub. L. 106-382, will also need to be extended five years (to 2025), as construction at that level will continue into 2023. The budget ceiling will also need to be raised as a result of inadequate funding to complete the project in the statutory time frame.

Rural water projects such as the Fort Peck Reservation Rural Water System are meeting a basic drinking water need of highest importance to the health and welfare of the people served.

TABLE 1
 FY 2018 FUNDING REQUEST
 FORT PECK RESERVATION RURAL WATER SYSTEM (PL 106-382)

Sponsor	Project Feature	Federal	Non-Federal	Total
Fort Peck Tribes				
	US 2 North to Reservation Boundary Secondary Branches	\$6,796,000	\$0	\$6,796,000
	US 2 North/Lustre Main Branch	4,015,000	0	4,015,000
	Frazer to Porcupine Creek (Booster in 2018)	1,976,000	0	1,976,000
	Service Connections	559,000	0	559,000
	FP Electrical, Meters, Easements	1,384,000	0	1,384,000
	Subtotal	\$14,730,000	\$0	\$14,730,000
Dry Prairie (Main Transmission Pipelines and Branches)				
	Westby/Outlook	\$3,061,000	\$602,000	\$3,663,000
	FP Boundary to Scobey and Third Connection Service Area	8,469,000	1,665,000	10,134,000
	DP Electrical, SCADA, Meters, Easements	728,000	143,000	871,000
	Subtotal	\$12,258,000	\$2,411,000	\$14,668,000
	Total	\$26,988,000	\$2,411,000	\$29,398,000

Congress has long recognized that infrastructure, including reliable and plentiful residential, commercial and industrial water supply, is a foundation for community stability and an essential component for economic development, especially in rural communities. The former Administration shifted the funding burden for such projects to Congress, but Congress has consistently stepped forward and added tens of millions in funding for additional rural water programs which, for FY 2016, brought funding to \$65.5 million.

For a federally-authorized project that is nearly two-thirds complete, and partially supported with local funds, the fiscally prudent course of action would be finance the remaining construction sooner rather than later, thereby saving taxpayer money and removing from the project from the list of on-going rural water construction projects financed with Reclamation funds. We ask that Congress reject any proposal by the Administration to reduce funding.

As shown in Table 2 below, at the end of FY 2017, based on House and Senate versions of FY 2017 funding, construction of the ASRWS will be 72% complete, and DPRWS will be

45% complete. The Assiniboine and Sioux Tribes have built the regional intake, water treatment plant and 2 of the 3 main transmission pipelines that serve both the Tribes and Dry Prairie. The third main transmission pipeline will be completed in FY 2017. Construction funds remaining to be spent after FY 2017 total \$109.012 million within the current authorization (in October 2016 dollars).

Administrative costs beyond 2020 will reduce funds that can be applied to construction and cause the authorized ceiling to fall short of the amount needed to finish construction. The Subcommittee is urged to address the problem of inadequate budgeting of currently authorized projects in the Rural Water Program that are well advanced in construction to avoid unbudgeted annual overhead costs and inflation.

TABLE 2
FUNDING STATUS AND NEEDS
STATUS OF FEDERAL FUNDS

Funding Status	ASRWS	DPRWS	Project
Total Federal Funding Authority (October 2016\$)	\$209,850,000	\$90,854,000	\$300,704,000
Federal Funds Appropriated Through FY 2017			
Energy and Water Appropriations	\$103,922,000	\$40,399,205	\$144,321,205
ARRA Allocation	47,371,000	0	47,371,000
Total	151,293,000	40,399,205	191,692,205
% Complete after FY 2017	72.10%	44.47%	63.75%
Amount Remaining After FY 2017			
Total Authorized (October 2016\$)	\$58,557,000	\$50,454,795	\$109,011,795
Adjusted for Inflation to FY 2020 at 1.201% Annually	\$59,969,000	\$51,672,000	\$111,641,000
Years to Complete	3	3	3
Average Annual Required to End in FY 2020	\$19,990,000	\$17,224,000	\$37,214,000
FY 2018 Amount Requested	\$14,730,000	\$12,258,000	\$26,988,000
FY 2017 Employment, Full Time Equivalents	44	37	81

Congress authorized two amendments of PL 106-382 to extend the project completion to 2015, and most recently to September 30, 2020. Inflation at 1.201% (average over past 5 years) through the 3 years ending in 2020 will increase remaining project costs to \$111.641 million or

\$2.630 million more than the authorized construction ceiling in today's dollars (Table 2).

The Tribes and Dry Prairie have worked extremely well and closely with the Bureau of Reclamation since the authorization of the project in FY 2000. The Commissioner, Regional and Area Office of the Bureau of Reclamation have been consistently in agreement with the need, scope, total costs, and the ability to pay analysis that supported the federal and non-federal cost shares. There have been no areas of disagreement or controversy in the formulation or implementation of the project. The project has substantial additional capability to use construction funds and would benefit from infrastructure legislation that might be authorized in the current session. As much as \$50 million in additional funding is within the capacity of the project to use. The project's history demonstrates the capability of the parties to economically manage and apply large funding amounts to beneficial project purposes.

In conclusion, continued Congressional support is needed for the Reclamation Rural Water Program to complete the currently authorized projects in a timely manner. With adequate funding, we can avoid the erosion of construction capability. This is due to the fact that fixed, annual overhead costs reduce authorized construction funds because project construction must be spread out over a significantly longer period than anticipated at authorization. With calls by the Administration for a \$1 trillion infrastructure measure this session to help create American jobs, it makes perfect sense to increase federal appropriations for authorized ongoing rural water projects to help improve the health and economy of our regions.

Mr. SIMPSON. Thank you, and if any of the committee members that—the last two people to testify, if you have not been out on some of the Reservations and seen the needs in terms of water and so forth, it is amazing what is going on. I have been very involved in trying to get the Cheyenne River Sioux Eagle Butte Water System completed out there that have a dire need, but it is throughout Indian country that we need to make sure that we maintain—it is amazing, in today's age, that people do not have access to fresh water, which is just incredible. So it is not only us, it is the Interior Committee also that has been working on it and stuff, so appreciate it. Thank you.

Ms. KAPTUR. Mr. Chairman, I just say for all of the Tribal representatives who are here today, I would urge you to work together and invite the President of the United States to your Reservations and to make sure that the infrastructure bill that they are considering over there—and it is a new administration, so they got a lot of issues—but that they see you, and, you know, you might get him to come.

Mr. AZURE. Thank you.

Mr. SIMPSON. Thank you, Floyd. Dr. Elmer Guy.

Mr. GUY. Thank you. Thank you, Mr. Chairman. I am Elmer Guy, president of Navajo Technical University.

Mr. SIMPSON. Is your microphone on?

WEDNESDAY, MAY 3, 2017.

NAVAJO TECHNICAL UNIVERSITY

WITNESS

DR. ELMER GUY, PRESIDENT, NAVAJO TECHNICAL UNIVERSITY

Mr. GUY. Thank you, Mr. Chairman. I am Elmer Guy, president of Navajo Technical University in Crownpoint, New Mexico, on the Navajo Nation. I ask that my full statement be included in the record of this hearing, Mr. Chairman. On behalf of the Nation's 37 Tribally and Federally chartered colleges and universities, that collectively are the American Indian Higher Education Consortium, or AIHEC, thank you for this opportunity to address your subcommittee.

Mr. Chairman, I want to thank you for your past support of Tribal colleges. I would also like to thank the subcommittee for your longstanding support for the MSI partnership program operated by the Department of Energy's National Nuclear Security Administration. I am here today with a modest request for a small program with enormous potential. I respectfully request \$5 million in the fiscal year 2018 Energy and Water Development Appropriations bill to continue and expand the new Tribal college initiative, which is part of the Department of Energy's NNSA/MSI partnership program. Tribal colleges first joined the MSI partnership consortia program about 2 years ago. Already, it has made a significant impact in our small institutions and the rural communities we serve.

Tribal colleges are place-based institutions located in 16 States. We focus on Tribal Indian Nation-building through programs that sustain our Tribal cultures, languages, lands, and people. We are

working to grow the country's Native workforce, and even more important, to create jobs in Indian Country to help address the deep-seated poverty that plagues our communities. Through AIHEC, Tribal colleges are implementing a long-term systemic plan to transition Native communities from local economies that perpetuate cycles of dependency and poverty into dynamic, innovation-driven economies, creating jobs and business opportunities.

A key part of our plan is to work with new and emerging manufacturing technologies and methods to build jobs that Native Americans need and thereby to expand opportunity and leadership for all Americans. With seed funding from NNSA, we launched an advanced manufacturing program involving a pilot cohort of five Tribal colleges. This program will prepare a well-trained Native workforce in advanced manufacturing and create economic opportunities through the design and manufacture of products that are responsive to industry needs in these targeted technology areas.

For example, the Center of Digital Technology at my institution, Navajo Technical University, has established a rapid growing advanced manufacturing program. Funded in part by the NNSA program and the National Science Foundation, NTU has developed a state-of-the-art facility, including 3D printers, computer numerical control machines, validation instrumentation, including metrology, that allows students to acquire knowledge and skills in design engineering, manufacturing processes, and performance analysis.

Through this program, NTU is poised to become a leader, both in advanced manufacturing and the promotion of innovation and competitiveness through our own Center for Inspection Standards and Calibration. In fact, the Navajo Nation is contemplating investing in our college program, is helping recruit industry partners for research, development, and manufacturing projects involving faculty and students. Los Alamos National Laboratory is working with us to strengthen our metrology program simply because they lack metrologists.

This is one example of how Tribal colleges are creating models for small, under-resourced, and rural institutions to successfully participate in an advanced technology-supported economic growth area, while providing students, both male and female, with hands-on training that leads to careers.

Mr. Chairman, to ensure that the vital NNSA/TCU advanced manufacturing network initiative can continue, and more important, to help us accelerate the transformative power of relevant, job-producing higher education, we request your support for \$5 million for the Tribal college initiative within the NNSA/MSI partnership program. Thank you.

[The information follows:]

STATEMENT OF DR. ELMER GUY
PRESIDENT, NAVAJO TECHNICAL UNIVERSITY
ON BEHALF OF THE AMERICAN INDIAN HIGHER EDUCATION CONSORTIUM
PREPARED FOR THE U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT, AND RELATED AGENCIES
DEPARTMENT OF ENERGY – NATIONAL NUCLEAR SECURITY ADMINISTRATION

May 3, 2017

I. REQUEST SUMMARY

On behalf of the nation's Tribal Colleges and Universities (TCUs) that collectively are the American Indian Higher Education Consortium (AIHEC), thank you for this opportunity to present the TCUs' Fiscal Year 2018 (FY 2018) appropriations request with regard to the Department of Energy, National Nuclear Security Administration (NNSA) Minority Serving Institutions Partnership Program (MSIPP). In FY 2016, approximately \$5 million in new funds were included in the budget to launch a Tribal Colleges and Universities Initiative within MSIPP; however, because the intent for the added funds was not articulated clearly enough in the budget request, the funds were absorbed into the existing NNSA-MSIPP programs. In the end, a modest amount of funding was identified through NNSA-MSIPP to launch the first phase of this important TCU Initiative, funding five TCUs. To ensure that in the future funds are allocated to the intended program, we request that report language be included in the FY 2018 Energy and Water Development, and Related Agencies Appropriations bill directing that \$5 million of the funds appropriated for the Department of Energy, NNSA-MSIPP, be specifically designated for the Tribal Colleges and Universities Initiative. This initiative is designed to support a primary focus of the MSIPP, which includes advancing the TCUs' capacity for engaging in collaborative research projects throughout the NNSA complex, and helping to meet the nation's STEM workforce needs.

II. NNSA-MSIPP TRIBAL COLLEGES AND UNIVERSITIES INITIATIVE

The Tribal Colleges and Universities Initiative is designed to educate, train, and develop Native researchers, engineers, and technicians to expand and diversify the nation's STEM workforce in important technology growth areas. When the program is fully implemented, projects will focus on capacity building at TCUs in these growth areas and on facilitating research partnerships with NNSA's National Laboratories and their industry partners. In addition to furthering the science mission of the U.S. Department of Energy, activities supported through this program will encourage Native students to pursue science and technology careers resulting in a sustainable career pipeline for American Indian and Alaska Native students in science and technology fields that are emerging as key drivers of the U.S. and global economies and important to the nation's security interests.

III. JUSTIFICATIONS

Since 1973, the American Indian Higher Education Consortium (AIHEC) has been the collective spirit and voice of the nation's Tribal Colleges and Universities (TCUs), advocating on behalf of tribally or federally chartered institutions of higher education to help the TCUs achieve their collective mission of improving the lives of students through higher education and to moving

American Indians/Alaska Natives toward self-sufficiency. Our vision statement - *Strengthening sovereign nations through excellence in Tribal higher education* - illustrates our strong focus on Tribal Nation-building.

To achieve this vision, AIHEC continually seeks new avenues of support and new partners to grow the country's Native workforce and to create jobs in Indian Country. TCUs are the leaders in preparing American Indian/Alaska Native nurses, hundreds of teachers, and other professionals in high-demand fields, including agriculture and natural resources management, human services, IT technicians, and building tradesmen. However, training workers where opportunities for employment are extremely limited cannot address the entrenched poverty that plagues Indian communities.

Using the TCUs as the foundation, AIHEC is implementing a long-term systemic plan for transitioning Native communities from local economies that perpetuate the cycle of unemployment, dependency, and poverty to economies that are dynamic and innovation-driven, creating jobs and business opportunities. Working with new and emerging manufacturing technologies and methods, and with seed funding from the U.S. Department of Energy's National Nuclear Security Administration (NNSA), we have established an advanced manufacturing program involving a pilot cohort of five TCUs. Each college has established a basic advanced manufacturing facility, is involved in developing a joint training and education program, and has identified research and development projects involving energy system and related technologies that they are pursuing with private sector and federal agency partners. This program will prepare a well-trained Native workforce in advanced manufacturing and create economic and employment opportunities within Tribal communities through design and manufacture of products that are responsive to needs and opportunities within these targeted technology areas. The project envisions bringing the "maker movement" to Indian Country by providing American Indian/Alaska Native young people with technical skills, as well as the opportunity to use those skills to respond to emerging opportunities in key technology areas. We envision Tribes, Tribal Colleges, and investment partners working together to establish a manufacturing sector in Indian Country involving products and technologies that are designed, developed, and made by Native people. While the \$5 million requested from the DOE will focus on DOE STEM strategic goals more broadly, it will be critical to this initiative, ensuring that the participating Tribal Colleges have the facilities, dedicated personnel, and National Laboratory partners necessary for meeting both their training and education and research and development goals. Most important, these funds will help ensure that the TCUs develop the capacity to generate business activity that creates revenue necessary to grow and expand the program, and create jobs.

The TCU Initiative is helping to further some very promising and exciting projects in the area of advanced manufacturing. For example, the Center for Digital Technology at my own institution, Navajo Technical University (NTU) in Crownpoint, NM has established an Advanced Manufacturing program, funded in part by the Department of Energy and the National Science Foundation. The program has put together a state-of-the-art facility including 3D printers, computer numerical control (CNC) machines and high tech inspection, and validation instrumentation that allow students to acquire knowledge and skills in design engineering, manufacturing processes and performance analysis. Through this program, NTU is poised to become a leader both in advanced manufacturing and the promotion of innovation and

competitiveness through its own center for inspection standards and calibration. The Navajo Nation plans to make a significant investment in this program, and is helping to recruit industry partners for research and development, and manufacturing projects involving both NTU faculty and students. This program provides a model for how TCUs and Tribes can join the global manufacturing sector, generate significant economic activity, and train students to join the technology and engineering workforce.

A second example is Bay Mills Community College (BMCC) in the Upper Peninsula of Michigan that operates the Great Lakes Composite Institute, a wholly owned subsidiary of the college that functions as a Tier II/Tier III manufacturing supplier. It has established a technical leadership position as a supplier of composite materials and products focusing on thermoplastic fiber reinforced polymeric innovations and next generation thermoplastic fiber reinforced products. Industry partners include the Department of Defense military tank command (TARDEC), Ford Motor Company, and the Chrysler Corporation. They are also working with Sandia National Laboratories in exploring the use of composite materials to improve flywheel technology for energy storage.

Both NTU and BMCC are providing leadership and models for how TCUs can successfully participate in an advanced technology-supported economic growth area while providing students hands-on training and career opportunities.

IV. ABOUT TRIBAL COLLEGES: SOUND FEDERAL INVESTMENTS. Tribal Colleges and Universities are an essential component of American Indian/Alaska Natives' (AI/ANs) education. Currently, 37 TCUs operate more than 75 campuses and sites in 16 states, within whose geographic boundaries 80 percent of all American Indian reservations and federal Indian trust land lie. They serve students from well over 250 federally recognized tribes, more than 85 percent of whom receive federal financial aid – Pell Grants. In total, the TCUs annually serve over 160,000 AI/ANs through a wide variety of academic and community-based programs. TCUs are public institutions accredited by independent, regional accreditation agencies and, like all institutions of higher education in the U.S., must periodically undergo stringent performance reviews to retain their accreditation status. Each TCU is committed to improving the lives of its students through higher education and to moving AI/ANs toward self-sufficiency. To do this, TCUs must fulfill additional roles within their respective reservation communities, functioning as community centers, libraries, tribal archives, career and business centers, economic development centers, public meeting places, and child and elder care centers.

In August 2015, an economic impact study on the TCUs, conducted by Economic Modeling Specialists International (EMSI), revealed that the known TCU alumni impact is \$2.3 billion, which supports 28,778 jobs in the nation. From a taxpayer's perspective, the study concluded that the total monetary benefits to taxpayers compared to their costs (equal to the federal funds the TCUs received during the analysis year) yields a 2.4 benefit-cost ratio. In other words, for every federal dollar invested in the TCUs, the taxpayers receive a cumulative value of \$2.40, over the course of students' working lives. The average annual rate of return is 6.2 percent, a solid rate of return that compares favorably with other long-term investments. On an individual basis, TCU students see an annual return of investment of 16.6 percent, and the vast majority of TCU-trained workers remains in Indian Country and contributes to the local economy. TCUs benefit taxpayers through increased tax receipts and reduced demand for federal social services; a win all-round.

V. APPROPRIATIONS LANGUAGE REQUEST FOR FY 2018

We ask that the Subcommittee include report language designating that of the funds appropriated for the National Nuclear Security Administration (NNSA)-Minority Serving Institutions (MSI) Program, \$5,000,000 be designated to the Tribal College Initiative, so that we might begin to realize the full potential of this program that is setting TCUs on a path to further the opportunities they can offer their students and reservation communities.

VI. CONCLUSION

Struggling economies are endemic in Indian Country. We ask that Congress join us in bringing Tribal nations into the evolving global manufacturing community, transforming Tribal economies while addressing national energy technology challenges. AIHEC Member institutions/Tribal Colleges and Universities provide quality higher education opportunities to many thousands of American Indians and Alaska Natives and other reservation residents, as well as essential community programs and services to those who might otherwise not have access to such possibilities. As noted earlier, the modest federal investment that has been made in TCUs has paid great dividends in terms of employment, education, and economic development. As outlined earlier, continuation and expansion of this investment through the Department of Energy/NNSA partnerships makes sound fiscal sense.

We greatly appreciate your past and your continued support of the nation's Tribal Colleges and Universities and your careful consideration of our FY 2018 appropriations requests.

Mr. SIMPSON. Thank you. Thank you for being here today. We look forward to working with you on this.

Maria Korsnick from the Nuclear Energy Institute?

WEDNESDAY, MAY 3, 2017.

NUCLEAR ENERGY INSTITUTE

WITNESS

MARIA KORSNICK, CEO AND PRESIDENT, NUCLEAR ENERGY INSTITUTE

Ms. KORSNICK. All right, thank you very much. I am very pleased to be here today and share with you the nuclear energy industry's view on the fiscal year 2018 budget. My comments today are going to cover four main areas. First, the NRC's outdated and costly regulatory regime needs to be updated. Second, accident-tolerant fuel and advanced reactors require urgent review and action. Third, that the Federal R&D efforts that promote new technologies and innovation are essential. And fourth, the licensing of the proposed Yucca Mountain repository must proceed according to the law and in parallel with the pursuit of consolidated interim storage. I will summarize those four key points.

First, with the NRC, while our reactor fleet relies on a focused, efficient, and technically expert NRC, we believe that the agency's regulatory regime needs to evolve. Thanks to your oversight on this subcommittee, you have created additional attention and focus on the NRC's processing of licensing actions, its readiness to review second license renewal applications, digital instrumentation and controls, the backfit rule, and advanced nuclear fuels. We appreciate that, however, the NRC's work here is not yet done. Congressionally directed, independent assessments emphasize the need for NRC to continue improving the efficiency and transparency of its regulatory processes and operations, consistent with its own good principles of good regulation. As NRC rebalances its priorities, consistent with leaner budgets, we would ask them to integrate preparation for accident-tolerant fuel and reactor applications as part of its funding program. The NRC's own Project Aim 2020 report recommends shifting resources away from disciplines that are less in demand towards these activities to maintain the efficiency of the current fleet regulation.

Second, by 2030, the United States could experience electricity shortages if a significant number of reactors are retired, as currently projected. To avoid this outcome, the industry is preparing a path to enable the renewal of the operating licenses of nuclear plants a second time, and that would be for an additional 20 years. Two plants have already announced plans to do so. While DOE's work in this area has been critical, additional work is still necessary through the Light Water Reactor Sustainability Project. That R&D can reduce the operating cost of the existing fleet. This includes work in advanced instrumentation and controls and the accident-tolerant fuel program. Increasing funding for the accident-tolerant fuel program will actually allow the R&D to be accelerated ahead of its current schedule.

Congress should also continue funding for the Energy Innovation Hub for Modeling and Simulation. That project sponsors CASL, which is the Consortium for Advanced Simulation of Light Water Reactors. That initiative is successfully developing tools that help us optimize our fuel performance, support approval of new designs, and also support plant life extension.

Turning now to small modular reactors, the SMR licensing and technical support program we think has been a success. The new scale design, a certification application, has recently been docketed by the NRC, and TVA's early site permit application was docketed last year. The SMR/LTS program should be expanded to support first-of-a-kind engineering, and continued investment by the Federal government as a cost-sharing partner is necessary to ensure that these first SMRs are deployed in the mid-2020 timeframe.

Developing this technology is going to help U.S. companies capture an international market as well for smaller and more versatile carbon-free energy sources. So here at home, SMRs will complement the large, passively safe reactors that you know we are building in Georgia and in South Carolina. And given the benefits for domestic job creation, expansion of income and export income and clean electricity, we think Federal support for the SMR technology is a sound investment in our Nation's future.

Third, the ability of the nuclear industry to continue to innovate depends on the Federal Government supporting demonstration projects and encouraging advanced research. NEI supports the programs managed by DOE's Office of Nuclear Energy, and they seek to accelerate the commercial use of new nonlight water reactor technologies. The Gateway For Accelerated Innovation in Nuclear, or the GAIN program, has expanded access to the U.S. national labs. The small business voucher program implemented last year was, in fact, very successful, and a second round of awards was announced earlier this year. We think this program should be expanded.

The advanced reactor industry has formed three technology working groups now. There is molten salt reactors, fast reactors, and high-temperature gas reactors, and this focuses the R&D needs, also interfaces with this GAIN program to inform the DOE Research and Development. Continued and increased funding for DOE advanced reactor program is essential to foster the ongoing and timely development and commercialization of advanced reactors, and also, in the continuation of funding for the industry cost-sharing awards that support the development of two advanced reactor concepts. Although the United States has a world-leading national lab program, it, in fact, lacks a fast neutron test reactor facility. Building an American facility would enable companies to accelerate the commercialization and eliminate our need to rely on a Russian research reactor, as we do today. We support the establishment of an independent U.S. facility in no less than 10 years.

Lastly, with respect to used nuclear fuel management, NEI supports funding for DOE and NRC to complete the licensing of the Yucca Mountain repository in parallel with the development of consolidated storage. We encourage Congress to restructure the funding and spending mechanisms of the Nuclear Waste Fund to provide for dependable access to the Nuclear Waste Fund while main-

taining congressional oversight. Such action is essential to ensuring that the Federal Government can meet its statutory and contractual commitments.

Thank you, Chairman Simpson, Ranking Member Kaptur, and the members of the subcommittee. I am happy to take any questions you may have.

[The information follows:]

Testimony for the Record
Maria G. Korsnick
President and Chief Executive Officer
Nuclear Energy Institute
House Appropriations Subcommittee on Energy and Water Development
May 3, 2017

NEI is responsible for establishing unified industry policy on regulatory, financial, technical, and legislative issues affecting the commercial nuclear energy industry. NEI has more than 350 members, including all U.S. companies licensed to operate commercial nuclear power plants, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, materials licensees, labor organizations, universities, and the federal contracting companies implementing the DOE EM and NNSA missions and other organizations involved in the nuclear energy sector.

Nuclear energy is the largest and most efficient source of carbon-free electricity in the United States. Currently, 99 reactors in 30 states produce nearly 20 percent of our nation's electricity and approximately 63 percent of our carbon-free electricity. Nuclear energy facilities demonstrate unmatched reliability by operating with an average capacity factor greater than 90 percent—higher than all other electricity sources. Nuclear produces electricity 24/7, regardless of weather and with all its fuel on site for 18-to-24 months. The long horizon for nuclear fuel procurements also means nuclear generation is not subject to price spikes occasionally experienced by other generation sources in recent years.

Nuclear energy facilities are essential to the country's economy and the local communities in which they operate. The typical operating plant generates \$470 million each year in the sale of goods and services in the local community, and employs 700 to 1000 workers. Construction of a new nuclear plant provides in the range of 3500 jobs at peak periods. Collectively, the nuclear industry contributes about \$60 billion every year to the U.S. economy, through supporting over 475,000 jobs and producing over \$12 billion annually in federal and state tax revenues.

The current nuclear fleet is an integral cog in and significant contributor to the nation's infrastructure given its local and national economic value, grid support, reliability, and price stability. Tennessee's 1150-megawatt reactor at Watts Bar II that began operation in October 2016 and the four new reactors under construction in Georgia and South Carolina will likely provide this valuable energy for 80-plus years. And, future nuclear innovations in the form of various advanced design reactors are being developed to meet the needs of our society well into the next century and beyond.

Current operating plants, units now under construction, and plants of the future all must be able to rely on a safety focused, efficient, and technically expert regulator. It is imminently reasonable from the perspective of the industry as well as our nation's energy consumers to expect a

regulatory process with those attributes. Those regulatory attributes are also a national imperative, as they directly affect the ability to maintain the diversity of America's energy portfolio. The industry believes that the NRC's untimely, somewhat outdated, and unnecessarily costly regulatory regime needs updating. The need for Congressional action directing regulatory reform has become more urgent as utilities consider utilizing accident tolerant fuel and NRC applications are being submitted for certification of small modular reactor (SMR) designs, which will be deployed in the mid-2020s, and developers of advanced non-light-water reactors are beginning interactions with the NRC and are looking to deploy their technologies around 2030.

Specifically, the nuclear energy industry makes the following recommendations:

- Exercise oversight of NRC to continue improving the efficiency and transparency of its regulatory processes and operations consistent with its own principles of good regulation without compromising the review schedule for applicants or the shared NRC and industry commitment to safety;
- Oppose reinstating a tax on nuclear power plant operators to pay the cost of decontaminating and decommissioning the federal government's uranium enrichment plants;
- Provide robust funding for the DOE Office of Nuclear Energy's R&D efforts, including public-private partnerships supporting development and commercialization of advanced fuel and reactor technologies, as well as, GAIN initiative;
- Fund NRC to prepare a streamlined, efficient and effective process for addressing accident tolerant fuel and advanced reactors;
- Continue funding for the Energy Innovation Hub for Modeling and Simulation (CASL – Consortium for Advanced Simulation of Light Water Reactors)
- Fund the DOE loan guarantee program for key clean energy technologies as identified by DOE for advanced nuclear power plants and front-end nuclear fuel cycle to ensure global leadership in nuclear innovation particularly when industry finances the cost of the guarantee;
- Provide funding for DOE and NRC to complete the licensing of the proposed Yucca Mountain repository in parallel with developing a consolidated storage facility;
- Fund completion of the Mixed Oxide (MOX) Fuel Facility at the Savannah River Site;
- Provide for cleanup of legacy waste from the Manhattan Project and Cold War nuclear weapons production with predictable and meaningful funding;
- Fund modernization of the nuclear security enterprise to meet requirements for the nation's nuclear deterrent and U.S. Navy nuclear propulsion;
- Retain the Integrated University Program at DOE and NRC;
- Fund Idaho National Lab infrastructure to support vital research

Nuclear Regulatory Commission

While it is essential that current operating plants, and plants of the future all rely on a safety focused, efficient, and technically expert regulator, we believe that the NRC's untimely, somewhat outdated, and unnecessarily costly regulatory regime needs updating. Thanks to the oversight of this Subcommittee, NRC's timely and efficient processing of licensing actions, readiness to review second license renewal applications, adherence to the backfit rule in rulemakings and the efficient and predictable transition to digital instrumentation and control systems and advanced nuclear fuels is receiving the needed attention to modernize and reform

NRC. And the recommendations of Congressionally-directed independent assessments and the Project Aim report emphasizes the need for NRC to continue improving the efficiency and transparency of its regulatory processes and operations consistent with its own principles of good regulation.

Additionally, the NRC should dedicate resources to prepare for efficiently and effectively reviewing the advanced technologies of accident tolerant fuel and advanced reactor applications. The dedication of resources to these next generation technologies are consistent with NRC's own Project Aim 2020 Report, "Achieving Exemplary Nuclear Regulation in the 21st Century" which states, "Over the next five years, gradual shifts in technologies, safety issues, and security threats are expected, which will drive some shifts in the workforce. Such growth can be offset by contractions in other disciplines that are less in demand." In support of these efforts, the industry encourages funding to NRC for non-fee billable accident tolerant fuel and advanced reactor activities.

Uranium Enrichment D&D Tax

While the industry fully supports the complete decontamination and decommissioning of the gaseous diffusion plants, NEI strongly opposes any recommendation to reinstate a uranium enrichment decontamination and decommissioning tax on the industry. Producers and consumers of electricity should not be forced to bear the additional financial burden of this unwarranted tax since the industry has already paid in full its share of the cleanup costs—first as part of the price for government uranium enrichment services and again as required by the Energy Policy Act of 1992. Under the 1992 law, the tax on electric utilities was to end after 15 years or the collection of \$2.25 billion, adjusted for inflation. The three uranium enrichment plants in question operated for 25 years as Department of Defense facilities and were irretrievably contaminated long before any sales of enrichment services to the commercial nuclear industry.

Current Fleet of Nuclear Reactors

By 2030, the United States could experience electricity shortages if a significant number of nuclear plants are retired in a short period. One way to avoid this outcome is renewing the operating licenses of nuclear power plants a second time for an additional 20 years. The existing fleet of reactors is preparing for this life-extension beyond 60 years to 80 years of operations. Two reactors have already announced plans to seek a license renewal from NRC. While DOE's work in this area has been instrumental in enabling these life extensions, additional work is still necessary through the Light Water Reactor Sustainability program. The industry, with the support of the DOE, is actively working on R&D that can reduce the operating cost of the existing fleet. This includes work in advanced instrumentation and controls and the accident tolerant fuel program. Both of these R&D efforts support the ongoing efforts of the industry to improve the cost-competitiveness of the fleet and preserve this national asset. Increasing funding for DOE's accident tolerant fuel program will enable the R&D to be accelerated and lead test rods to be inserted into commercial reactors in 2018/2019, significantly ahead of the current schedule. In addition to these programs, funding for the Energy Innovation Hub for Modeling

and Simulation, CASL – Consortium for Advanced Simulation of Light Water Reactor, should be continued. CASL is successfully developing tools that support the operating fleet as well as supporting the development of accident tolerant fuels.

Small Modular Reactors (SMRs)

The SMR Licensing and Technical Support (LTS) program has successfully supported SMR activities to date. The NuScale design certification application has recently been docketed by NRC and TVA's early site permit application was docketed last year. The support for SMR development cannot end with these early successes. The SMR LTS program should be continued beyond FY 2017 and expanded to support first-of-a-kind engineering work. Continued investment by the federal government as a cost-sharing partner is necessary and prudent to ensure the first generation of economically competitive SMRs are deployed in the mid-2020s.

Developing this technology will help U.S. companies claim a large portion of the international market for smaller, carbon-free energy sources. SMRs will provide domestic energy companies with an additional low-carbon electric generating option as they respond to changes in market forces and will complement the large passively safe light water reactors being built in Georgia and South Carolina. Given the benefits to domestic job creation, export value, reliable and domestic clean electricity supply, federal investment in the development of SMR technology today is an investment in our nation's future.

Advanced Reactor and Fuel Cycle Technologies

The ability of the nuclear industry to continue to innovate and build advanced technologies depends on the federal government supporting demonstration projects and encouraging new research.

NEI supports programs managed by DOE's Office of Nuclear Energy that seek to accelerate the commercial use of new non-light water reactor technologies. The Gateway for Accelerated Innovation in Nuclear (GAIN) has been very beneficial in expanding access to the U.S. national laboratories for advanced reactor companies. The small business voucher program, implemented last year, was very successful and well received by industry. A second round of awards was announced earlier this year and this program should be continued and expanded.

The advanced reactor industry has formed three technology specific reactor working groups: molten salt reactors, fast reactors, and high-temperature gas reactor to focus on R&D needs and interface with GAIN to inform DOE R&D. Continued and increased funding for the DOE advanced reactor R&D program is essential to foster the ongoing and timely development and commercialization of advanced reactors. Also essential is the continuation of funding for the industry cost-shared awards supporting the development of two advanced reactor concepts.

While the U.S. has world leading national laboratories, it lacks a fast neutron test reactor user facility. Such a facility would enable companies to accelerate testing thereby accelerating the commercialization of their technology. A U.S. facility would also obviate the need for U.S.

companies to utilize a Russian research reactor. Therefore, NEI supports funding the DOE to establish a versatile fast-neutron test capability, to be operational within ten years.

Used Nuclear Fuel Management

With respect to used nuclear fuel management, NEI supports funding for DOE and NRC to complete the licensing of the proposed Yucca Mountain repository in parallel with developing a consolidated storage facility consistent with the industry's proposed integrated used nuclear fuel management strategy as adopted by NEI in November 2015. We encourage the Congress to restructure the funding and spending mechanisms for the Nuclear Waste Fund to provide the necessary certainty to implement the program. This should include dependable access to the Nuclear Waste Fund while maintaining effective Congressional oversight. Such action is essential to ensuring that the federal government can meet its statutory and contractual commitments.

Mixed-Oxide (MOX) Fuel Fabrication Facility

NEI supports funding for the timely completion and operation of the (MOX) Fuel Fabrication Facility at the Savannah River Site. Construction of the MOX facility is 70 percent complete, employs 1,800 people directly and uses more than 4,000 American contractors and suppliers in 43 states. Under the Plutonium Management Disposition Agreement, the U.S. committed to transform 34 metric tons of U.S. weapons-grade plutonium (enough plutonium for 17,000 nuclear weapons) into fuel for commercial power reactors.

Environmental Management (EM)

NEI supports DOE's mission to complete the safe cleanup of legacy sites resulting from decades of nuclear weapons development and government-sponsored nuclear technology research. The DOE has a legal and moral obligation to clean up the sites and the mission of EM should have the commensurate level of increased funding to match increased work scope. NEI commends the EM funding level of \$6.5 billion in the President's FY 2018 budget blueprint including direction to address "excess facilities to support modernization of the nuclear security enterprise." NEI also commends EM's significant footprint reduction to date and the re-start of WIPP, which is critical to the TRU waste program and impacts progress at legacy sites across the country.

Adequate and reliable funding is essential for the Department to address the significant challenges ahead and to meet its commitments to affected communities and states. The EM program relies on an array of contractors to carry out its diverse cleanup mission. It is critical that the Department work in concert with industry to identify barriers to the effective execution of its objectives: risk reduction and the successful planning, construction and operation of large, often first-of-a-kind projects and facilities.

Mr. FLEISCHMANN. Thank you, Ms. Korsnick, good to see you. Melissa, great to see you again. For the benefit of everybody on this subcommittee I just want to thank you all for the outstanding work that NEI does.

On a personal level, your support for the Nuclear Cleanup Caucus and all that we do in sites from Oakridge to a little place called Idaho, and across a great United States, thank you. Beautiful little place. Yeah, that is right. I have been once.

If I may, I have two quick questions. Castle, you touched on Castle which is very important to us. Can you please, again, tell us how Castle has helped the current fleet in terms of nuclear power and how we can improve the economics of nuclear power using Castle?

Ms. KORSNICK. I can give you a couple of examples. Watts Bar 2 is a plant that recently started up, and I know they used the Castle simulation program as part of that plant startup, as an example.

I mentioned a recent SMR, small modular reactor, program NuScale is a company that is involved with SMRs, and I know they are using the Castle program as they are providing input, as they are finalizing their design and getting regulatory approval. And so the Castle program is being used in that.

And we are looking at using the Castle program, as well, in support of the life extension as well as accident-tolerant fuels, and they are two very key programs for the current fleet.

Mr. FLEISCHMANN. Thank you. And one further question. Does NEI support the Department of Energy reestablishing a domestic uranium enrichment capacity for national security purposes in the near term and why?

Ms. KORSNICK. Yes, I would say from an NEI perspective we do think that it is important that the United States has the ability to enrich uranium.

Mr. FLEISCHMANN. Thank you, Mr. Chairman, I yield back.

Ms. KAPTUR. Thank you very much and we appreciate your testimony this morning, Ms. Korsnick. I wanted to ask you a difficult question you did not completely reference in your testimony. You probably have been here this morning, you heard about the Southeast Power Marketing Authority and some of the other energy umbrellas that exist across the United States.

In the region of the country that I represent nuclear energy is undergoing particular market pressure right now because of, I do not know whether one would call it an anomaly in the marketplace, but because of the movement of natural gas into our energy production, and the severe impact that has had on the nuclear industry. For the plants I represent and in the general Great Lakes region we have no such umbrellas across our region.

Do you have any recommendations or thoughts you could provide now or to the record how we can deal with these companies? It is my understanding 25 percent to a third are heavily impacted currently. That could allow them to continue to function, but they may not be able to meet that test in the individual States in which they exist because energy pricing is really global in nature and we face the threat of a loss of many of our nuclear power plants in the commercial sector. Do you have any comments on that or could you

providing information to the record on a range of solutions that you might suggest as head of your institute?

Ms. KORSNICK. Certainly. I will provide a few comments here, but I will add more to the record, if that is okay. I would characterize the challenge that is facing the fleet today is, in fact, the low price of natural gas or the glut, if you will, of natural gas has put significant pressure on the operating fleet.

I know that we have been working with the Federal Energy Regulatory Commission. And they have just, in fact, had a technical conference this week, and one of those items is to look at the value that nuclear brings to the marketplace, and the fact that all of that value is not being realized, in fact, in the market. So it is a significant challenge. You are right. We have closed six plants in the last few years, seven additional plants have announced, and there are more that are threatened.

So I do think that this is a significant challenge. I would step back. I would say right now the solutions are playing out in individual States, so there was success in New York. There was success in Illinois, but there will be other individual State conversations. But I do think it is very important for us as a Nation to step back and look at what we have in nuclear power and appreciate the importance that nuclear power brings.

There are 60 reactors being built around the world today, two-thirds of those are Chinese and Russian design. The United States needs to be in that conversation. We do not get in that conversation by letting our fleet at home atrophy. We need to take this very seriously. We should look at it as a national security issue, and that is something that we are working very much to create that conversation. I am happy to add more for the record.

Ms. KAPTUR. All right. Thank you very much. And, Mr. Chairman, this is such a significant issue in the Great Lakes because when our nuclear power plants were built we actually function in the commercial marketplace. We have nothing like the Tennessee Valley Authority or the Bureau of Reclamation or the Southeast Power Market Authority. It simply does not exist.

And these companies are really enduring hardship. I really, personally, I think we need a bridge financing package. The industry has not really asked for that. Right now they are sort of hostage at the State level, but this is an issue for this subcommittee, and also for the authorizing committee, I think. And I just do not, I am sorry to say, I just do not think our States are up for the task of meeting a national challenge. So I just wanted to put that on the record and we would welcome any additional comments you wish to make.

Mr. SIMPSON. Thank you.

WEDNESDAY, MAY 3, 2017.

E4THEFUTURE

WITNESS

STEPHEN COWELL, PRESIDENT, E4THEFUTURE

Mr. COWELL. Hi. Thank you, Mr. Chairman. Thank you for the opportunity to testify today. And I will be testifying, we have submitted testimony on behalf of myself, EForTheFuture, but also Home Performance Coalition. My partner, Brian Castelli, will be also talking about it.

So my goal is really to talk through about how energy efficiency, and specifically the work that is being done by DEO in the very critical role of working collaboratively with States is absolutely critical. Just a little bit about EForTheFuture. We used to be called Conservation Services Group and we ran the residential energy efficiency in 23 States, including Tennessee, Ohio, New York, New Jersey, California, Oregon, Washington, Massachusetts, and a few other States.

But we were able to assist, our nonprofit was able to assist over 3.5 million American U.S. households reduce their energy consumption over the last 20 years. That was our work.

We recently sold our business work to a Texas company, Clear Result, and they are going to continue doing that. We are going to continue focusing on research, education, and innovation to really drive our energy economy for the future which is what we have to do. And so one of the things, really the specific points—and I would like to thank the House, specifically. Your continuing resolution continues the work that I am going to talk about, and so thank you very much, which I think you are going to vote on today, later today. I think it was a leadership effort, so thank you very much.

Specifically, the Building Technology's Office at DOE does tremendous work around helping all of us in the energy efficient world, which energy efficiency is the least expensive. It is the most reliable and it is the most beneficial. Brian will be talking about the jobs impact analysis that we did in terms of how many jobs and its impact.

But the Building Technology Office, part of EERE, is really critical to helping provide the background and the underpinnings for all the efforts in each State. The State energy programs provides the support to the State energy offices because this country, we have delegated managing and running our energy economy to the States. It is a critical partnership between State and Federal. If we do not have a strong energy economy we will not keep going as a country, so we really need to put all the pieces together.

So we really strongly support that and the weatherization systems program, helping low-income people try to avoid energy poverty, and that is really critical as well. There has been great work over the years of the weatherization assistance.

As a matter of fact, CSE EForTheFuture started as a result of learning from the weatherization program in 1979. So a long history of tremendous innovation and others will be talking about the weatherization assistance program and its critical nature.

We did put together a letter, which we have submitted, with almost 2,500 names, including names and businesses from every State, all of your States in terms of Ohio, Tennessee. Tennessee we had 135 different businesses submit a letter asking for support, continued support for those programs that I mentioned because they really are critical for a lot of reasons.

So that letter was put together really with reaching out to all the people that we work with and talking about the value and the benefit that they bring. And one of those benefits, we did another report on the issue of the health impacts, predominantly low-income. And what we identified, we worked with DOE as well as several others, that, in fact, residential energy efficiency reduces healthcare costs, particularly Medicare, right? And it reduces asthma. It reduces a variety of health impacts, so it really produces benefits that we really had not even calculated before, and that ought to be, you know, recognized in the discussion, in the deliberation.

Really, in closing, it is really critical to recognize that volatility of our energy prices is an absolute critical concern for our economy. In several cases, one of the things I did, I helped draft and put together the Stimulus Bill in 2008. I was asked to assist with that, and one of the research projects that we did was looking at the relationship between energy prices and home mortgage failure. They were directly related to each other.

Between 2003 and 2008, the average American family lost 15 percent of their disposable income. And any homeowner who was on the edge was pushed over the edge. I presented this information to all the Senate staff, Energy staff and there was a gasp, like, oh, we did not realize that. The banks may have put the gasoline, but the match was energy costs. Right? So volatile energy costs have a tremendous negative impact on our economy, and energy efficiency is the way that we can stabilize those.

So thank you very much. Appreciate the work that everyone is doing. We need to continue things like weatherization assistance, the State energy program collaboration really is a collaboration between State and Federal. You guys cannot walk away. You have got to work with each of the States in helping craft the energy policy.

[The information follows:]



Brian T. Castelli, President & CEO, Home Performance Coalition

Stephen Cowell, President, E4TheFuture

Tom Carter, Executive Director, Efficiency First

and

Larry Zarker, CEO, Building Performance Institute

**House Appropriations Committee
Subcommittee on Energy and Water Development**

**Fiscal Year 2018 Department of Energy Funding for
Residential Energy Efficiency Programs**

April 26, 2017

As the leaders in the residential energy efficiency industry, the Home Performance Coalition, E4TheFuture, Efficiency First, and the Building Performance Institute respectfully urge your support for funding to advance programs at the Department of Energy that invest in residential energy efficiency and whole-house initiatives, as outlined in this testimony, in the Fiscal Year (FY) 2018 Energy and Water Development Appropriations bill. On behalf of our stakeholders and members, we thank you for this opportunity to express our support for these important programs and initiatives that pay for themselves many times over and are a wise and modest investment that help Americans save money, improve energy security, and live and work in safe and comfortable buildings.

The Home Performance Coalition (HPC) is a national non-profit 501c3 organization that works with industry leaders in the home performance and weatherization industries to advance energy- efficient, healthy and safe homes retrofit policies, programs and standards through research, education, training and outreach.

E4TheFuture is non-profit 501c3 organization which collaborates with industry stakeholders to provide expert policy solutions, education, and advocacy to advance residential clean energy and energy efficiency solutions on the federal, state and local level.

Efficiency First (EF) is a national trade association with members across the country that unites the home performance workforce, building product manufacturers and related businesses and organizations in an effort to advance cost-effective energy efficiency solutions for residential customers to create jobs, boost the economy, and fight rising energy costs.

The Building Performance Institute (BPI) is the nation's premier building performance credentialing, quality assurance, and standards setting organization. Approved by the American National Standards Institute, Inc. (ANSI) as an accredited developer of American National Standards and as a certifying body for personnel credentials, BPI develops technical standards and professional certifications that help raise the bar in home performance contracting.

Energy efficiency is more than just a way to reduce energy waste and save consumers and businesses money on their monthly utility bills - it is by far the largest sector in the U.S. clean economy. A recent report from E4TheFuture, entitled "Energy Efficiency Jobs in America,"¹ found that three out of every four clean energy jobs is an energy efficiency job, and as of 2015 the energy efficiency industry employed 1.9 million Americans. The report also found that most energy efficiency jobs are created by small businesses - of the 165,000 U.S. companies engaged in energy efficiency, 70% of them have 10 or fewer employees.

A significant portion of the energy efficiency jobs in the U.S. are in the residential sector, and forty percent of them involve the installation of energy efficiency products. These are the contractors – the “boots on the ground” - installing energy efficiency products and technologies and working to reduce energy waste in homes and buildings across the country. These jobs are, by their very nature, inherently local and cannot be exported.

In addition to economic and jobs benefits, residential energy efficiency also plays a key role in public health. A U.S. Department of Energy report on the Weatherization Assistance

¹ https://e4thefuture.org/wp-content/uploads/2016/12/EnergyEfficiencyJobsInAmerica_FINAL.pdf

Program² found that home improvements focused on energy efficiency can improve indoor air quality, which reduces respiratory illness and sick days, and improves mental alertness and productivity for both children and adults. A recent report from E4TheFuture, entitled “Occupant Health Benefits of Residential Energy Efficiency,”³ which reviews existing research on the link between resident health benefits and energy efficiency upgrades, also found that residential energy efficiency upgrades can produce significant improvements in asthma symptoms and help improve overall physical and mental health.

HPC, E4TheFuture, Efficiency First, and BPI offer their strong support for DOE’s residential efficiency programs and initiatives, as they are vital to the continued growth of the energy efficiency industry across the country. Public programs that support the energy efficiency industry are vital as it continues to develop and, as evidenced by a [grassroots letter](#)⁴ to House and Senate Energy and Water Appropriations subcommittee leadership, there is tremendous public support for these programs. The grassroots letter includes signatures from 2,463 energy efficiency professionals and supporters from 49 states plus the District of Columbia.⁵

The following programs at the Department of Energy, in the Office of Energy Efficiency and Renewable Energy and the Weatherization & Intergovernmental Programs Office, deserve the support of the American taxpayer as these programs are proven to provide a significant return on investment. When funded they will continue to provide energy cost relief to households, support American-based industry and American jobs, ameliorate issues with the aging electrical grid, and support national security goals. We respectfully urge at least level funding of these programs in FY 2018.

² <https://energy.gov/eere/wipo/downloads/weatherization-assistance-program-national-evaluation>

³ <https://e4thefuture.org/occupant-health-benefits-of-residential-energy-efficiency/>

⁴ <https://e4thefuture.org/wp-content/uploads/2017/04/Letter-to-Congressional-Appropriations.pdf>

⁵ Only Hawaii was not represented on the letter.

\$200.5 M for Building Technologies Office (BTO), which develops critical technologies, tools, and solutions that help U.S. consumers and businesses achieve peak efficiency performance in new and existing homes and buildings across all sectors of our economy. Programs like Home Performance with Energy Star, which advances contractor engagement in high efficiency equipment installations, and Home Energy Score, which helps ensure that energy efficiency is valued in real estate transactions – are just two examples of crucial residential programs within BTO. The Residential Building Integration program within BTO has the capacity to fundamentally transform homebuilding and greatly improve the energy efficiency in the 115 million existing residential buildings throughout this country. Therefore, we recommend that the funding be focused on research, development and the widespread deployment of whole-house energy efficiency. BTO's programs can significantly improve the energy efficiency in the residential sector through its partnerships with the thousands of small businesses in this sector, the construction trades, equipment, smart grid technology and systems suppliers, integrators and state and local governments. We encourage the direct engagement with residential contractors and businesses, which are crucial to the success of buildings programs. We respectfully urge Congress to fund Residential Building Integration at \$23 million.

\$50 M for State Energy Program (SEP). We urge the Committee to maintain level funding of \$50 million for SEP, which supports state and local efforts to develop and implement cost-effective energy efficiency projects and leverage private sector innovations. Over the past 30 years, SEP has proven to be the critical link in helping states improve efficiency in hospitals and schools, establish business incubators and job training programs, and establish relationships with energy service companies and small businesses to implement cost-effective energy efficiency programs across their state. The Oak Ridge National Laboratory found that every

dollar invested in SEP by the federal government yields over \$10 leveraged for energy-related economic development.

\$225 M for Weatherization Assistance Program (WAP). We ask the Committee to maintain at least level funding of \$225 million for WAP, which helps low-income and rural families, seniors, and individuals with disabilities make lasting energy efficiency improvements to their homes. WAP has a proven track record of creating new jobs and contributing to the economy through the program's large supply chain of vendors, suppliers, and manufacturers. Moreover, a recent peer-reviewed study from the Oak Ridge National Laboratory found that the program is cost-effective at even conservative levels of evaluation. Each dollar that goes toward weatherization assistance yields at least \$2.30 in benefits, and by some estimates as much as \$4.10 to the home and society. Since its creation, WAP has helped improve the energy efficiency of homes for over seven million low-income and rural Americans, who are particularly susceptible to volatile energy prices and higher utility bills.

The Home Performance Coalition, E4TheFuture, Efficiency First, and the Building Performance Institute believe that energy efficiency is vital to our economic growth and international competitiveness. The very small investments in the programs discussed above pay for themselves many times over and are a wise and modest investment that help Americans save money, improve energy security, and live and work in safe and comfortable buildings. Again, thank you for providing this opportunity to submit testimony. We look forward to working with you.

Contact Information

Kara Saul Rinaldi
President and CEO, AnnDyl Policy Group
On behalf of HPC, E4TheFuture, Efficiency First, and BPI
717 Kennebec Ave, Takoma Park MD 20912
Phone: (202) 276.1773, Fax: (202) 747-7725
kara@anndyl.com

Mr. SIMPSON. Thank you.

Mr. COWELL. So thank you very much.

Mr. SIMPSON. Thank you for being here. Thank you for mentioning all of those important States, but you left out the State. So other than that I am, you know, I am not going to say.

Mr. COWELL. I know. I know. We did not work in Oklahoma. I am very sorry.

Mr. SIMPSON. It is like the Ohio University, right?

Mr. COWELL. All the rest of you.

Mr. SIMPSON. Any questions?

Ms. KAPTUR. I welcome your testimony so much. You have found very receptive ears on this panel, but especially with this member. And I am hoping that an organization like your own will consider as part of the infrastructure bill to work with other colleagues and institutes and organizations on the outside to have a housing component to the infrastructure bill that may or may not be coming forward in this administration, this new administration.

I represent hundreds, if not thousands, of constituents who cannot afford to put a new roof on their homes. Many of them are seniors. What is happening in a State like Ohio, because of the difficulty with our nuclear power plants in the northern part of Ohio, which gets very cold, by the way, energy bills, if the State gets its way are going to go up more for people who are elderly, too.

They cannot afford windows. They cannot afford insulation. They cannot afford weatherization. They get sicker, just what you say. And I just think we need a massive roofing program across this country, roofing, windows, insulation as a part of an infrastructure bill. And it ought to affect millions of people, not thousands because it is desperately needed. It could be a job training program as well.

So I thank you for your testimony. I am so glad you came today and thank you for the programs that you support at the Department of Energy.

Mr. COWELL. Well, thank you.

Ms. KAPTUR. Thank you, Mr. Chairman.

Mr. COWELL. From a product's point of view, we have looked at, and I actually worked with Home Depot together and they did an analysis of where the products that go into energy efficiency improvement in homes and over 75 percent must be made in America because they cannot be made anywhere else, insulation is too light. Heating and cooling equipment is too heavy to transport. Glass, windows are too fragile. Right? I mean, these are products that are made in America and every job has to be an American. You cannot take a house and move it overseas and fix it and bring it back. That is a little difficult to do.

Mr. SIMPSON. Thank you.

Mr. COWELL. Thank you.

Mr. SIMPSON. Thank you for being here today. Brian?

WEDNESDAY, MAY 3, 2017.

HOME PERFORMANCE COALITION**WITNESS****BRIAN T. CASTELLI, PRESIDENT AND CEO, HOME PERFORMANCE COALITION**

Mr. CASTELLI. Thank you, Chairman Simpson, and thank you for the invitation here, Ranking Member Kaptur. My name is Brian Castelli. I am with the Home Performance Coalition and we are a nonprofit organization that advances the residential energy efficiency market through research, education, and policy analysis. We also hold the premier national and regional conferences on home performance, both the policy arena, as well as the best practices for installing energy efficiency majors in the home.

We work with all stakeholders in the industry, from the installers themselves to the manufacturers of the products. I am here to talk today about support for three of the Department of Energy's programs. One in the residential energy efficiency program and the other two in the weatherization and intergovernmental affairs office.

Specifically, we would like to see the subcommittee support \$200.5 million for building technology offices which develops the critical technologies, tools, and solutions to increase energy efficiency in homes and buildings. We would also like to see \$23 million of that number focused on the residential building integration. Integrating all the different parts of the efficiency office that deals with homes.

This has been a missing piece in the portfolio of programs that DOE has had, and we think this is now the time to get that program up and running. We would also like to support a \$50 appropriation for the State energy program. It supports the State and local efforts to develop and implement cost effective energy efficiency projects and leverage private sector innovations.

Now, as a former director of the State energy office for Pennsylvania, and also as the Washington DC liaison for the California Energy Commission I would like to tell you, these are some of the most important infrastructure we have in the States are the State energy offices. They are where the rubber meets the road. They work with the companies, the corporations, and the individuals in those States to make sure that energy efficiency plays a major role in the energy programs of that State.

It is where innovation happens. That is where we really have a lot of the innovation, both on the policy side as well as the technology side. Many years ago when I was with the Pennsylvania Energy Office we teamed with both the Texas Energy Office as well as State Energy Conservation Office, as well as companies in Ohio, Columbia Gas of Ohio to do a community project in low-income weatherization where we did the first, the seminal work, in plug load monitoring both for electricity and natural gas. And that now has become an industry in and of itself, so I am very strong on supporting.

However, I notice that a good friend of mine, Doug Taylor is in here today. He is here now and he is going to speak later and he will tell you a lot about the State energy offices.

The third program that I want to talk about is the weatherization assistance program. We would like to have you support a \$225 million appropriation for that program. Steve talked a lot about the weatherization program. It helps low-income, rural families, seniors, and individuals with disabilities to make lasting energy efficiency improvements in their homes.

Oakridge National Lab has provided a lot of good data on this program, and it has shown that every dollar that is invested by the Federal government \$2 to \$4 returns in benefits, both to society, as well as the home owners. This is a critical program. It helps the most vulnerable, and I know that everyone in this room does not want to make the vulnerable more vulnerable or the poor poor.

This is a program that helps these people. By lowering their energy costs they are able to use that money, which may have gone to a utility, but they can use it for food. They can use it for health. They can use it for a lot of things. So we are very strong on this program. They return a significant ROI and they deserve the support of the United States on this.

Jobs, Steve said I would mention jobs, this is a report that the E4 Foundation funded and supported. Done by an outside, objective consultant group that does these surveys.

And it is one of the most effective ways to save consumers and businesses money on their utility bills. There are two recent reports out. One came from E4, followed two weeks later by a report from DEO. Very similar results. The E4 report shows that over 1.9 million Americans are employed in the energy efficiency industry. It is kind of a stealth program, energy efficiency. Nobody knows about it. Do not understand how many jobs that there are there.

The most recent report from DOE which was done with data from a year later showed 2.2 million full and part time jobs in energy efficiency. They are well-paying, diverse, and they are found in every State in the country. Again, these jobs are in the residential sector, 40 percent of them, and they involved the insulation of energy efficiency products.

The contractors are the boots on the ground. They are the people who install these products in the homes, who do the installation, the windows, the roofs. And let me tell you, those jobs cannot be exported. They are indigenous jobs, not only to your State, to your country, to your local community.

And the most interesting thing about this is there are over 165,000 U.S. companies that are small businesses, fewer than ten employees in this part of the energy efficiency sector.

Just for some information here, you might be interested to know in the State of Washington there are over 38,000 energy efficiency jobs. In Ohio over 78,000 energy efficiency jobs. You probably, even though you know your State better than anybody, you probably do not realize how many jobs there are.

In Idaho, nearly 3,000 jobs and these are important jobs. They are critical to the efficiency industry. They are critical to your State's economy, and we believe in them. And this is a good program.

So we believe that energy efficiency is vital to the economic growth. The industry supports millions of these well-paying jobs, and we urge the subcommittee to preserve at least level funding for the DOE programs I mentioned earlier, and outlined in the written testimony we provided earlier.

I want to thank you, again, for the opportunity to provide this testimony. Thank you.

Mr. SIMPSON. Thank you. And I will just announce for the committee's sake that we are so far 25 minutes behind schedule, and not quite half way through yet, so everybody speak quickly.

Mr. CASTELLI. I am happy to answer quick questions.

Mr. SIMPSON. Ken.

WEDNESDAY, MAY 3, 2017.

SOUTH CENTRAL COMMUNITY ACTION PARTNERSHIP

WITNESS

KEN J. ROBINETTE, EXECUTIVE DIRECTOR, SOUTH CENTRAL COMMUNITY ACTION PARTNERSHIP

Mr. ROBINETTE. Good morning, Chairman Simpson, ranking member Kaptur and committee members. I am the CEO of the South Central Community Action Partnership in Twin Falls, Idaho. I am pleased to submit testimony today to support the Department of Energy's Weatherization Assistance Program referred to as WAP. I would also like to thank the two presenters that just came before us that talked about WAP to set me up for this presentation. So thank you.

With the Department of Energy's Weatherization Assistance Program I would respectfully urge this committee to fund the Weatherization Assistance Program in fiscal year 2018 at a level of 230. That is a little bit above what they had recommended but we are deeply concerned about the administration's proposal to eliminate WAP and I believe that this funding level is essential in continuing and improving the outstanding results of the program. The WAP celebrated its 40th anniversary in 2016. Today I want to highlight the impact that the WAP has nationwide as well as demonstrate what the program makes a difference in my State of Idaho.

The WAP is a proven, cost effective and successful model of a Federal, State and local partnership. WAP services are delivered by more than 900 organizations, many of which are community action agencies like mine. WAP operates in every corner of the Nation making a difference in both urban and rural communities in all 50 States and the District of Columbia, U.S. Territories, and Native American Tribes. Since its inception in 1976 over 7.4 million homes have been weatherized by WAP. That is 7.4 million families with extra money in their pocket and living in a safer, healthier more comfortable home. It is widely known that the families with low income pays a larger portion of their income towards home energy costs and their higher income counterparts about 16 percent of income versus just three percent according to Oakridge National Laboratory. Weatherization helps alleviate this high energy burden through cost effective, energy efficiency improvements such as insulation, air sealing, HVAC systems, lighting and appliances.

According to DOE, in cold weather States like Idaho WAP can reduce heating costs by as much as 30 percent and families in weatherized homes save at least \$283 each year on their energy costs. This income can be used to pay for goods like food, medicine and education.

According to a commonest at the Home Energy Affordable Gap Project, Idaho households with incomes below 50 percent of the Federal poverty level pay a staggering 21 percent of their annual income simply for their home energy bills. Idaho has six WAP providers that serve all 44 counties and weatherize approximately 975 homes annually for families and individuals that are economically disadvantaged. Of those homes weatherized each year more than 2,400 individuals many of which are elderly, disabled and young children now live in a more energy efficient and safer home. Many of our families submit letters of thanks for assistance they received.

I would like to share one of those letters from a family who owns a home in small farming community of Hazelton, Idaho. This family where dad and mom are both working with one small child who is disabled writes we are so grateful and could not thank you all enough of everything. I was so amazed how professional all the guys were. Our home used one third of the electricity and a lot less coal. The proof is in out reduction of our power bill. Also my son has only had one minor cold. Last year he had several because the cold drafts and fluctuation of temperature.

In addition to providing substantial emergency savings for hard working American families, the WAP also makes homes healthier and safer. For every dollar invested in weatherization, \$2.78 cents were generated in health and safety benefits. Weatherization measures generally improve ventilation, mitigate mold, and improve indoor air quality. As a result, residents of weatherized homes experience fewer asthma and allergy symptoms as well as fewer hospitalizations. Children in weatherized homes missed fewer days of school and their parents missed fewer days of work.

In the Oakridge National Laboratory study of WAP residents reported paying an average of \$514 less out-of-pocket medical expenses after weatherization. Not only does WAP make a necessary, needed improvement to our national aging housing stock, but it also helps American workers and American businesses. The WAP directly supports more than 8,500 jobs and indirectly supports thousands more in related business. The WAP has provided training and workforce development to thousands of low-income and middle-income workers allowing them to secure stable employment across the entire State or across the entire supply chain from WAP crews, material suppliers, tech companies, and more.

Idaho is also a great example of another key success of WAP with a strong record of leveraging and additional funds to supplement the Federal dollars. The main method of leveraging is through partnerships with utility companies. Many of which depend upon the WAP delivery network to carry out low-income residential efficiency incentives. In 2015, increasing—excuse me, let me back that up. At least 21 States were able to leverage additional funds from utilities in 2015, increasing the impact of the WAP in those States. This leveraging activity is only possible with

the critical base money from DOE as well as DOE's reputation and high quality standards. In Idaho, we have had a longstanding partnership with three of our largest utility companies. Over the past 5 years, they have contributed more than \$11.8 million that were invested in approximately 2,200 households throughout the State.

In closing, I would like to extend my gratitude to all of you for your hard work and continued support of WAP over the years. I again respectfully urge the subcommittee to find or fund the WAP at \$230 million for fiscal year 2018, the funding level necessary we believe to sustain a national program to serve low-income families in all local communities. Thank you.

[The information follows:]

TESTIMONY OF KEN J. ROBINETTE, CHIEF EXECUTIVE OFFICER,
SOUTH CENTRAL COMMUNITY ACTION PARTNERSHIP (SCCAP), BEFORE THE
HOUSE ENERGY AND WATER DEVELOPMENT APPROPRIATIONS SUBCOMMITTEE
IN SUPPORT OF FY 2018 DEPARTMENT OF ENERGY FUNDING
May 3, 2017

Good morning, my name is Ken Robinette and I'm the CEO of the South Central Community Action Partnership in Twin Falls, Idaho. I am pleased to submit testimony today in support of the Department of Energy's (DOE) Weatherization Assistance Program (WAP) and I respectfully urge this committee to fund the Weatherization Assistance Program in fiscal year 2018 at a level of \$230 million. I am deeply concerned about the Administration's proposal to eliminate the WAP, and I believe this funding level is essential in continuing and improving the outstanding results of the program.

The WAP celebrated its 40 year anniversary in 2016, and I've been working in weatherization for the past 38 of those years. Today I want to highlight the impact that WAP has nationwide, as well as demonstrate how the program makes a difference in my state of Idaho.

The WAP is a proven, cost-effective, and successful model of a Federal, State, and local partnership. WAP services are delivered by more than 900 local organizations, many of which are Community Action Agencies like mine. WAP operates in every corner of our nation, making a difference in both urban and rural communities in all 50 states, the District of Columbia, U.S. Territories, and Native American tribes. Since its inception in 1976, over 7.4 million homes have been weatherized by WAP- that's 7.4 million families with extra money in their pockets and living in safer, healthier, more comfortable homes.

It's widely known that families with low-incomes pay a larger portion of their income towards home energy costs than their higher income counterparts- about 16% of income versus just 3% according to Oak Ridge National Lab. Weatherization helps alleviate this high energy

burden through cost-effective energy efficiency improvements such as insulation, air sealing, HVAC systems, lighting, and appliances. According to DOE, in cold weather states WAP can reduce heating costs by an average of 30% and families in weatherized homes save at least \$283 each year on their energy costs. This income can be used to pay for other goods like food, medicine, and education. Families don't have to make the impossible choice between heating and eating.

According to economists at the Home Energy Affordability Gap project, Idaho households with incomes of below 50% of the Federal Poverty Level pay a staggering 21% of their annual income simply for their home energy bills. Idaho has 6 WAP providers that serve all 44 Counties of our mostly rural state. On average over the past 5 years these 6 agencies with an average DOE state allocation of \$1.6 million dollars have weatherized annually 974 homes of families and individuals that are economically disadvantaged. Of those homes weatherized each year more than 2400 Individuals, of which 485 Elderly, 480 Disabled and 328 children under the age of 17 now live in a more energy efficient and safer home. Many of our families submit letters of thanks for the assistance they received. I would like to share one of those letters from a family who owns their home in the small farming community of Hazelton. This family, where dad and mom are both working with 1 small child who is disabled writes, *"We are so grateful and couldn't thank you all enough for everything. I was so amazed at how professional all the guys were. They all were a pleasure to have in our home, and very trustworthy. I want all the guys to know how great a job they did! Our home used a third of electricity and a lot less coal. It is so comfortable and we can't feel drafts anywhere. The proof is in our reduction of our power bill. Also my son has only had one minor cold. Last year he had several because of all the cold drafts and fluctuation in temperature. This is one program I feel helps people help themselves.*

My family and I couldn't thank you guys enough! I wish the government knew how important this program is, and how it truly helps those who otherwise can't afford it. Pay it forward, God Bless!

In addition to providing substantial energy savings to hard working American families, the WAP also makes homes healthier and safer. For every \$1 invested in weatherization, \$2.78 were generated in health and safety benefits. Weatherization measures generally improve ventilation, mitigate mold, and improve indoor air quality. As a result, residents of weatherized homes experience fewer asthma and allergy symptoms, as well fewer hospitalizations. Children in weatherized homes missed fewer days of school and their parents missed fewer days of work. In the Oak Ridge National Lab study of WAP, residents reported paying on average \$514 less each year in out of pocket medical expenses after weatherization. Today, Idaho agencies have a current active waiting list of over 8400 income eligible households needing weatherization assistance. With our average annual household completion that equates to more than 8 years that families wait to receive this service. We do provide emergency services to eligible homeowners during the winter months with no heat due to broken or unsafe heating system and prioritize the other households that have elderly, disabled and young children.

Not only does the WAP make drastically needed improvements to our nation's aging housing stock, but it also helps American workers and American businesses. The WAP directly supports more than 8,500 jobs and indirectly supports thousands more in related industries. The WAP has provided training and workforce development to thousands of low and middle-income workers, allowing them to secure stable employment across the entire supply chain- from WAP crews, material suppliers, tech companies, and more. For my agency in south central Idaho, our crew based staff weatherizes approximately 80 homes per year. We currently employ 14 trained

technicians, 2 of whom are Quality Control Inspectors or referred to as QCI, one of the highest certifications in the WAP network that assures every home weatherized is carefully inspected to DOE standards and regulations. We contract with over 10 independent contractors in the construction trades such as HVAC and Electrical and purchase our weatherization materials and supplies from 24 local vendors and 11 major dealers.

Idaho is also a great example of another key success of the WAP- a strong record of leveraging additional funds to supplement federal dollars. The main method of leveraging is through partnerships with electric and gas utilities, many of which depend on the WAP delivery network to carry out low-income residential efficiency initiatives. At least 21 states were able to leverage additional funds from utilities in 2015, increasing the impact of the WAP in these states. This leveraging activity is only possible with the critical base money from DOE, as well as DOE's reputation and high quality standards. In Idaho, we have had long standing partnerships with 3 of our largest private investor own utility companies; Idaho Power, Avista and Rocky Mountain Power that over the past 5 years contributed more than \$11.8 million dollars that were invested in approximately 2200 households throughout the state.

In closing, I would like to extend my gratitude to all of you for your hard work and continued support of WAP over the years. I again respectfully urge the Subcommittee to fund the WAP at \$230 million for FY 2018, the funding level necessary to sustain a national program to serve low-income families in all local communities as it has traditionally done. This is a program that has proved its worth and effectiveness for over forty years. WAP provides essential services to thousands of low-income families, resulting in greater energy savings, increased health and safety, more living wage jobs, and increased leveraging of other funds-- outcomes that will benefit the nation. Thank you.

Respectfully submitted,

Ken J. Robinette
Chief Executive Officer
South Central Community Action Partnership

Mr. SIMPSON. Thank you, Ken. Ray.

WEDNESDAY, MAY 3, 2017.

**NATIONAL ASSOCIATION FOR STATE COMMUNITY
SERVICES PROGRAMS**

WITNESS

**RAY JUDY, ENERGY SERVICES DIRECTOR, NATIONAL ASSOCIATION
FOR STATE COMMUNITY SERVICES PROGRAMS**

Mr. JUDY. All right, thank you. My name is Ray Judy and I am the energy services director for the National Association for State Community Services Programs and I appreciate the opportunity to come and speak to you today mainly regarding the Weatherization Assistance Program, which is near and dear to my heart. So I am pleased to submit testimony in support of the Weatherization Assistance Program and State Energy Program.

As some of the numbers that you have already heard we are seeking an fiscal year 2018 appropriations level of \$230 million for the Weatherization Assistance Program and \$70 million for the State Energy Program. NASCAP is a member organization representing the weatherization grantees and the directors in all 50 States, D.C., and five U.S. territories on all the issues related to WAP.

The State office is represented by organization. We would like to thank this community for its support of the WAP and SEP through the years. Additionally, we would like to share our appreciation for the increase in WAP funding contained within the omnibus for the fiscal year 2017 funding. I have been working in the weatherization program for over 29 years with the first 28 years of that being spent in Indiana's weatherization program and have witnessed throughout that time firsthand the impact that the WAP has on the most vulnerable households in this country.

Weatherization provides a foundation for residential clean energy investments that sustain jobs and save families money through improved energy efficiency. In its 40-year history the WAP has weatherized over 7.4 million homes, helping hard-working American families, particularly those that are elderly, disabled, and families with children.

The need for weatherization services is significant. DOE estimates that 20 to 30 million families are eligible for WAP each year. This represents an incredible opportunity for energy savings that cannot be obtained without the WAP.

Weatherization managers like insulation, air ceiling, high-efficiency HVAC systems are investments that pay off for the life of the home reducing energy waste and saving families money month after month and year after year. With lower energy bills these families can increase their usable income and buy essentials like food, clothing, medicine, and health care.

In addition to delivering savings to families, the WAP plays a significant role in supporting jobs in workforce development and we will repeat the number again that WAP supports at least 8,500 jobs in weatherization and thousands more across the supply chain and material suppliers, vendors, and manufacturers. It is also im-

portant to highlight that the work performed under WAP meets extremely high quality standards set forth by DOE. In recent years, DOE has developed and implemented standard work specifications that ensure all homes receive the highest quality weatherization services.

As of 2016, there are over 1,600 building performance institute-certified quality control inspectors. This workforce of QCIs ensures that 100 percent of the units weatherized with DOE funds are inspected for quality. And in addition that number, the WAP grantees inspect 5 percent of those units in sharing another layer of review during their time in monitoring.

Another critical benefit of the WAP is its positive impact on the health and safety of families. You have heard this again, but it really bears the repeating these numbers and this information. It makes sense that in a home that is cold and drafty or full of mold and excess moisture there is an increased risk of recurring illnesses.

What we have learned over the years is that the nonenergy benefits of weatherization results in a healthier living environment. This was confirmed by the Oakridge National Laboratory evaluation which found that residents of weatherized homes experience fewer asthma, allergy, and cold symptoms. Weatherization mitigates factors that can trigger an asthma attack resulting in fewer emergency room visits and hospitalizations. WAP measures can also prevent other life-threatening events such as carbon monoxide poisoning and fires from unsafe heating sources.

After weatherization families have homes that are safer and more livable, resulting in fewer missed days of work and school. These outcomes pay off. Again, every weatherization dollar spent returns \$2.78 in health and safety benefits.

These economic benefits are even more significant when viewed in light of our Nation's staggering healthcare costs. According to the Green and Healthy Homes Initiative, \$82.4 billion in healthcare costs are lost each year due to inefficient and unhealthy housing. That is 3 percent of the total U.S. healthcare costs. The CDC estimates that asthma alone costs the United States \$56 billion per year.

Despite the wide range of benefits and proven cost effectiveness of the Weatherization Assistance Program and the State Energy Program, the administration's fiscal year 2018 budget blueprint zeroed out both programs, citing a need, "to reduce Federal intervention in State-level energy policy and implementation". However, WAP and SEP are models of success; successful Federal, State, and local partnership, not Federal intervention. Elimination of these programs will result in loss of jobs as well as decreased investment in local businesses, which will harm the financial stability, health, and safety of families across the Nation.

NASCAP respectfully urges the subcommittee to fund the WAP and not less than \$230 million for fiscal year 2018 and the funding level necessary to sustain the national program. NASCAP also supports the appropriation of 70 million in fiscal year 2018 for the State Energy Program. And NASCAP also looks forward to working with committee members in the future to ensure that these programs continue to deliver cost-effective results that support our

economy and make a difference in the lives of the most vulnerable in our communities.

And to end, we just really appreciate the opportunity to be here today and to speak to the benefits of this program.

[The information follows:]

TESTIMONY OF RAY JUDY, ENERGY SERVICES DIRECTOR,
NATIONAL ASSOCIATION FOR STATE COMMUNITY SERVICES PROGRAMS
(NASCS), BEFORE THE HOUSE ENERGY AND WATER DEVELOPMENT
APPROPRIATIONS SUBCOMMITTEE IN SUPPORT OF FY 2018 DEPARTMENT
OF ENERGY FUNDING
May 3, 2017

As Energy Services Director for the National Association for State Community Services Programs (NASCS), I am pleased to submit testimony in support of the Department of Energy's (DOE) Weatherization Assistance Program (WAP) and State Energy Program (SEP). We are seeking an FY 2018 appropriations level of \$230 million for the Weatherization Assistance Program. We also seek \$70 million for the State Energy Program (SEP), and of this amount that Congress specify not less than \$50 million in support of base program formula funding, with the remainder targeted to priority energy emergency and cyber security preparedness and response. NASCS believes these funding levels are essential to support these truly effective state grant programs on a nationwide scale.

NASCS is the member organization representing the weatherization grantees and directors in all 50 States, DC, and 5 US territories on issues related to the WAP. The state offices represented by our organization would like to thank this Committee for its support of the WAP and SEP through the years. I have been working in Weatherization for over 29 years beginning my career on a Weatherization crew in southern Indiana, climbing under mobile homes and through crawl spaces and into attics. I later became a state monitor, working to ensure quality across the program statewide. I eventually became the WAP State Manager in Indiana, serving in that role for approximately five years prior to coming to NASCS. I have witnessed firsthand the impact that the WAP

has on America's most vulnerable households from multiple perspectives, while seeing the program grow stronger and more effective each year.

Weatherization provides the foundation for residential clean energy investments that sustain jobs and save families money through improved energy efficiency. In its 40-year history, the WAP has weatherized over 7.4 million homes nationwide, helping hard working American families, particularly the elderly, disabled, and families with children. The need for weatherization services is significant; DOE estimates that 20-30 million families are eligible for WAP each year. Furthermore, our nation's existing housing stock is aging and inefficient, with 40% of homes built before 1970 resulting in a median home age of 37 years according to HUD. This represents an incredible opportunity for energy savings that cannot be attained without the WAP. Weatherization measures like insulation, air sealing, and high efficiency HVAC systems are investments that pay off for the life of the home, reducing energy waste and saving families money month after month, year after year. With lower energy bills, these families can increase their usable income and buy other essentials like food, clothing, medicine, and health care.

In addition to delivering savings to families, the WAP plays a significant role in supporting jobs and workforce development. The WAP supports at least 8,500 jobs in weatherization and thousands more across the supply chain of material suppliers, vendors, and manufacturers. These are good, living wage jobs that provide fulfilling and rewarding careers- something I can personally attest to. Additionally, because of the advanced diagnostics and technology developed in WAP, the program stands as the foundation for the home performance industry (HPI), which employs thousands of contractors who complete energy efficiency retrofits across the entire residential sector.

It is also important to highlight that the work performed under WAP meets extremely high quality standards set forth by DOE. In recent years DOE has developed and implemented Standard Work Specification and Guidelines for Home Energy Professionals that ensure all homes receive the highest quality weatherization services. As of 2016, there are over 1,600 Building Performance Institute certified Quality Control Inspectors. This workforce of QCI's ensure that 100% of units weatherized with DOE funding are inspected for quality. Additionally, the WAP Grantees inspect 5% of those units ensuring another layer of review and quality assurance. The Standard Work Specifications undergo a yearly review and comment process soliciting feedback from WAP managers, trainers, and technical experts to ensure that the latest building science is being incorporated into the program.

Another critical benefit of the WAP is its positive impact on the health and safety of families. It makes sense that in a home that's cold and drafty, or full of mold and excess moisture, there is an increased risk of recurring illnesses. What we have learned over the years is that the non-energy benefits of weatherization results in a healthier living environment. This was confirmed by the Oak Ridge National Laboratory Evaluation, which found that residents of weatherized homes experienced fewer asthma, allergy, and cold symptoms. Weatherization mitigates factors that can trigger an asthma attack resulting in fewer emergency room visits and hospitalizations. WAP measures can also prevent other life threatening events such as carbon monoxide poisoning and fires from unsafe heating sources. After Weatherization, families have homes that are safer and more livable resulting in fewer missed days of work and school.

These outcomes pay off - every weatherization dollar spent returns \$2.78 in health and safety benefits. The Oak Ridge National Laboratory Evaluation found that families reported decreased out-of-pocket medical expenses by an average of \$514. The total health and household-related benefits for each unit is estimated to be \$14,148. These economic benefits are even more significant when viewed in light of our nation's staggering healthcare costs. According to the Green and Healthy Homes Initiative, \$82.4 billion in healthcare costs are lost each year due to inefficient and unhealthy housing - that's 3% of total U.S. healthcare costs. The CDC estimates that asthma alone costs the U.S. \$56 billion per year. One study of WAP in Massachusetts found significant savings potential for Medicaid and Medicare as a result of weatherization.

While I've spoken mostly about the WAP today, I'm also here advocating for funding for the State Energy Program. In many States, WAP and SEP are housed in the same division of government. The State Energy Program enables states to assist with the development of energy efficiency and renewable energy projects, such as improving the efficiency of hospitals and schools, working with utilities and energy service companies to install clean energy and energy efficiency projects, developing energy emergency preparedness and response plans, and supporting private sector energy innovations through business incubators and job training. The Oak Ridge National Laboratory found that for every dollar of federal funding, the SEP leverages over \$10 for energy related economic development.

Despite the wide range of benefits and proven cost effectiveness of the Weatherization Assistance Program and the State Energy Program, the Administration's FY 2018 Budget Blueprint zeroed out both programs, citing a need "to reduce Federal

intervention in State-level energy policy and implementation”. However, WAP and SEP are models of successful federal, state, and local partnership- not federal intervention. They are the only two DOE programs specifically identified in the National Governors’ Association transition recommendations, which ask the Administration to “Continue and expand existing energy grant programs the states rely upon”. Elimination of these programs will result in the loss of jobs as well as decreased investment in local businesses, which will harm the financial stability, health, and safety of families across the country.

NASCSP respectfully urges the Subcommittee to fund the WAP at not less than \$230 million for FY 2018, the funding level necessary to sustain a national program and that is in-line with historical funding levels. NASCSP also supports the appropriation of \$70 million in FY 2018 for the State Energy Program. NASCSP looks forward to working with Committee members in the future to ensure that these programs continue to deliver cost effective results that support our economy and make a difference in the lives of the most vulnerable in our communities.

Respectfully submitted,

Ray Judy
Energy Services Director
National Association for State Community Services Programs (NASCSP)

Ms. KAPTUR. Mr. Chairman, I want to take just 5 seconds to ask the prior witness, Mr. Robinette, and yourself if you could submit from that Oakridge study to each of the members up here by their State from the inception of the program how many units have been weatherized and then the State-by-State achievements over that period of time and what remains to be done. I think that that would be very—to take the one example you provided for Idaho and to extend that to other States, that might be very—we have a lot of new members on this subcommittee. Thank you.

Mr. ROBINETTE. Absolutely, be glad to.

Mr. SIMPSON. Thank you, Ray. Daniel.

WEDNESDAY, MAY 3, 2017.

NORTHERN MANHATTAN IMPROVEMENT CORPORATION

WITNESS

DANIEL RIEBER, WEATHERIZATION DIRECTOR, NORTHERN MANHATTAN IMPROVEMENT CORPORATION

Mr. RIEBER. Good afternoon, Mr. Chairman. My name is Daniel Reiber and I am the weatherization director at the Northern Manhattan Improvement Corporation in New York City, or NMIC as we say. I am here today before this committee to submit testimony in support of the Department of Energy's Weatherization Assistance Program, or WAP. I respectfully request that the Weatherization Assistance Program (WAP) be kept whole and funded nationally at \$230 million for fiscal year 2018.

At NMIC we integrate numerous crises innovation services under one roof. With their crises resolved our clients move seamlessly to capacity building services through our holistic programs designed to support individuals and families as they develop the tools to transition from crises to self-sufficiency. Our weatherization program is a critical piece of our mission to serve as a catalyst for positive change in the lives of people in our community on their paths to a secure and prosperous future.

The WAP is the largest energy efficiency retrofit program in the Nation. The local community action agencies and community-based organizations that implement the program are skilled, highly trained, and held to higher standards that are often required in the commercial marketplace for equivalent work. For 40 years the WAP has led the charge for energy efficiency and used building science to properly evaluate, diagnose, and retrofit houses and buildings so they may become more energy efficient and safe. The WAP workforce sustains almost 9,000 jobs nationwide. Additionally, thousands of jobs are sustained through related industries and the hiring of small business contractors.

NMIC utilizes subcontractors throughout the program year to provide windows, boilers, insulation, and ventilation upgrades. This workforce can consist of up to 100 works from 8 different small business contractors. Over the past several years we have seen the availability of affordable apartments become very scarce in Manhattan. According to the National Low-Income Housing Coalition in the State of New York there are just 35 affordable units available for every 100 low-income renters.

As low-income tenants struggle to live in our great city, the weatherization program is more important today in helping to preserve affordable housing for low-income families, especially children, seniors, and individuals with disabilities. Most of the buildings we have served in the last grant period were extremely inefficient and in desperate need of energy conservation measures, causing residents to pay significantly more than necessary towards energy costs. Additionally, the need for these services is staggering. Our organization alone has 800 units in over 20 buildings on our waiting list.

NMIC works with building owners who are committed to preserving affordable housing while still running a profitable business. Many properties were neglected over time and are in great need of assistance. Such things as boilers, pipe and roof installation, roof repairs, and windows. WAP helps keep low-income people in affordable, safe, energy-efficient, and healthy homes.

Furthermore, weatherization dollars are key to helping low-income, tenant-owned buildings survive. These HDFC, or Housing Development Fund Corporations as they are known, typically have poor cash flow and high energy burden. By assisting these buildings, the WAP helps preserve the essence of affordable housing in low-income neighborhoods and, at the same time, improves the quality of life in our various communities. The DOE weatherization program is critical because it provides the critical base with which to leverage and combine other funding. We utilize a mix of program, owner, utility, and State energy office, NYSERDA in this case, dollars to weatherize buildings, make them sustainable, safe places to live.

One thing is certain, should the Federal funds for WAP be significantly reduced or zeroed out, the impact would be devastating to our community. Building owners will seek out repairs and pass that cost on to tenants. This upward pressure on rent will force people out of their homes, thus creating a vicious cycle of displacement and uprooting of families and the elderly. The stress of losing your home through no fault of your own is the kind no one should have to endure.

Furthermore, the nonprofits in support of housing agencies that rely on WAP for their clients will most likely defer maintenance until they are able to make repairs, endangering the health and safety of their residents.

I will just highlight in my testimony our two case studies which show energy-saving reductions in two buildings of 42 percent and 47 percent, respectively. In both cases the low-income residents were direct beneficiaries of an affordable, safer, more comfortable home with no fear of a rent increase. Founded in 1979, the staff of two with the goal of assisting immigrants in northern Manhattan who were at risk of being evicted, Northern Manhattan Improvement Corporation has grown to be one of New York City's most trusted, innovative, and effective poverty fighting organizations. Our programs include legal services, social services, education and career services, weatherization, and community organizing. The loss of the weatherization program would impact our ability to achieve our mission as we would no longer be able to pro-

vide the comprehensive services that makes a difference in the lives of the most vulnerable in our community.

In closing, I urge the subcommittee to fund the WAP at no less than 230 million for fiscal year 2018, the funding level necessary to sustain a national program. This is a program that has proved its worth and effectiveness over 40 years. The WAP plays a critical role in providing and preserving affordable housing in our community and helps hard-working families across the entire country. I thank you and also want to thank you for adding 13 million to the FYI 17 Omnibus Bill. We appreciate that very much.

[The information follows:]

TESTIMONY OF DANIEL J. RIEBER, WEATHERIZATION DIRECTOR,
NORTHERN MANHATTAN IMPROVEMENT CORPORATION (NMIC), BEFORE THE
HOUSE ENERGY AND WATER DEVELOPMENT APPROPRIATIONS SUBCOMMITTEE
IN SUPPORT OF FY 2018 DEPARTMENT OF ENERGY FUNDING
May 3, 2017

Good morning, my name is Daniel Rieber and I'm the Weatherization Director at Northern Manhattan Improvement Corporation in New York City. I appear today before this committee to submit testimony in support of the Department of Energy's (DOE) Weatherization Assistance Program (WAP). I respectfully request that the Weatherization Assistance Program be kept whole and funded nationally at \$230 million dollars in FY 2018.

At NMIC we integrate numerous crisis intervention services under one roof. With their crises resolved, our clients move seamlessly to capacity building services through our holistic programs designed to support individuals and families as they develop the tools to transition from crisis to self-sufficiency. Our weatherization program is a critical piece of our mission to serve as a catalyst for positive change in the lives of the people in our community, on their paths to secure and prosperous futures.

The WAP is the largest energy efficiency retrofit program in the nation. The local Community Action Agencies and Community Based Organizations that implement the program are skilled, highly trained and held to higher standards than are often required in the commercial marketplace for equivalent work. For 40 years the WAP has lead the charge for energy efficiency, and used building science, to properly evaluate, diagnose and retrofit houses and buildings so they may become more energy efficient and safe. The WAP workforce sustains almost 9,000 jobs nationwide. Additionally, thousands of jobs are sustained through related industries and the hiring of small business contractors.

NMIC utilizes subcontractors throughout the program year to provide windows, boilers, insulation and ventilation upgrades. This workforce can consist of up to 100 workers from 8 different small business contractors.

Over the past several years we have seen the availability of affordable apartments become very scarce in Manhattan. According to the National Low Income Housing Coalition, in the State of New York there are just 35 affordable units available for every 100 low-income renters. As low-income tenants struggle to live in our great city, the Weatherization program is more important, today, in helping to preserve affordable housing for low-income families, especially children, seniors, and individuals with disabilities. Most of the buildings we served in the last grant period were extremely inefficient and in desperate need of energy conservation measures, causing residents to pay significantly more than necessary towards energy costs. Additionally, the need for these services is staggering- our organization alone has 800 units in over 20 buildings on our waiting list. NMIC works with building owners who are committed to preserving affordable housing while still running a profitable business. Many properties were neglected over time and are in great need of assistance (for such things as boilers, pipe and roof insulation, roof repairs and windows). WAP helps keep low-income people in affordable, safe, energy efficient and, healthy homes.

Furthermore, Weatherization dollars are key to helping low-income tenant owned buildings survive. These Housing Development Fund Corporations, or HDFC's, as they are known, typically have poor cash flow and a high-energy burden. By assisting these buildings the WAP helps preserve the essence of affordable housing in low-income neighborhoods and at the same time improves the quality of life in our various communities.

The DOE Weatherization Assistance program is critical because it provides the critical base with which to leverage and combine other funding. We utilize a mix of program, owner, utility and State Energy Office (NYSERDA) dollars to weatherize buildings, making them sustainable, safe places to live.

One thing is certain, should the federal funds for WAP be significantly reduced or zeroed out, the impact would be devastating to our community. Building owners will seek out repairs and pass the cost onto their tenants. This upward pressure on rent will force people out of their homes, thus, creating a vicious cycle of displacement and uprooting of families and the elderly. The stress of losing your home through no fault of your own is the kind no one should have to endure. Furthermore, the non-profits and supportive housing agencies that rely on WAP for their clients will most likely defer maintenance until they are able to make repairs, endangering the health and safety of residents.

I would like to highlight some success stories in order to illustrate how the WAP operates in our community:

510 W 188 St. NY, NY 10040

Background:

- 6 floors
- 35 Apts.
- 36,750 Heated SqFt

Workscope:

1. New, smaller, more efficient steam boiler
2. New apartment windows
3. Refrigerator replacement
4. Low-flow showerheads
5. Pipe insulation
6. Common area and apartment lighting upgrade
7. Roof insulation

Savings:

- 42% Energy Reduction
- \$21,695 First Year Savings

179 Henry Street, NY, NY 10002

Background:

- 12 floors
- 50 Apts.
- 60,400 Heated SqFt
- HUD regulated senior housing

Workscope:

1. Conversion from steam to hydronic hot water system
2. Conversion from #6 oil to natural gas
3. Common area lighting upgrade
4. Apartment lighting upgrade

Savings:

- 47% Total Energy Reduction
- \$83,000 First Year Savings

In both cases the low-income residents were the direct beneficiaries of an affordable, safer, more comfortable home with no fear of a rent increase.

Founded in 1979 by a staff of two with the goal of assisting immigrants in northern Manhattan who were at risk of being evicted. Northern Manhattan Improvement Corporation (NMIC) has grown to be one of New York City's most trusted, innovative and effective poverty-fighting organizations. Our programs include Legal Services, Social Services, Education and Career Services, Weatherization, and Community Organizing. The loss of the weatherization program would impact our ability to achieve our mission, as we would no longer be able to provide the comprehensive services that make a difference in the lives of the most vulnerable in our community.

In closing, I urge the Subcommittee to fund the WAP at not less than \$230 million for FY 2018, the funding level necessary to sustain a national program. This is a program that has proved its worth and effectiveness for over forty years. The WAP plays a critical role in providing and preserving affordable housing in our community, and helps hard working families across the entire country.

Thank you.

Mr. SIMPSON. Thank you. David.

WEDNESDAY, MAY 3, 2017

ASSOCIATION FOR ENERGY AFFORDABILITY, INC.

WITNESS

DAVID HEPINSTALL, EXECUTIVE DIRECTOR, ASSOCIATION FOR ENERGY AFFORDABILITY, INC.

Mr. HEPINSTALL. Good morning. As the executive director of the Association for Energy Affordability, AEA, I represent and serve a network of not-for-profit community-based organizations that provide weatherization services to low-income households throughout downstate New York. AEA is a national weatherization training center and a WAP-funded technical services provider as well as a direct services subgrantee in New York City.

In the last 10 years AEA itself has weatherized 9,000 housing units and completed investment grade energy audits of 2,400 buildings with over 112,000 units in New York, while also every year having trained hundreds of program staff, contractors, and building operators in New York and nationally. I am here today to urge you to fund the Department of Energy's Weatherization Assistance Program at least 230 million and DOE's State Energy Program for 50 million for fiscal year 2018. Funding at this level is needed to retain the expertise in infrastructure that enables weatherization to deliver its essential services to low-income households throughout the United States and supports State energy programs that work collaboratively with weatherization.

Weatherization employs energy auditors, retrofit installers, quality control inspectors, and project managers with deep expertise in whole building energy efficiency. In New York State alone 736 persons are fully or partly employed directly by weatherization and yet even more work is performed by local heating, plumbing, electrical, and ceiling contractors hired and overseen by weatherization. These local agency and contractor jobs affect the local economy. They cannot be outsourced.

WAP also supports accredited training programs conducted by training centers like AEA to prepare workers for BPI certifications and help program staff and contractors deliver deep energy savings. Weatherization in New York also leverages substantial private resources from building owners and utilities to complete its energy efficiency upgrades helping to preserve affordable housing and make a lasting impact on low-income communities. Cost-effective, whole house weatherization saves money and energy and improves occupant health, safety, and comfort for years to come.

Weatherization enables low-income families to meet more of their basic needs despite limited incomes simply by reducing energy waste in their homes. Yet the very program that makes all of this possible, that has spawned valuable technology improvements along the way, that is celebrating 40 years of bipartisan support today, finds itself on the chopping block. Passing the current CR is a start, but having at least 230 million in the 2018 budget is the key. If the weatherization program were to be defunded or there were major cuts in fiscal year 2018 funding, both program staff and

contractors would experience job loss, many moving on to other types of work. This would be a huge loss to their communities and not easily reversed if the infrastructure of WAP were dismantled.

In New York City, only 16 percent of low-income households own their own homes compared to 42 percent nationally. Most are renters living in older, multifamily buildings. Preserving the affordability of their housing requires more than a few low-cost measures in their units. Energy-efficient heating, hot water, and ventilation systems are needed to control building and operating costs.

Seventy-one percent of low-income households in New York City are severely rent burdened, meaning they pay over 50 percent of their income for rent and utilities. This places them at a high risk of becoming homeless. WAP policies and best practices in New York contribute to economic and social stability of low-income families and neighborhoods by reducing the energy and maintenance costs that may otherwise lead to rent increases and displace many families from their homes.

The positive effects of WAP in New York City multifamily buildings begin even before retrofits begin because owners must ensure code violations and other hazardous conditions identified in the building audit before weatherization work can even begin. Weatherization helps by simulating owners to invest in low-income communities that have suffered from disinvestment. Weatherization measures contribute to the health and safety of building residents, improving indoor quality and removing conditions that trigger asthma symptoms.

DOE rules permit energy efficiency upgrades to central systems in multifamily buildings when the required percentage of households in the building is income eligible. This allows local weatherization subgrades in New York City to take a whole building approach to energy efficiency that helps to maintain housing affordability.

Multifamily weatherization in New York protects low-income residents in housing affordability by requiring building owner investment of at least 25 percent of the cost of the building-wide energy upgrades, prohibiting owners from increasing rents based on capital improvements, co-funded by weatherization, and preventing displacement of low-income tenants by requiring any apartment vacated by a low-income resident to be rented to another low-income household for at least 5 years after weatherization upgrades have been completed.

Those are things that have been developed in New York specifically coming from below, from subgrantees, and it is possible because of DOE regulations as well.

So I really want to thank you for the opportunity to testify today and say I have been in this for 27 years and gone to a lot of buildings in New York City, and I remain to this day deeply moved by the positive impacts on so many households. We have pictures of before and after. We have movies, frankly, of that as well, and the impact on households and buildings and whole neighborhoods would be far-reaching, adverse, unintended consequences if this essential program were to end or be crippled by deep funding cuts. Please do not let this happen.

[The information follows:]

House Appropriations Subcommittee on Energy and Water Development**Testimony of David Hepinstall, Executive Director, Association for Energy Affordability, Inc.**

Thank you for the opportunity to testify today. I speak on behalf of the AEA Network of community-based Weatherization subgrantees in the New York City metro area, and also for all Weatherization providers nationally who weatherize low-income, multi-unit residential properties. AEA is a National Weatherization Training Center, and both a technical services subgrantee and direct Weatherization services subgrantee in parts of Bronx and Queens Counties in New York.

In the last 10 years, AEA has weatherized 8,931 of the 177,087 units completed in NY. For WAP, AEA has also completed investment grade audits of 2,437 buildings with 111,922 units. For 20 years AEA has trained weatherization technicians, managers, contractors, and building operators. AEA trainers also travel to other states to train Weatherization staff.

It is from this base of experience that I respectfully request that you fund the Weatherization Assistance Program at \$230 million for Fiscal Year 2018. This funding level will enable the program to retain the talent and infrastructure to continue as a national program, performing its essential services for low-income households and the communities where they live, in every State.

As this Subcommittee hears our testimony, local contractors and Weatherization workers are at work upgrading homes where low-income people live to make them more energy efficient. Their work makes families safer and more secure in their homes by reducing their energy bills. It reduces their dependence on government assistance. It helps local building owners maintain their buildings cost-effectively. It increases America's energy independence. It improves the air we breathe both indoors and out.

Weatherization directly employs building scientists, energy auditors, retrofit installers, quality control inspectors, and project managers with deep expertise in whole building energy efficiency. 736 persons in New York State alone are fully or partly employed directly by Weatherization. Yet most Weatherization work is performed by local contractors overseen by Weatherization

project managers. The heating, plumbing, electrical and air-sealing contractors hired by WAP subgrantees are local firms whose skills we will need to keep us safe and healthy in our homes for years to come. Their work cannot be outsourced. WAP also supports industry-leading training and certification programs, including the IREC accredited courses leading to BPI certification that AEA carries out at our Training Center in the Bronx, that help those contractors and energy professionals to deliver even deeper energy savings and to maintain their competitive edge. And we in Weatherization leverage substantial private and utility resources to do all of this.

Low-income families lack the resources to purchase Weatherization services directly. But Weatherization has a lasting impact on each one. Weatherization's cost-effective energy upgrades are durable improvements that improve occupant health, safety and comfort, saving money and energy for years to come, and enabling residents, who may otherwise be forced to choose between high housing costs and food or medical care, to do more with the financial resources they have, simply by eliminating energy waste.

Yet the very program that makes all of this possible and has spawned valuable technological improvements along the way, that is celebrating 40 years of bipartisan support, today finds itself on the chopping block. What is wrong with this picture? If the Weatherization program is defunded, or even if the federal funding is cut substantially, its experienced staff will be forced out of work or into other jobs – and very likely to other fields of endeavor. The negative impact on households of experienced Weatherization workers who have dedicated many years of their lives to serving low-income communities could be devastating. But it would also be a huge loss to their communities and to the energy efficiency industry – and one not easily reversed if the infrastructure of WAP were dismantled. Without the Department of Energy's national Weatherization program, job loss would extend to local contractors who are a key part of the Weatherization workforce in New York City and around the country.

Who does the Weatherization Program Serve? In New York State, priority for

Weatherization assistance is given to households with children, elderly persons, and persons with disabilities. Priority is also given to homeowners or renters with high-energy burdens and to those who receive assistance through the State's Home Energy Assistance Program (HEAP). When a HEAP-eligible household's home is weatherized, its energy bills go down, reducing its need for HEAP support in future years. This frees up funds to assist other needy families in the following years. This is a "virtuous circle" in which government resources are cost-effectively managed to reduce individuals' dependence on government assistance by the wise application of funds to provide a long term solution to an otherwise recurring problem.

Nationally an increasing share of the population lives in multi-unit residential buildings. In NYC more than 65% of all households live in multifamily apartment buildings, and only 16% of low-income households own their own homes (compared with 42% nationally).¹ Most live in older buildings, many of which have not been well maintained. Low-income renters generally pay their own utility bills for electricity and cooking gas. In centrally heated urban buildings, tenants may not pay separately for their heat, but the rent they pay to the owner is paying for those fuel costs. If an inefficient boiler is installed when the existing one needs replacement, it may burden the building and its tenants with high energy costs for 30 or more years.

When building operating costs are high, these costs are passed along to tenants through rent increases, adding to their high rents. 70.8% of low-income households in New York City are severely rent burdened, meaning that they pay over 50% of their income for rent and utilities.² This is a major factor increasing housing insecurity and homelessness. WAP contributes to the economic stability of families and neighborhoods by reducing the energy and maintenance costs that lead to dislocation of low-income families from their homes. And this is urgent. Each night

¹ NYU Furman Center/Citi Report on Homeownership & Opportunity in New York City, August 5, 2016.

² Over 60% of low-income households in the central cities of the 11 most populous metropolitan areas in the U.S. are severely rent-burdened. Renting in America's Largest Cities, NYU Furman Center/Capitol One National Affordable Rental Housing Landscape, May 28, 2015.

over 60,000 persons in NYC sleep in homeless shelters.³ Others remain on the street.

Key Features of the Weatherization Assistance Program in New York City

Positive effects are felt even before retrofits begin. Owners must cure building violations before Weatherization work can begin. As part of the energy audit, diagnostic testing is used to identify conditions such as gas or carbon monoxide leaks, or the presence of mold, asbestos, lead, or other hazardous conditions that endanger residents and would endanger workers. These must be remediated before Weatherization starts, or be addressed in the project workscope.

Weatherization reduces building operating costs that create upward pressure on rents.

When building systems are upgraded or replaced to be more efficient, and when management addresses leaks, makes timely repairs, and uses technology to manage energy use wisely, the building saves money. To secure these benefits, NY State requires the building manager or superintendent of each multifamily building that undergoes Weatherization to attend multifamily building operator training.

Reinvestment. Weatherization helps to preserve housing both in participating houses and buildings and by stimulating other owners to reinvest in communities that have traditionally suffered from disinvestment. Homeowners and landlords alike are more likely to invest their own money in properties in neighborhoods that are stable or improving.

Health and Safety. Weatherization measures contribute to the health and safety of building residents and their neighbors by reducing emissions, hazards, and pest problems, improving indoor air quality and removing conditions that can trigger asthma symptoms. Thus, beneficial impacts on school attendance and worker productivity are also partly attributable to WAP.

Whole Building Work. Retrofits to the central heating, hot water, and ventilation systems serving a building are needed for eligible residents to obtain similar benefits to their health and housing security that owners of small homes get. DOE rules permit energy efficiency upgrades to

³ The average nightly shelter census in New York City in February 2017 was 62,435 persons, including 23,764 children. Sources: NYC Department of Homeless Services and Human Resources Administration and NYCStat shelter census reports, cited on Coalition for the Homeless website.

these systems, if the required percentage of households (typically 66% of units) is income-eligible. This critically important rule has permitted local Weatherization subgrantees in NYC to take a “whole building” approach to energy efficiency, helping to maintain housing affordability.

How does Multifamily Weatherization help Low-Income Residents?

First, multifamily building owners in NY must contribute at least 25% of the costs of building-wide energy efficiency improvements that benefit both landlord and tenants – including upgrades that owners might not otherwise make in properties with low rent rolls, whose tenants often pay their own utility bills. *Second*, Weatherization contracts prohibit owners of rent-regulated properties from applying to the State for rent increases based on retrofits co-funded by the Weatherization Program, even if they would otherwise qualify as Major Capital Improvements for that purpose. To do so would undercut the purpose of WAP to make housing more affordable for low-income residents. Owners have accepted this provision given the value of the federal share of the improvements. *Third*, owners must agree to maintain affordable rents in the building. Since rents can be raised in rent-regulated apartments when a unit is vacated, the Weatherization agreement owners must sign requires that if a low-income resident moves out of the building, the unit will be rented to another low-income household for a period of at least 5 years following installation of energy efficiency upgrades. This prevents landlords from harassing or otherwise displacing the residents whose eligibility was the basis for the building qualifying to receive Weatherization in the first place. These policies were established in the early 1990s following calls for comprehensive upgrades and direct owner investment by NYC subgrantees.

Thank you for the chance to share insights about the Department of Energy's Weatherization Assistance Program with you. I have been involved in WAP on and off since its inception, and continuously since 1990. I remain deeply moved by its positive impacts on so many households, buildings and whole neighborhoods in NYC. There would be far-reaching adverse unintended consequences if this essential program were to end, or be crippled by deep funding cuts.

Mr. SIMPSON. Thank you, David, for being here today. We appreciate it very much. Dr. Maria Spiropulu

WEDNESDAY, MAY 3, 2017

CALIFORNIA INSTITUTE OF TECHNOLOGY

WITNESS

DR. MARIA SPIROPULU, PROFESSOR OF PHYSICS, CALIFORNIA INSTITUTE OF TECHNOLOGY

Ms. SPIROPULU. It is Greek. Chairman Simpson, Ranking Member Kaptur, and distinguished members of the subcommittee, I want to thank you for the opportunity to testify today. I am here to discuss the importance of the United States in leadership in high-energy physics funded by the Department of Energy of the Office of Science, and why sustained government investment is needed to continue making world-changing discoveries.

The major reasons why we need to sustain our excellence in particle physics are, for one, the basic research to understand and explain the universe. Secondly, our international leadership, our workforce development, and our technology breakthroughs. These accomplishments have only been possible through the support of your committee.

In fact, you are the sole sponsor of this curiosity-driven research. So, I want to thank you for providing just recently \$825 million for HEP for fiscal year 2017, and I ask you to consider providing the \$868 million for fiscal year 2018, to advance our ongoing critical research and infrastructure projects.

I have been a particle physicist for 24 years, and I am now a professor at Cal-Tech. Back then, we were building for discovery, and discovery we did, and Building For Discovery is the title and the name of the report that laid out a 10-year strategic vision for the U.S. particle physics by what is called the Particle Physics Project Prioritization Panel, P5 for short, which you have heard from before.

It took the high-energy physics community a good 2 years to come up with this P5 plan, and sacrifices were made. We are now in the midway of its execution, and I am very glad to report that all projects are on time and budget.

The highest priority in the P5 report is continuing our collaboration with CERN, the leading European laboratory, and meeting our commitments to the Large Hadron Collider, and the associated more than 2,000 American researchers, physicists, technicians, students. This will happen by funding the upgrades, the upgrade detectors.

Now, mind you, with the LHC we found a unique particle that is necessary to complete our particle physics model of the universe, the blueprint of the universe.

The highest medium-term P5 priority is the Long-Baseline Neutrino Facility, or LBNF. Fermilab will host LBNF and lead the world's accelerator-based Neutrino Research Program, studying the least understood, the most puzzling, and the highest abundant matter particles in the universe than neutrinos. LBNF will be the

largest U.S.-based international science facility and the largest research program Neutrino has ever undertaken worldwide.

As part of the detector, which is called the Deep Underground Neutrino Experiment, DUNE, Fermilab will shoot neutrinos 800 miles from Illinois all the way to South Dakota at the Sanford Underground Research Facility where we are building four massive detectors that are a mile underground. LBNF and DUNE will be for neutrinos what the LHC is for the Higgs, namely the mothership of deep exploration and discovery.

And, very importantly, this international project continues to gain financial contributions from many other nations. In fact, following a cooperative agreement signed 2 years ago here, CERN, our closest collaborator, for the first time decided to invest outside Europe and invest on LBNF in South Dakota—Fermilab in South Dakota. And as of yesterday, additional protocols and agreements were signed at CERN, and CERN engineers and technicians started working at Fermilab starting already yesterday.

Now, my testimony comes at a very crucial time for the U.S. Particle Physics Program. LBNF and DUNE received approval to start construction, and with the Omnibus Bill we can now provide sufficient funding for construction. Cessation in funding will lead to increased costs and delays and curtailing of the current momentum. Sustained funding will signal, in fact, to our partners across the wall, that the United States is absolutely determined and prepared to lead in science and make the case for the future, that science leadership, discovery, and innovation are essential aspects of our Nation's technological and economical growth.

And I will take my last minute to talk a little bit about technology and workforce development after mentioning that the U.S., the United States, in this area, in the frontier of the cosmic—what we call in this area—we are already leaders, and we are doing dark matter and dark energy exploration and we will continue with sustained funding doing so. Dark matter is important, because it is the gravitational scaffolding of the universe. Without dark matter, galaxies and stars would fly away. We must understand what it is.

Going to the technology, fundamental research is crucially dependent on advanced technology. We are adapting right now what technology has developed for quantum computers essential for these dark matter searches, pushing farther the advancement of these technologies, important applications of particle physics—spun areas of manufacturing, computation, medicine, and national security.

Particle physics detectors improve homeland security using advanced technology and providing new techniques for monitoring the core of nuclear reactors. And when the motivation to generate new technology lies within deeper scientific questions, it is then that we make unprecedented leaps in technology and in the domain sciences.

Finally, particle physics—you probably know it from the many times we come in front of you—we are the source of the biggest, absolute biggest data, and absolute biggest and more complex data architectures. This, as a consequence, that our particle physics students and the young researchers today are expertly versed in all

these artificial intelligence methods and tools for science, for basic science.

I would like to highlight one example of a recent graduate of mine, Alex Mott. He received his Ph.D. in 2015 from Cal-Tech, and he was handpicked by the Tesla model Autopilot team, and he developed from Version 0 to Version 9 now the Autopilot for Tesla Motors. This is happening with our students. This is just one example. This is happening with our students all over.

So, in closing, I want to just remind everybody that particle physics is the physics of understanding and explaining the universe end to end and in its core, and it is curiosity-driven and basic science, but we are preparing technology advancements and technology breakthroughs in workforce development that it is unprecedented.

And I want to thank you for the opportunity to testify and for your continued support to this science.

[The information follows:]

Testimony of

Maria Spiropulu, PhD
Professor of Physics, California Institute of Technology
Chair, Fermilab Physics Advisory Committee

Before the
U.S. House of Representatives
Committee on Appropriations,
Subcommittee on Energy and Water Development, and Related Agencies

On
The Department of Energy's High Energy Physics Program Funding for FY 2018

Introduction

Chairman Simpson, Ranking Member Kaptur and Distinguished Members of the Subcommittee, thank you for the opportunity to testify today. The views and words that I present here today are my own, on behalf of the HEP community. Sustained and robust funding of High Energy Physics (HEP) within the Department of Energy's (DOE) Office of Science is crucial to maintain U.S. leadership in science and technology and \$868 million will be needed in Fiscal Year (FY) 2018 to advance critical research and infrastructure projects. FY 2018 comes at a pivotal point for the U.S. HEP community, falling nearly midway through the 10-year strategic vision laid out in the Report of the Particle Physics Project Prioritization Panel (P5), *Building for Discovery*. This report serves as a framework for research in the three Frontiers of Particle Physics: Energy, Intensity, and Cosmic. The P5 plan has enabled a world class physics research program funded by the Office of Science by strategically investing our Nation's resources. Of note, P5 called for the construction of the Long-Baseline Neutrino Facility/Deep Underground Neutrino Experiment (LBNF/DUNE), to be operated by the Fermi National Accelerator Laboratory (Fermilab) in Illinois, the continued pursuit of second generation dark matter and dark energy experiments, and the ongoing upgrades to the Large Hadron Collider (LHC) at CERN. I want to underline that over 2,000 scientists, engineers, and technicians work in the U.S. in tandem with American industries to advance our contributions at the LHC.

Within the HEP program, we are conducting some of the most advanced research ever attempted, in pursuit of a deeper understanding of the universe and our place in it. The work of high

energy physicists is to answer big questions. Therefore, the program's greatest asset is the breadth and depth of talent among the researchers, physicists, engineers, and technologists at all levels of their career and training: from talented undergraduate students to the most senior expert faculty and staff. HEP is successful because it attracts the most creative researchers and scholars in a large array of science and technology domains dedicated to the full and open exchange of ideas and to collaborating across many disciplines in the service of discovery. Like all other scientists, we are fearless and ambitious, but also cognizant of the demand to improve and make the case for the future: that discovery and invention are essential aspects of our Nation's ability to compete.

Particle Physics Project Prioritization Panel (P5)

In the past 25 years, since I arrived in the US as a graduate student at Harvard, I have witnessed first-hand two momentous discoveries that changed and framed in a fundamental way how we think about the Universe. As a graduate student, I moved to Fermilab at a time of great excitement for the field of high energy physics: the announcement of the top quark. The significance of this discovery in the field has only been surpassed by the discovery of the Higgs Boson in 2012. This latter discovery captured the imagination of the public, and demonstrates the importance of long-term and robust funding of HEP. These two fundamental particles have much to say about the fate of the Universe, and still today we are researching what they are telling us.

Discoveries like these are not a given. It is only with deliberate planning, federal support, and the continued growth in the field that these transformational discoveries can continue. It took two years for the HEP community, through the High Energy Physics Advisory Panel (HEPAP), of which I am a member, to reach consensus and formulate the P5 plan to position U.S. for world-leading science. P5 brings clear priorities and resource requirements. Sacrifices were made and the HEP community has been successful in executing the plan. I am happy to report that, so far, all projects are on time and on budget! This makes our community a model for other science disciplines on how to successfully prioritize competing interests in a constrained budget environment. As a result, we keep learning and pushing the frontiers of knowledge at an accelerated rate.

Neutrino Physics and the Long Baseline Neutrino Facility

Crucially, the P5 report recognizes the importance of U.S. based efforts with a specific

recommendation that Fermilab host and lead the world's accelerator-based neutrino research program through LBNF. This is the largest and most complex research program on neutrinos ever undertaken worldwide. Enormous progress has been made in preparing for the neutrino beams and the associated detectors at Fermilab and the Sanford Underground Research Facility (SURF) at the Homestake mine in South Dakota. Federal funding for the facilities at SURF are creating a modern state-of-the-art underground laboratory. The ongoing R&D phase is now moving into the detailed design stage.

LBNF/DUNE will answer big questions that connect the physics of the neutrinos to the dynamics of the large-scale structure in the universe, the nature and the age of the universe, and their crucial role in the collapse and explosion of massive stars. Neutrino research is important for the understanding of the universe at the intersection of particle physics, astrophysics, and cosmology! My testimony comes at a vital time for the U.S. particle physics program. LBNF/DUNE is set to begin constructing detectors and large structures to house these complex instruments. Cessation or a delay in funding could cause increased costs, and would signal to our international partners that the United States is not prepared to lead this internationally renowned project. I note that as is the case with most curiosity-driven research, the federal government is the sole supporter. Its backing is crucial and must be sustained.

Dark Universe Experimental program

The quest to understand the "Dark Universe," especially the dark matter that modifies the motion of stars in galaxies and the dark energy that appears to be driving the expansion of the universe, is also undertaken by our field. Important experiments in the P5 portfolio include the Dark Energy Survey, using the Dark Energy Camera built at Fermilab; the Large Synoptic Survey Telescope whose camera is being built at SLAC; the Large Area Telescope on the Fermi Gamma Ray Space Telescope spacecraft, which was funded by the DOE, NASA, and foreign partners and DESI, the Dark Energy Spectroscopic Instrument, designed to improve our understanding of the role dark energy plays in the expanding universe. High energy physicists are also directly searching for evidence of dark matter particles in underground laboratories, most notably in the LZ experiment at SURF but also other small to medium size experiments. The US is already a leader in this area, and a strong particle physics program will ensure that we stay there.

CERN and Large Hadron Collider

CERN, a Fermilab sibling laboratory in Geneva, Switzerland, is home of the LHC. As a member of the global community of high energy physicists, the United States must meet its commitments to the LHC and the American scientists working there by funding upgrades to the detectors. Through such acts, the U.S. will be able to ensure that our scientists are part of global innovation. Given our history of cooperation and partnership, CERN is now our most important partner in the construction and development of LBNF/DUNE. Two years ago, the National Science Foundation (NSF) and DOE signed a cooperative agreement with CERN to ensure that thousands of physicists from hundreds of American institutions could invest and participate in this program. U.S. researchers will have leading roles in this challenging science for more than another decade to come, pressing on how the Higgs boson is connected to the dark universe and even the fate of the universe. We will continue our research over the next decade to better understand these connections.

Additionally, the data from the LHC constitutes the largest collection of scientific data ever produced. The rate and size of the LHC data have forced the invention and development of Grid Computing (the precursor of Cloud Computing) pioneered in the United States. Particle physics has been and continues to be the source of the most complex “big data” architectures, and the field is used as a prototype for all sciences that are now producing huge volumes of data.

HEP Trains A Scientific Workforce

HEP is a vital engine of the American workforce. Most of the particle physics students and young researchers today, and in all research domains detailed in the P5 plan, are expertly versed in the artificial intelligence (AI) methods and tools that are commonly written about in the media. When the motivation to generate new technology lies with deeper scientific questions we make unprecedented leaps in both areas: the domain sciences and the technology. As technicians, students, and researchers develop and use these technologies, they expand into the workforce and generate innovation. Additionally, physics research provides the base from which technology develops. As such, not only are high-energy physicists a vital part of the workforce, we are also vital to the creation of technologies that are driven to the market with unexpected consequences of the original federal investment.

To quote Neal Lane, former NSF Director, “One thing I have learned over the four decades

I have been working with particle physicists is that the men and women who emerge as leaders in this demanding field of science are extraordinary by any measure.” Indeed, over 90% of the young scientists we train in our HEP experiments now work in the tech industry, medicine, government, and finance, to name a few, and are taking leadership positions and making a huge impact. I would like to highlight one recent young graduate from my group. Alex Mott received his PhD in 2015. He was hand-picked by Elon Musk’s team at Tesla Motors auto-pilot group, and in the past 20 months he has been responsible in large part for astonishing self-driving car developments based on machine learning and AI. His next endeavor is with DeepMind, a company with the culture of research and academia and the drive and rigor of the top tech startups. Alex and others trained as high energy physicists like him are making leaps in the areas of neuroscience applications in AI.

HEP as a Driver of Innovation

Fundamental research is crucially dependent on advanced technology. Superconductivity researched and studied by condensed matter physicists is the source of the advanced accelerators we have today. Indeed, superconducting materials were scaled up by HEP for advanced accelerators which are now used also by other scientists to discover even more advanced materials. A current and striking example of the convergence of fundamental research and technology can be identified in the search for dark matter. New ideas to search for dark matter particles call for novel superconducting, semiconducting, graphene, superfluid helium and other exotic and novel quantum materials. Remarkably, technologies developed for quantum computers are being adapted in HEP as sensors for dark matter, pushing further the advancement of those technologies. Further important applications of particle physics technologies span areas of manufacturing, computing, medicine and national security. For example, particle physics detectors improve homeland security using advanced screening and provide new techniques for monitoring the contents of nuclear reactor cores.

Conclusion

I want to thank all Members of the House Appropriations Subcommittee on Energy and Water Development for their valuable time and continued support for the DOE Office of Science’s High Energy Physics research program, and for considering a funding level of \$868 million in FY 2018 to sustaining U.S. leadership in this critical fundamental research area.

Maria Spiropulu

Biography

MARIA SPIROPULU, a professor of physics at Caltech's Division of Physics Mathematics and Astronomy, is a world renowned experimental particle physics researcher and a notable mentor of many graduate and undergraduate students. She worked for ten years at the Tevatron's collider experiments at Fermilab in Chicago and thirteen years at the CERN's Large Hadron Collider, with leading roles on detector R&D and operations and in the searches for dark matter and other new physics, including the discovery of the Higgs boson. She is known for developing the "double blind" data analysis method for the first time in searches for supersymmetry at the Tevatron and inventing the novel "razor" framework for discovery and characterization of new physics in colliders.

Spiropulu received her PhD from Harvard in 2000 and was an Enrico Fermi Fellow at the University of Chicago until 2003. She moved to CERN in 2004 as a research staff physicist at the Physics Division and was promoted to a senior physicist position at CERN in 2008. She was appointed a professor of physics at Caltech in 2008. Spiropulu has been an AAAS fellow since 2010 "For her leadership in experimental high-energy physics, in particular for her pioneering efforts in the experimental search for supersymmetry and extra dimensions," and an APS fellow since 2014 "For pioneering searches for supersymmetry and extra dimensions at the Tevatron, innovative searches for new physics and the study of the Higgs boson at the LHC, and key contributions to triggering and data flow for CDF and CMS."

Since 2014 she has been working on advanced data technologies with an eye on using AI methods to enable and accelerate scientific discovery. She initiated a collaboration with leading quantum computation researchers targeting the embedding of physics problems onto the D-Wave quantum annealer.

Spiropulu is the chair of the Fermilab Physics Advisory Committee and a member of the High Energy Physics Advisory Panel (HEPAP) to the U.S. Department of Energy and the National Science Foundation. She is the chair of the Forum of International Physics of the American Physical Society, serves on the Advisory Panel of the HEP Forum for Computational Excellence and is a member of the Aspen Center for Physics.

Spiropulu has been contributing to intellectual exchange forums such as *Edge* (edge.org) and has participated in many public outreach science events and documentaries (NASA TV, *NOVA*, *Through the Wormhole*, the History Channel, among others). She is the author of "Where is Einstein?", the final chapter in *My Einstein: Essays by Twenty-Four of the World's Leading Thinkers on the Man, His Work, and His Legacy*.

She is the founder of the Physics of the Universe Summit (potus.caltech.edu), a meeting held under Chatham House Rules at SpaceX and Caltech since 2010 that explores challenges in emerging and cross-cutting areas of science and technology.

Mr. SIMPSON. Thank you, Doctor. There are a lot of questions that I would like to ask you, but I am just not smart enough. It is pretty deep stuff. But thank you for being here——

Ms. SPIROPULU. Thank you.

Mr. SIMPSON [continuing]. And testifying on the importance of the program.

Ms. SPIROPULU. Thank you.

Mr. SIMPSON. Morry Markowitz.

WEDNESDAY, May 3, 2017.

FUEL CELL AND HYDROGEN ENERGY ASSOCIATION

WITNESS

MORRY MARKOWITZ, PRESIDENT, FUEL CELL AND HYDROGEN ENERGY ASSOCIATION

Mr. MARKOWITZ. I want to thank the Chair and the Ranking Member for giving me this opportunity to discuss our industry's priorities for fiscal year 2018 funding for the Department of Energy. My name is Morry Markowitz. I am president of the Fuel Cell and Hydrogen Energy Association.

I previously submitted written testimony to the committee, but I would like to have this opportunity to have a conversation with you.

The member companies that make up the Fuel Cell and Hydrogen Energy Association range in size from some of the best-known household brands in the world to small businesses and startups. We also count national laboratories and other nonprofits within our family. Looking around at the subcommittee, I could see we are well represented here.

The industry currently employs approximately 10,000 direct workers in the United States through manufacturing, maintenance, engineering, and supply chain support, and thousands more in indirect jobs.

We often refer to the fuel cell technology as the all-the-above technology, meaning it applies to stationary and distributed power generation, backup power for telecommunications, material handling, and transportation, including passenger vehicles, buses, and soon trains and heavy vehicles. We utilize all the above fuels because we can drive hydrogen from 100 percent domestic resources, including natural gas, bio and landfill gas, to renewables such as solar and wind.

Our industry, with the help of the Department of Energy, has made incredible strides in developing this transformational clean energy technology. Passenger cars are now being sold and leased in California. Stationary power is being used by some of the leading utilities and companies from around the world. Fuel cell forklifts are taking the place of old battery types in the largest distribution centers in North America. However, even with all this progress, there is still a great deal left to accomplish in making this technology more competitive in the marketplace. And that is why I am here to speak to you today.

For fiscal year 2018, our organization is asking that the committee positively consider our request for \$101 million in funding

for hydrogen and fuel cell activities managed by the Office of Energy Efficiency and Renewable Energy, and \$50 million for solid oxide fuel research and development managed by the Office of Fossil Energy.

We know that this is an era of tight budgets. That is why our request for fiscal year 2018 EERE budget is identical to the appropriated level of this year, and our Office of Fossil Energy Funding request is identical to what we requested for 2017. The members of FCHEA truly appreciate the consistent level of bipartisan support given to these programs by this committee, Congress, and past administrations.

If we were to be asked how money for EER would be best put to work at the Department of Energy, I would provide you with the following response. It is the industry's opinion that the bulk of appropriated monies should focus on three main areas: hydrogen research and development, market transformation, and stationary and storage applications.

For hydrogen research and development, we ask for funds to further enhance hydrogen metering devices, for retail fueling stations, improve hydrogen compressors, and reduce the costs of storage and transport.

In addition, the department should identify competitive opportunities to help develop robust, affordable hydrogen infrastructure components. This would encourage entrance to the markets, drive down costs, and speed transition. As a package, all these proposed ideas will help in the development of a reliable and cost-effective infrastructure. The department should also continue modest proof of concept demonstrations. These activities have proven successful for material handling equipment at warehouses and show significant progress for air and sea ports.

Market transformation funding enables fuel cell and vehicle companies to overcome cost-prohibitive steps, that has the best chance to perform well against environmentally problematic incumbent technology. Within the stationary generation application sector, we are encouraged by the committee's recognition of the role that fuel cells and hydrogen can play in energy storage. Excess power can be utilized to generate hydrogen for future electricity generation, transportation fuel, and for use in the natural gas pipeline.

Finally, with regard to EERE, we continue to call for the committee to encourage the Secretary of Energy to work with the Secretary of Transportation on coordinating efforts to deploy hydrogen fueling infrastructure, particularly as part of a major investment in U.S. infrastructure.

Concerning the Solid Oxide Fuel Cell Program managed by the Office of Fossil Energy, our request for \$50 million would continue essential R&D in support of the development of large-scale, highly-efficient ultra clean stationary power generation fuel cell systems. This program is the only one of its kind globally, providing the U.S. with a unique competitive advantage over foreign competitors. Solid oxide fuel cells utilize domestic fuels that include classified coal, natural gas, bio gas, hydrogen, and biodiesel.

Completion of this work will result in ultra-efficient stationary power systems for the distributed as well as central power applications. Success continues in reaching performance milestones for du-

rability and cost. This essential R&D must continue in order to reach the requirements for successful introducing of solid oxide fuel cell technology.

Modern-day fuel cells are the result of American ingenuity, which played a key role in our quest in landing a man on the moon. We believe that this transformational, clean technology will play a role in addressing many of our energy and transportation challenges. If we make the right decisions today, we will ensure that future high-quality jobs will be created here while at the same time improving our economy and environment, bolstering our national security, and making us energy independent. We look forward to working with you and the committee staff as the process continues.

[The information follows:]

Written Testimony of Morry B. Markowitz**President of the Fuel Cell and Hydrogen Energy Association****Department of Energy Spending on Fuel Cell and Hydrogen Activities for FY 2018**

Chairman Simpson, Ranking member Kaptur, and members of the Committee, I want to thank you for this opportunity to discuss our priorities for FY 2018 funding for the Department of Energy. My name is Morry Markowitz, and I serve as the President of the Fuel Cell and Hydrogen Energy Association (FCHEA). For Fiscal Year 2018, our organization is requesting \$101 million for hydrogen and fuel cell activities managed by the Office of Energy Efficiency and Renewable Energy (EERE), and \$50 million for Solid Oxide fuel cell research and development managed by the Office of Fossil Energy.

Association and Technology Background

The member companies that make up the Fuel Cell and Hydrogen Energy Association range in size from Fortune 100 companies, to small businesses and startups. We also count National Laboratories and other non-profits within our family. The industry currently employs approximately 10,000 workers in the U.S. through manufacturing, maintenance, engineering and supply-chain support.

Fuel cells are highly efficient and generate electricity through a chemical reaction, not combustion. Utilizing hydrogen, which can be generated domestically from America's abundant natural gas resources, and local sources such as wind, solar and biogas, fuel cells power a wide range of applications. This includes many types of vehicles, distributed energy resources, large-scale electricity generators, backup power units, and material handling equipment.

These innovative, efficient technologies are starting to have a positive impact in the markets they serve.

For example, hospitals, universities, data centers, small businesses, telecommunications companies, Fortune 500 companies, and utilities are incorporating fuel cells into their operations as way to supply reliable power for their operations and cost-effective management of their warehouse operations.

Our path to sustainable commercialization continues gain momentum and there is plenty of room for growth. Today we estimate approximately 300 MW of stationary fuel cell capacity for primary and back up electricity generation. Compared to other alternative energy technologies, fuel cells only account for 0.4% of installed wind and 0.75% of installed photovoltaic (PV) solar in the U.S.

A growing number of the Fortune 500 companies are adopting fuel cells for material handling equipment by replacing their battery-powered forklifts with fuel cell powered versions. This switch allows warehouses and logistical centers to commit more valuable space to inventory and allow workers to be more productive and move more goods. To date, nearly 15,000 of these units powered by fuel cells are in service, and recent news-worthy sales indicate that this sector of the industry is likely to experience significant growth. This includes opportunities for zero emissions logistics and ground support equipment at air and seaports.

Congressional support and details of EERE FY 18 request

The members of FCHEA truly appreciate the consistent level of support given to these programs by this committee and Congress. Fuel cells and hydrogen have the potential to drastically change the way we power our homes, offices, data centers, logistical outposts, and critical infrastructure facilities.

For FY 18, we feel that appropriated monies should focus on three main areas: hydrogen research and development, market transformation, and stationary applications.

Fuel cell vehicles (FCVs) are beginning to enter markets where hydrogen infrastructure is being deployed. That said, infrastructure lags behind FCV availability and on multiple levels, and the department can dedicate more attention to these activities.

For hydrogen research and development, we ask for funds to refine hydrogen measurement devices for retail fueling stations. Additional activities include funding to improve hydrogen compressors and reducing the cost of hydrogen storage and transport.

For market transformation activities, the Department should identify competitive opportunities to help develop robust, affordable hydrogen infrastructure components. For example, refueling nozzles are currently built by a single manufacturer. For modest sum, the department could work to develop an open-source alternative. This would encourage entrants to the market, drive down costs, and speed transition. Alternatively, the Department could facilitate a bulk-purchase agreement of these components. The department should also continue modest “proof of concept” demonstrations. These activities have proven successful for material handling equipment at warehouses, and show significant progress for air and sea ports. Market transformation funding enables companies to overcome cost-prohibitive steps to integrate their core competencies together as a cohesive solution that has the best chance to perform well against incumbent technology.

Within the stationary applications sector, we were encouraged by the committee’s recognition last year that fuel cells and hydrogen can play a transformative role in energy storage. The department should continue to explore technologies that advance the storage and transportation fuel distribution and retailing systems.

Finally, within EERE activities, we continue to call on the Committee to encourage the Secretary of Energy to work with the Secretary of Transportation on coordinating efforts to deploy hydrogen fueling infrastructure, particularly as part of a major investment in U.S. infrastructure.

Details of FE FY 18 request

Concerning solid oxide fuel cells managed by the Office of Fossil Energy, we request \$50 million for the Solid Oxide Fuel Cell (SOFC) Program, which provides essential R&D in support of the development of large scale, fuel-flexible, high efficiency, ultra-clean, stationary power fuel cell systems.

The program is the only program of its kind globally, providing the U.S. with a unique competitive advantage over others in this field. SOFCs utilize domestic fuels that include gasified coal, natural gas, biogas, hydrogen and biodiesel.

Successful completion of this work will result in ultra-efficient stationary power systems for distributed as well as central power applications for powering 500 to 25,000 homes, streamlined power distribution, and reduced emissions - ultimately delivering central power plants fueled by gasified coal and/or natural gas.

The SOFC program has been highly successful despite large reductions in funding over the years, and continues to offer the potential for field applications by 2020 and beyond.

Only SOFC technology offers the spectrum of fuel flexibility and performance that allows modular building blocks for increasing power while creating a basis for utilizing natural gas today and gasified coal in the future.

Over the life of the program, the SOFC work has involved over 150 entities, including industry, academia, national labs, small businesses and research institutions. This engagement is paying off with many technical successes that are already paving the way for viable systems at the megawatt scale. Because of operating conditions, conventional pollutant production of SOFC systems is near zero; carbon dioxide production is less than 50% of conventional power production; and electrical efficiency is nearly double conventional electric power grid efficiency. These add up to provide the potential for lower cost, clean, power production from conventional fuels.

Technical successes in performance factors, such as lifetime, durability and cost have been achieved despite 50% reduction in funding since 2007. However, system tests to insure all components are meeting performance standards, and advanced testing remains to leverage these successes into the widespread applications that will deliver the promised national strategic benefits.

In closing, the industry, with support of the research your Committee funds, has made tremendous progress promoting energy independence and creating well-paying manufacturing jobs. Unfortunately, much of the progress this Committee has seeded is at the risk of being undone if Congress does not act to create a level playing field for fuel cells in the tax code. For example, the section 48 investment tax credit only applies to solar technology after Congress extended the provision in 2015. Congressman Tom Reed has introduced a bill, HR 1090, that would level the playing field by extending the credit to all the orphaned technologies and phasing it out permanently over five years. Passing HR 1090 will ensure that the research this Committee has funded does not go to waste. Similarly, credits for fuel cell vehicles and hydrogen infrastructure were allowed to expire at the end of 2016. The timing of this is particularly unfortunate given that three automobile manufacturers are working to sell more vehicles in California, with an eye to open new markets in the northeast.

Again, I want to thank the members of the Committee, the staff, and Congress for your past and continued support. We are confident that the partnership we enjoy with the Department of Energy will continue to pay dividends through the creation of more high, quality jobs in manufacturing, assembly, installation, operation, and service. It will also result in environmental improvements, and bolster our national security.

Thank you for the opportunity to discuss these issues with you. I look forward to your questions.

Mr. SIMPSON. Thank you, Morry.

Mr. MARKOWITZ. Thank you.

Mr. SIMPSON. And we look forward to working with you. Ms. Callahan.

WEDNESDAY, MAY 3, 2017.

ALLIANCE TO SAVE ENERGY

WITNESS

KATERI CALLAHAN, PRESIDENT, ALLIANCE TO SAVE ENERGY

Ms. CALLAHAN. Hi. Thank you very much. I really appreciate the opportunity to testify before you today, Mr. Chairman and Ranking Member Kaptur. And I want to lay out and highlight the critical and cost-effective, energy-effective energy efficiency programs being carried out at the Office of Energy Efficiency and Renewable Energy.

I want to start, like so many others have, in saying thank you to you and the other members of the committee for your long-standing support of Federal energy efficiency programs. We were really encouraged by the Omnibus Bill, which includes robust funding for these programs. And to say thank you, I am going to try to buy you back a minute or two of the time that you are running over today.

My name is Kateri Callahan, and I serve as the president of the Alliance to Save Energy. We are a bipartisan, nonprofit organization with the mission of advancing national policies that make our economy more energy productive, and that results in creation of jobs, reduction of energy costs for consumers and businesses, increased global competitiveness, and, of course, reduction in the harmful emissions associated with energy production.

The Alliance enjoys the leadership of 13 members of Congress who serve in an honorary capacity on our Board of Directors. We also enjoy the support of over 120 companies and institutions that help us in our advocacy, education, communications, and market transformation work. We are celebrating our 40th anniversary this year, and over those past four decades, we witnessed a remarkable decoupling in the growth in energy demand in this country from the growth in our economy.

Today, we are twice as energy productive as we were in the late 1970s. What does that mean? That means we are getting two times—twice—as much GDP for each unit of energy that we consume, so we are much more energy productive. And what did that do? In the creation of this real evolution or transition in our energy use, we have created an enormous and a domestic-based energy efficiency industry.

You have heard a lot of the other witnesses today talk about the 2.2 million jobs that have been created. I brought along a visual to just kind of emphasize and highlight this for you. You can see that it is 2.2 of the 3 million clean energy jobs. But the bigger story is, it is a third of the jobs in the overall energy sector in the U.S. You can also see that the majority of these jobs are in the construc-

tion and the manufacturing sectors, so these are largely nonexportable and good-paying jobs.

One thing that others have not pointed out is that it is a rapidly growing industry. We realized 6 percent growth between 2015 and 2016 in this industry, and we are expecting another 9 percent growth just this year. And these jobs can be found all across the United States. It is detailed in my testimony. But, for example, in your district, Mr. Simpson, there are over 900 energy efficiency jobs. And, Ms. Kaptur, in your district in Ohio, there are 4,200 energy efficiency jobs.

Ms. KAPTUR. And I think that is a low number.

Ms. CALLAHAN. And I would agree with you, but we always err on the side of being cautious and conservative. In total for the committee, there are 46,000 jobs that are represented just in the districts of the committee members. It is impossible to understate the role of Federal policies and investment, from building energy codes, to appliance and equipment and efficiency standards, to public and private partnerships in this remarkable evolution, to an economy that is doing much more with less in terms of energy consumption.

For this reason, we are requesting funding at levels at least equivalent to those you included in the Omnibus, and in a few instances have suggested slight increases to keep programs. As detailed in my testimony, the energy efficiency programs at DOE are paying out huge returns to consumers and businesses on the modest taxpayer investments. There are just three quick examples that I want to call to your attention.

First is the State Energy Program, or SEP, that is currently funded at \$50 million. We join with the others in requesting a \$20 million increase to this program, which is delivering direct energy savings of \$7 for every \$1 of Federal support. The second is the Weatherization Assistance Program. And you have heard chapter and verse on that. We join with the others in requesting a modest increase of \$5 million to the \$230 million level for a program that has a cost-benefit ratio of 4 to 1.

One thing that has not been talked a lot about today, that I have heard, is the Building Technology Office. That is where we house the Appliance and Equipment Standards Program, which is saving consumers, through the standards that we put in place, \$500 a year on their energy bill, and also houses the Building Energy Codes Program. New homes that are built to codes certified by DOE through that program can expect a net savings in as little as 1 to 2 years.

Again, these are just examples of the programs that are detailed. All of them have that kind of cost-effective, impactful benefit to our economy, so we urge you to continue to provide robust funding in support of these programs. We believe the return on investment to our economy and also to our energy security and our environment is simply too large to pass up. Thank you.

[The information follows:]

Ms. Kateri Callahan
President, Alliance to Save Energy
Appearing before the
Appropriations Subcommittee on Energy and Water Development, and Related Agencies
Wednesday, May 3, 2017

Introduction

Thank you, Mr. Chairman, Ranking Member Kaptur, and members of the Subcommittee for the opportunity to testify today. My name is Kateri Callahan, and I serve as the President of the Alliance to Save Energy, a non-profit coalition of over 120 businesses, organizations, and institutions committed to advancing policies that will lead to greater U.S. energy productivity.¹ We appear before you today to request Fiscal Year (FY) 2018 funding for the energy efficiency programs administered by the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) at levels *at least* equal to appropriated levels for FY2017.

The Alliance has worked to advance bipartisan national energy efficiency policies that reap economic, security and environmental returns for Americans for 40 years. We do not advocate for or against any fuel type; rather, our goal is reflected in our motto—"Doing More. Using Less."—which applies across all energy resources and emphasizes wiser use of energy.

Federal Energy Efficiency Programs: A History of Huge Success

Federal investments in energy efficiency have reaped huge returns for taxpayers, driving private sector investment, lowering energy bills, creating jobs and improving the environment. For these reasons, federal investment in energy efficiency has enjoyed broad bipartisan support in the Congress and the executive branch for decades.

¹ The Alliance's board of directors is available at <http://www.ase.org/about/leadership/board>. A current roster of Associate members available at <http://www.ase.org/involved/join/members>.

Testimony of Ms. Kateri Callahan, President, Alliance to Save Energy
 May 3, 2017

Since 1980, the U.S. economy’s energy productivity has more than doubled—we are getting twice as much GDP for each unit of energy we consume today than we did back then. The result of this improvement is huge; Americans are saving an estimated \$800 billion annually.²

The importance of energy efficiency to our economy is underscored by 2.2 million American workers who design, manufacture, install, and repair the devices, appliances, equipment and buildings that deliver cost-effective savings, representing fully one-third of entire energy-related workforce.³ In fact, the members of the Subcommittee represent over 46,000 Americans employed in whole or in part in energy efficiency.

Energy Efficiency Jobs, in Districts Represented by Subcommittee Members

Member	District	Jobs	Member	District	Jobs
Chairman Simpson	Idaho-2	909	Ranking Member Kaptur	Ohio-9	4,283
Rep. Calvert	Calif.-42	859	Rep. Visclosky	Ind.-1	4,262
Rep. Fleischmann	Tenn.-3	1,339	Rep. Wasserman Schultz	Fla.-23	2,708
Rep. Fortenberry	Neb.-1	4,184	Rep. Aguilar	Calif.-31	6,139
Rep. Granger	Texas-12	1,302	Rep. Serrano	N.Y.-15	559
Rep. Herrera Buetler	Wash.-3	3,639			
Rep. Joyce	Ohio-14	4,290			
Rep. Newhouse	Wash.-4	4,169			

The contributions of federal energy efficiency programs to the long history of economic, environmental and security benefits to our country are difficult to overstate. And, notwithstanding the tremendous gains already made, the opportunities to continue to drive energy efficiency improvements with an impactful return remain enormous.

Alliance Recommendations and Requests

We respectfully urge the Subcommittee to provide in Fiscal Year 2018 *at least* at the levels appropriated in FY2017 and in a few important instances to increase funding.

² “Energy Efficiency in the United States: 35 Years and Counting,” American Council for and Energy-Efficient Economy, June 30, 2015, <http://aceee.org/research-report/e1502>, last accessed April 24, 2017.

³ “Energy Efficiency Jobs in America: A Comprehensive Analysis of Energy Efficiency Employment Across All 50 States,” Environmental Entrepreneurs and E4TheFuture, December 2016, https://e4thefuture.org/wp-content/uploads/2016/12/EnergyEfficiencyJobsInAmerica_FINAL.pdf, last accessed April 24, 2017.

Testimony of Ms. Kateri Callahan, President, Alliance to Save Energy
May 3, 2017

Proposed Funding Levels for FY2018 for U.S. DOE EERE Programs

Program	Current Funding FY2017 <i>As of April 26, 2017</i>
Building Technologies Office	\$200,500,000
▪ Equipment and Building Standards	-\$57,500,000
▪ Residential Building Integration	-\$23,000,000
▪ Commercial Building Integration	-\$32,000,000
▪ Emerging Technologies	-\$86,000,000
Advanced Manufacturing Office	\$228,500,000
Federal Energy Management Program	\$27,000,000
Weatherization and Intergovernmental Programs	\$265,000,000
▪ State Energy Program	\$50,000,000
▪ Weatherization Assistance Program	\$215,000,000
Energy Information Administration	\$122,000,000

Building Technologies Office (BTO)

We respectfully request your support for level funding (\$200.5 million) for BTO. BTO develops critical technologies, tools, and solutions that help homeowners and businesses achieve peak energy performance in residential and commercial buildings, respectively. Within the BTO account, we request report language that instructs U.S. DOE to allocate funding as follows: \$57.5 million for Equipment and Building Standards, \$23 million for Residential Building Integration, \$32 million for Commercial Building Integration, and \$86 million for Emerging Technologies. BTO programs are cost-effective. For example, an average U.S. household saves about \$500 each year because of minimum energy efficiency standards.⁴ Where states and localities have adopted updated building energy codes that have been certified by DOE, homeowners realize net savings within one to two years of buying a new home.⁵

⁴ “Why National Appliance Standards?” Appliance Standards Awareness Project, March 16, 2017, <https://appliance-standards.org/fact-sheet>, last accessed April 24, 2017.

⁵ “The Economic Case for Building Energy Codes,” Energy Efficient Codes Coalition, <http://energyefficientcodes.com/facts/the-economic-case/#EEC>, last accessed April 24, 2017.

Testimony of Ms. Kateri Callahan, President, Alliance to Save Energy
May 3, 2017

Advanced Manufacturing Office (AMO)

We respectfully request your support for level funding (\$228.5 million) for AMO, which has a mission consistent with the current administration's vision for a broader, multi-agency National Network for Manufacturing Innovation (NNMI). AMO enables the research, development, demonstration, and deployment of industrial efficiency and clean energy manufacturing technologies. Your support for the deployment of energy efficient manufacturing technologies and practices will help keep the U.S. a global industrial leader.

Federal Energy Management Program (FEMP)

We respectfully request your support for a modest increase of \$1 million over FY2017 for FEMP, which provides project and policy expertise to agencies across the federal government and helps energy managers meet Congressional and executive branch energy management goals. FEMP helps to leverage billions of dollars of private-sector capital through energy savings performance and utility energy service contracts (ESPCs and UESCs) and supports the remarkable reduction in energy intensity—down 47.4% since 1975—of federal facilities. This reduction saves taxpayers money on federal energy bills.

Weatherization and Intergovernmental Programs

We respectfully request your support for an increase of up to \$20 million over FY 2017 appropriated levels for the State Energy Program (SEP). SEP supports state efforts to develop clean energy projects and to build capacity for program and project management and financing. Studies show a direct savings on energy bills of \$7 for every dollar of federal investment, and every \$50 million in SEP delivers results of \$585 million in benefits.⁶ SEP represents a sound taxpayer investment opportunity.

⁶ "U.S. State Energy Program," National Association of State Energy Officials, <https://www.naseo.org/state-energy-program>, last accessed April 24, 2017.

Testimony of Ms. Kateri Callahan, President, Alliance to Save Energy
May 3, 2017

WAP has helped over 7 million low-income families, seniors and individuals with disabilities make lasting energy efficiency improvements to their homes.⁷ A typical year in WAP operations delivers \$340 million in energy savings, supports 8,500 jobs, and has a program-wide benefit cost ratio of 4:1; increasing funding would deliver even greater returns for taxpayers.

Energy Information Administration (EIA)

We request your support for a modest increase of up to \$9 million for the EIA. EIA provides world-class data collection, analysis and reporting activities on energy usage that is used and relied upon by businesses and institutions across the country and around the world. We are in the midst of transition to a modern, integrated power grid and a new energy world order that makes EIA work more important than ever before. EIA needs the resources and tools to keep up with the fast-paced changes in the energy sector.

Conclusion

Cutting funding to U.S. DOE EERE programs, as has been suggested by the administration, moves us in the wrong direction. Continued and aggressive federal energy efficiency programs at DOE are critical to driving U.S. economic growth and represent a “no regrets” approach to tackling environmental challenges. In short, taxpayers are far better served by continued investments in energy efficiency. We urge Congress to fund these EERE programs outlined here as aggressively as the overall budget allows; they are a win-win-win for the American people.

⁷ “About The Weatherization Assistance Program,” National Association for State Community Services Programs, <http://www.nascsp.org/Weatherization/635729/The-Weatherization-Assistance-Program.aspx>, last accessed April 24, 2017.

Mr. SIMPSON. Thank you. I appreciate your being here today.

Ms. CALLAHAN. Thank you.

Mr. SIMPSON. Dub Taylor.

WEDNESDAY, MAY 3, 2017.

TEXAS STATE ENERGY CONSERVATION OFFICE

WITNESS

WILLIAM “DUB” TAYLOR, DIRECTOR, TEXAS STATE ENERGY CONSERVATION OFFICE

Mr. TAYLOR. Thank you, sir. My name is William “Dub” Taylor and I serve as the State Energy Office director from Texas. It is an honor to appear before the subcommittee today on behalf of the National Association of State Energy Officials, or NASEO. NASEO represents the governor-designated energy officials from every State in U.S. territory.

It is a forum for us to share good ideas on all of the above energy solutions and to cooperate regionally and nationally. I want to thank Chairman Simpson, Ranking Member Kaptur, and the subcommittee for your support of \$50 million for the State Energy Program, or SEP, and \$225 million for the Weatherization Assistance Program, and the fiscal year 2017 House bill last spring and as part of this week’s budget deal.

First and foremost, I am here today asking the subcommittee for support of \$70 million for SEP in fiscal year 2018. In addition to seeking \$50 million in base SEP formula funds, we think that additional targeted funding to enhance Federal energy cooperation in energy emergency preparedness and response, including physical and cybersecurity of the energy infrastructure, should be provided.

Energy emergency preparedness is a necessity and is a highly interdependent Federal, State, private function, covering electricity, natural gas, petroleum, and other fuels. In the most recent year in which we have data, nearly 50 percent of the cyber attacks in the United States were on energy infrastructure, with significant activity in the petroleum sector, much of that in my own State.

Second, we strongly disagree with the administration’s proposals to eliminate SEP and Weatherization on the basis that it may interfere with State policymaking. I can tell you, the States know SEP as the only daily administered program which embodies cooperative Federalism and affords governors control of allocating funds within very broad guidelines, as intended by the Congress, all without unnecessary Federal Government interference in State policies.

In fact, governor support for SEP and Weatherization is extraordinary. This year, the National Governors Association called out SEP and Weatherization as top funding priorities in the energy area, urging the Trump administration to “continue and expand the Weatherization Assistance Program and State Energy Program.”

Moreover, the Southern States Energy Board, led by Governors Hutchinson of Arkansas and Adkins of Kentucky, the Governors’ Wind & Solar Energy Coalition led by Governors Raimondo of Rhode Island and Brownback of Kansas, and the Western Interstate Energy Board, led by the energy directors, my counterparts,

Governors Herbert of Utah and Sandoval of Nevada, all call for continued and expanding funding of SEP.

SEP is a strong Federal-State partnership program and it requires matching State funds. According to two Oak Ridge National Laboratory studies, one just referred to by Ms. Callahan, SEP provides taxpayers with exceptional value. Oak Ridge found that each dollar of SEP funds used by States leverages \$10.71 of State and private funds and realizes \$7.22 in energy cost savings for citizens and businesses.

In Texas, like most States, we are focused on the role of energy and economic development. Diverse energy resources and low energy prices provide Texas with an advantage, and we want to keep it that way. As an example, in Texas we leverage \$293,000 in SEP funds to support clean energy technology startup companies, which have attracted \$7 million in investments, created 86 jobs, and resulted in \$7.9 million in economic impact.

We have allocated SEP funding to the Texas Industries of the Future Program, which has had great success in supporting chemical manufacturers and refiners, to decrease the energy and water intensity of their Texas operations. And we utilized SEP funds to support local building energy code adoption and compliance by training homebuilders, contractors, and code officials across the State. Each of these successes and others are possible using the flexible SEP formula funds, which give our States and other States the ability to allocate funding to meet our top energy priorities and opportunities.

In Texas, SEP funds are also used to conduct energy and water assessments for public sector, taxpayer-supported facilities across the State. Projects identified can then be implemented under the State-funded LoneSTAR Revolving Loan Program, which offers low-cost financing to K-12 schools, local governments, and State agencies. This program has awarded almost 300 loans totaling \$375 million for projects that have saved borrowers \$523 million in utility costs, an average of 18.5 savings annually.

Finally, we would prefer that all SEP funds come to the States through the base formula account rather than the small competitive program or technical assistance which DOE has opted to undertake at its discretion over the past several years. We look forward to working with the subcommittee, with the Congress, and the new administration in advancing our energy policies and the good work of the States and private sector.

Thank you and I am happy to take any questions.

[The information follows:]

**TESTIMONY OF WILLIAM "DUB" TAYLOR, DIRECTOR,
TEXAS STATE ENERGY CONSERVATION OFFICE, BEFORE THE U.S. HOUSE
ENERGY AND WATER DEVELOPMENT APPROPRIATIONS SUBCOMMITTEE IN
SUPPORT OF FY'18 U.S. DEPARTMENT OF ENERGY FUNDING**

May 3, 2017

Chair Simpson, Ranking Member Kaptur and members of the Subcommittee, I am Dub Taylor, Director of the Texas State Energy Conservation Office, and I am testifying today on behalf of the National Association of State Energy Officials (NASEO) and our 56 governor-designated state and territory members. NASEO submits this testimony in support of funding for several U.S. Department of Energy (DOE) programs that are of great importance to the states. Specifically, we respectfully request \$70 million for the U.S. State Energy Program (SEP), \$230 million for the Weatherization Assistance Program, and expanded funding for the critical energy system modernization and energy emergency activities of DOE's Office of Electricity Delivery and Energy Reliability.

First, SEP is the only federal energy program that allows the states to set priorities for the use of that funding. The underlying statute was amended in 1990 to provide governors with great flexibility in addressing each state's unique circumstances. In Texas, as in other states, we are focused on the role of energy in the context of economic development. Our state's *all of the above* approach to energy encourages competition which keeps energy prices low for consumers, and we want to keep it that way. SEP helps us target activities that directly address state and national energy goals, with sound oversight, but without unnecessary federal government direction or interference.

The Administration's *skimmy budget* incorrectly asserts that eliminating both SEP and WAP would "reduce Federal intervention in state-level energy policy and implementation." Actually, SEP is a model state-federal partnership and is a good example of cooperative

federalism, which should be expanded. Earlier this year, the National Governors Association called out SEP and WAP as top energy funding priorities by specifically recommending to the Trump Administration to "continue and expand existing energy grant programs that states rely upon, particularly the Weatherization Assistance Program and State Energy Program." The reality is that of the approximately \$30 billion expended by DOE annually, the \$50 million in SEP funds is the only funding provided directly to the states to use on a wide range of energy priorities which the governors set. As authorized by Congress and administered by DOE, SEP provides discretion and deference to the governors within a broad statutory framework.

First and foremost, SEP is the most successful energy program supported by Congress. According to two Oak Ridge National Laboratory (ORNL) studies, SEP provides taxpayers with an exceptional value. ORNL found that \$50 million in SEP federal funding delivers \$535 million in private, state, and other non-federal leverage and \$360 million in sustained, annual energy cost savings for families, businesses, and state and local governments. The evaluation by ORNL of the states' work using SEP funds found that each dollar of federal SEP funds leverages \$10.71 of state and private funds and realizes \$7.22 in energy cost savings for citizens and businesses—a great value.

States set their priorities for use of SEP funds on activities such as planning for and responding to energy emergencies resulting from natural and man-made disasters; assisting small businesses and manufacturers in reducing energy costs to improve competitiveness and create jobs; aiding farms and rural homeowners in developing homegrown energy solutions to lower energy costs; and supporting local governments in retrofitting schools, police stations, and other public facilities to reduce utility bills paid by taxpayers.

In my own State of Texas, we leveraged \$293,000 in SEP funds to support clean energy technology startup companies, which have attracted \$7 million (24:1) in investments, created 86 jobs, and resulted in \$7.9 million (27:1) in economic impact. Other examples of how Texas has allocated SEP funding include the Texas Industries of the Future Program which has had great success in supporting chemical manufacturers and refiners to decrease the energy and water intensity of their Texas operations. And, we utilized SEP funds to support the City Efficiency Leadership Council and commercial Property Assessed Clean Energy (PACE) Training to encourage local building energy code adoption and compliance and local PACE financing program development. This public sector technical assistance effort resulted in 37 million square feet being assessed, and yielded significant energy and water savings opportunities with average paybacks of just five years. Each of these successes, and others, are possible using the flexible SEP formula funds which give our state, and other states, the ability to allocate funding to meet our top energy priorities and opportunities.

In Texas, SEP funds are also used to conduct energy and water assessments for public sector, taxpayer-supported facilities across the state. The energy and water saving projects that are identified can then be implemented under the LoanSTAR (Saving Taxes And Resources) revolving loan program, which offers low cost financing to K-12 schools, local governments and state agencies. This program has awarded almost 300 loans totaling \$375 million for projects that have saved borrowers \$523 million in utility costs – an average of 18.5% savings annually.

NASEO and the states strongly prefer that all SEP funds provided by Congress come to the states through the base formula account, rather than including DOE's diversion of a small portion of the funds for a competitive program. NASEO is seeking \$70 million in SEP funding with \$50 million in base formula appropriations, and the remainder targeted to enhance state-

federal cooperation on energy emergency preparedness and response, including physical and cyber security of energy infrastructure. Governors, typically through the State Energy Office, lead energy emergency planning and response. This interdependent state-federal-private function is a hallmark of SEP and needs greater support given elevated threat levels and an increasingly complex energy system—grid, petroleum, natural gas. For example, in the most recent year for which we have data, up to 50 percent of the cyber-attacks in the United States were on energy infrastructure, with a significant portion of that being petroleum related.

Finally, SEP is one of the only meaningful connections between billions spent on federal energy research and development by DOE *and* the energy priorities, policies, and market strategies set by states. The states' exceptional stewardship of SEP funding is widely known and strongly supported.

In addition to SEP and WAP, NASEO supports FY'18 funding for the following DOE offices and programs: \$289 million for DOE-EERE's Buildings Technologies Office (including building codes and appliance standards); the Clean Cities program within the Vehicle Technologies Office; and \$262 million for DOE Office of Electricity Delivery and Energy Reliability (DOE-OE). At DOE-OE, energy assurance, infrastructure security and energy restoration actions are critical to enable state and private efforts to mitigate and avoid the threat to life, safety, and damaging economic impacts resulting from energy supply disruptions caused by natural disasters and man-made events. For example, resolution of the propane disruptions in the Midwest and New England during the winter of 2013-14, and the Colonial Pipeline ruptures in 2016 would have taken substantially longer and had an even greater impact on consumers and businesses without OE's leadership and partnership with the states and industry. We also suggest robust funding for the Energy Information Administration.

Formula SEP funding provides states a flexible means to implement state-directed actions. Beyond the successes in Texas, I am providing additional examples of the ways in which Idaho and Ohio leveraged and utilized SEP funding (NASEO's Executive Director, David Terry, is submitting written testimony with examples of activities from the other states represented on the Subcommittee):

Idaho: The Idaho Energy Office leveraged SEP funding to support the K-12 Energy Efficiency Project. Energy audits have been completed on 894 school buildings statewide. HVAC system tune-ups were also completed on the 894 school buildings across Idaho. Approximately \$5 million was spent performing the HVAC tune-ups with anticipated savings for Idaho districts of about 10 percent of their energy budgets. Savings from the tune-ups are estimated at between 84,102.248 and 269,507.285 kBtu per year. Tune-up dollar savings based on site energy are estimated between \$1,254,169 and \$3,924,603 annually.

Ohio: The Ohio Energy Office utilized SEP funding to support the Energy Efficiency Program for Manufacturers. The program is enabling hundreds of Ohio's manufacturers to realize cost savings and improve the efficiency of their operations; putting these companies in a better position with their global competitors. The program has invested more than \$24 million in Ohio's manufacturing sector to reduce energy usage for a combined annual savings of 1,112,109 million British Thermal Units (gas, oil, other) and 79,256 megawatt hours. These savings translate into a greenhouse gas emission reduction of 110,256 metric tons per year.

Contact Information: Dub Taylor, Director, Texas State Energy Conservation Office (Dub.Taylor@cpa.texas.gov) (phone 512-463-8352); David Terry NASEO Executive Director (dterry@naseo.org) (phone 703-299-8800) and Jeff Genzer, NASEO Counsel (jcg@dwgp.com) (202-467-6370).

Mr. SIMPSON. I appreciate you being here today. We look forward to working with you. Robert.

WEDNESDAY, MAY 3, 2017.

HANNON ARMSTRONG

WITNESS

ROBERT JOHNSON, VICE PRESIDENT, HANNON ARMSTRONG

Mr. JOHNSON. Good afternoon, and thank you for having me here. In the interest of time, I will try to be brief.

We are a leading venture in the sustainable infrastructure and energy business and we are urging your support in funding of the Federal Energy Management Program, specifically FEMP. It is an important program that oversees and facilitates the implementation of energy savings performance contracts, or ESPCs as they are known, as well as utility energy services contracts, UESCs as they are known; these activities all of which are currently contemplated in the 2018 Energy and Water Development Appropriations Bill.

To give you a little background on who Hannon Armstrong is, we are a 36-year-old company, New York Stock Exchange listed, and ticker symbol HSAI. We invest in energy infrastructure to the extent that it is energy efficiency wind and solar projects. To give you an idea, we have approximately 23,000 acres of land that we own underneath wind and solar projects, some of which is here with some of the members of this committee, Mr. Fortenberry as well as Mr. Calvert. In each of those cases, we own approximately 7 megawatts of power that is being generated in a distributed manner in each of their locations. I, unfortunately, cannot say the same right now for the two jurisdictions that we have in attendance today, but I am sure that we will over time.

Ms. KATPUR. Excuse me, sir, you have to deal with the birders in Ohio. Yeah, yeah.

Mr. JOHNSON. I apologize. Specifically, I want to talk a little bit about ESPCs and UESCs. These critical contracts, they enable the Federal agencies to procure energy services and projects without relying solely on appropriated funds and they come at no added cost to the government. ESPCs and UESCs are tools that help agencies and installations replace, operate, and maintain aging energy using equipment. They reduce energy and intensity, as Kateri had mentioned before, saving taxpayer dollars, creating jobs, and in many cases improving the mission readiness of the Federal agencies. These innovative contracts require that each of the ESCOs that underpin the contracts perform annual assurance of the financial savings that are realized through these contracts.

ESPCs and UESCs also have resulted in thousands of jobs created. So we have talked about jobs today in a variety of contexts. In this context, it is in the Federal ESPC and UESC world where the Federal Performance Contracting Coalition, FPC, in particular, has estimated that approximately for every \$10 million of investment made in ESPCs and UESCs there are 95 high-paying jobs available here in the U.S. These jobs work in three areas. One is manufacturing, so manufacturing the equipment that is put in; two

is the installers through subcontractors and the like; and three are the ESCOs, or the Energy Services Companies, that do the work as a prime contractor to the government.

FEMP in particular is authorized to track agency progress on particularly section 432 of the Energy Independence and Security Act of 2007. In this capacity, they facilitate report findings of implemented projects and report annual building benchmarking metrics. In addition, FEMP is authorized by statute to appropriate procedures and methods for use by Federal agencies with these ESPCs, in particular on 42 U.S.C. 8287.

In addition, FEMP's most important effort is the coordinated and defined program management of ESPCs for the Federal agencies. FEMP staff helps agencies use ESPCs in several ways, advising the agencies on scoping and procurement activities, helping agencies select third party energy services companies, which I mentioned before, finalizing contract terms and project approval, and monitoring the project implementation and performance of these contracts over the long period of time, which can be up to 25 years in many cases.

FEMP is the program manager for this critical ESPC contracting tool used by Federal agencies to implement ESPCs. That is the Department of Energy ESPC, what is called an indefinite delivery, indefinite quantity, IDIQ, contract. This was recently, the third version of this was recently announced last week by the Department of Energy where there are 21 new contractors now awarded that contract under the DOE ESPC IDIQ. This new contract is an essential tool for Federal agencies and installations on the military side to continue achieving greater savings for the taxpayers and obviously promote the additional job creation that we have just mentioned.

In closing, we strongly urge that the \$28 million in funding for FEMP that has been proposed in the 2018 budget be approved so FEMP can continue its vital work, in particular on the ESPCs front with Federal agencies. We thank you for providing this opportunity and look forward to any questions and comments you may have.

[The information follows:]



**Robert Johnson, Senior Vice President
Hannon Armstrong**

**House Appropriations Committee
Subcommittee on Energy and Water Development**

**Fiscal Year 2018 Department of Energy Funding for
the Federal Energy Management Program**

April 25, 2017

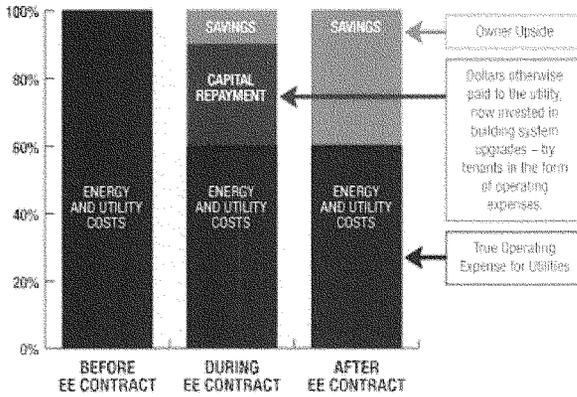
As a leading investor in sustainable infrastructure, including energy efficiency and renewable energy, Hannon Armstrong respectfully urges your support for funding the Federal Energy Management Program (“FEMP”), an important program that oversees and facilitates the implementation of Energy Savings Performance Contract (ESPC) and Utility Energy Service Contract (UESC) activities, all of which are currently contemplated in the Fiscal Year (FY) 2018 Energy and Water Development Appropriations bill.

Hannon Armstrong (NYSE: HASI) has 36 years of experience in sustainable infrastructure financing, including energy efficiency and renewable energy. We specialize in providing preferred or senior level capital to established sponsors and high credit quality obligors, such as U.S. federal, state and local governments, Global 1000 corporations and private developers, for assets that generate long-term, recurring and predictable cash flows.

Hannon Armstrong provides and arranges debt and equity financing for energy efficiency projects, which reduce energy usage or the cost of energy use. We often work with global energy service companies (ESCOs), which design and install improvements to various building components, including HVAC systems, lighting, energy controls, roofs, windows and/or building shells. We originate many of our transactions through programmatic finance relationships with

ESCOs as well as renewable energy manufacturers, developers and operators who own and operate renewable energy projects, including a number of U.S. utility companies.

ESPCs and UESCs enable agencies to procure energy services and projects without relying solely on appropriated funds to replace, operate, and maintain aging energy-using equipment. At no added cost to the government, ESPCs and UESCs assist agencies and installations in reducing their energy intensity, saving taxpayer dollars and in many cases improving mission readiness. These innovative contracts also require the assurance of financial savings.



ESPCs and UESCs have also resulted in the creation of thousands of local and un-exportable jobs. According to the Federal Performance Contracting Coalition (FPCC), for every \$10 million of investment in ESPCs and UESCs an estimated 95 high paying jobs are created. 40 of these jobs are created in the manufacturing sector, 35 jobs are created with subcontractors and installers and finally, 20 of the 95 jobs created are with the ESCOs.

ESPC and UESC contracts are excellent examples of the federal government leveraging private capital. With more than 350,000 energy-using buildings and structures representing nearly 2.4 billion square feet of facilities, the federal government is our nation's largest energy consumer. Federal agencies have a tremendous opportunity and an obligation to reduce energy and water use in their operations.

As the federal program responsible for providing services to enable all agencies to implement successful ESPC and UESC projects, FEMP provides crucial assistance, guidance, and training. **We therefore strongly urge funding of \$28 million for FEMP** so it may continue its vital work to cut energy waste and increase efficiency across the federal government through the public-private partnerships required under ESPCs and UESCs.

FEMP provides agencies and installations with the critical ESPC program information, tools, and assistance they need to meet and track their energy-related requirements and goals as required under law. FEMP is authorized to track agency progress on requirements of Section 432 of the Energy Independence and Security Act of 2007 (EISA) to audit facilities, report findings of implemented projects, and report annual building benchmarking metrics. FEMP is authorized by statute to establish appropriate procedures and methods for use by federal agencies with regard to the ESPC program. (See 42 U.S.C. § 8287(b)(1)(A); 10 C.F.R. § 436.30(a)).

FEMP has undertaken a number of efforts in support of the ESPC program, including training of energy managers through programs certified by the International Association for Continuing Education and Training, where roughly 9,500 people registered for FEMP training in 2015. FEMP offers technical assistance to agencies to identify energy efficiency and renewable energy technologies and assist the agencies in successfully implementing these technologies in

their buildings. Finally, FEMP provides resources and tools for purchasing energy- and water-efficient products and services to the federal agencies.

FEMP's most important effort is the coordinated and defined program management of ESPCs for federal agencies. FEMP staff help agencies use ESPCs in several ways: advising agencies on scoping, procurement, and performance requirements for energy conservation measures (ECMs); helping agencies select third-party ESCOs; finalizing contracting terms and project approval; and monitoring project implementation and performance.

FEMP is the program manager for the critical ESPC contracting tool used by federal agencies for the implementation of ESPCs – the Department of Energy, Indefinite Delivery Indefinite Quantity, Multiple Award, Energy Savings Performance Contract which was awarded by the Department of Energy's Golden Field Office to 16 Energy Services Companies on December 17, 2008. This contract has been instrumental in achieving the aforementioned energy and cost savings as well as the job creation outcomes for the nation.

Currently, DOE has an outstanding Request for Proposals (RFP) Indefinite Delivery Indefinite Quantity (IDIQ), Multiple Award, Energy Savings Performance Contract solicitation DE-SOL-0006380 / 000 which, once awarded, will take the place of the ESPC contract awarded in 2008. This new ESPC contract is an essential tool for the agencies and installations to continue achieving greater savings for the taxpayers and promote additional job creation for the economy.

We strongly urge \$28 million in funding for FEMP so it may continue its vital work as the program manager of ESPCs and the ESPC IDIQ contract. We thank you for providing this opportunity to submit this testimony and we look forward to working with you.

Contact Information

Kara Saul Rinaldi
Government Affairs Representative
Hannon Armstrong
717 Kennebec Ave, Takoma Park MD 20912
Phone: (202) 276.1773, Fax: (202) 747-7725
kara@anndyl.com

Mr. SIMPSON. Thank you, Robert, we appreciate you being here today and we will take into consideration your testimony when we put together our budget.

Mr. JOHNSON. And I will report back on any projects we have in your jurisdiction.

Mr. SIMPSON. Thank you. Bill.

WEDNESDAY, MAY 3, 2017.

MID-WEST ELECTRIC CONSUMERS ASSOCIATION

WITNESS

WILLIAM K. DRUMMOND, EXECUTIVE DIRECTOR, MID-WEST ELECTRIC CONSUMERS ASSOCIATION

Mr. DRUMMOND. Good afternoon, Mr. Chairman, Ranking Member Kaptur. My name is Bill Drummond. I am the executive director of Mid-West Electric Consumers Association. Mid-West represents about 300 not-for-profit utilities that purchase power from the Federal hydroelectric facilities on the Missouri River and its tributaries under the Pick-Sloan Missouri Basin Program. The projects are operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation and the power is sold by Western Area Power Administration or WAPA. This cost-based, renewable, non-carbon emitting power is an essential component of my members' power supply.

Mid-West member utilities purchase almost 3,000 megawatts of installed capacity and the associated energy under long-term contracts, some of which extend beyond 2050. In exchange for these long-term commitments to purchase WAPA power, Mid-West members pay rates that recover the capital costs of the Federal investment plus interest in the hydropower generation and transmission facilities. Hydropower's share of the joint costs including the dams and the spillways and other project purposes costs that are assigned by Congress to hydropower beneficiaries.

WAPA's rates also recover the annual operation and maintenance costs of the hydropower facilities. WAPA's and the other three power marketing administrations' cost-based rates are not subsidized by the United States Treasury or the taxpayer. Section 5 of the Flood Control Act of 1944 requires that the power marketing administrations' market Federal power at cost-based rates. Prior administrations have recommended raising the power marketing administration rates to market-based rather than the present cost-based system. Congress has consistently reaffirmed the use of cost-based rates for the power marketing administrations.

There have also been proposals to privatize the PMAs by selling them to the highest bidder. Mid-West urges you to reject any proposed sale of the power marketing administrations or the imposition of market-based rates. These ill-advised proposals would have a devastating impact on the fragile rural economy of the Upper Great Plains.

Second, the members of Mid-West want to thank the subcommittee for the proposal to reduce WAPA's net zero appropriation, also known as offsetting discretionary spending in the Omni-

bus Spending Bill for fiscal year 2017. That proposal is a reduction of \$37 million from the fiscal year 2016 levels. We support a continuation of that reduction into 2018 and beyond to address a double budgeting issue with the Parker-Davis Intertie Projects. So unlike a lot of other folks, we are actually here requesting a reduction and appreciate the subcommittee's support for that.

Mr. SIMPSON. We will mark that down.

Mr. DRUMMOND. Finally, Mid-West has a good working relationship with WAPA and its sister Federal agencies, the Corps, and the Bureau of Reclamation regarding the flow of current and rejected financial information. While Mid-West members still have healthy disagreements with some of WAPA's and the Corps' and Reclamation's spending proposals, we have been able to work together to obtain the data we need to be able to provide informed comments. We respect the efforts of the employees and the leadership of these agencies in managing these Federal assets under complicated circumstances.

So in conclusion, Mid-West members strongly support the Western Area Power Administration and will oppose any efforts to sell it or the other power marketing administrations or to change to market-based rates. We support a \$35 million reduction in WAPA's net zero appropriation request for fiscal year 2017 and appreciate the subcommittee's support of the fiscal year 2017 Omnibus Spending Proposal that calls for a \$37 million reduction. And finally, we appreciate the working relationship that we have with WAPA, the Corps and the Bureau of Reclamation.

So thank you for the opportunity to testify this afternoon and I look forward to any questions you may have.

[The information follows:]

Testimony of William K. Drummond
Executive Director of
The Mid-West Electric Consumers Association

Mr. Chairman and members of the subcommittee, my name is William K. Drummond and I am the Executive Director of the Mid-West Electric Consumers Association (Mid-West). Mid-West represents a membership of some 300 not-for-profit utilities that purchase power from federal hydroelectric facilities on the Missouri River and its tributaries under the Pick-Sloan Missouri Basin Program. My testimony today addresses funding for the Western Area Power Administration (WAPA), a part of the Department of Energy, and recommends that WAPA's net-zero request (discretionary offsetting collections) be reduced in the FY2018 budget by \$35 million to \$179 million to address the Parker-Davis and Intertie double budgeting. Mid-West supports WAPA's other appropriations.

These federal hydroelectric projects are operated by the U.S. Army Corps of Engineers (the Corps) and the U.S. Bureau of Reclamation (Reclamation), and the power is marketed by WAPA to Mid-West's members through long-term firm contracts, some of which extend beyond 2050. This cost-based, renewable, and non-carbon emitting power has been a part of their power supply since the 1940s, even before the Pick-Sloan program was started. It is an extremely important part of their power supply

The utility members of Mid-West serve some 8 million people in the states of Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, North Dakota, South Dakota, and Wyoming. Mid-West members account for 50 percent of WAPA's gross revenues.

Additionally, through the Western States Power Corporation, Mid-West members have provided over \$650 million in funds for the hydroelectric projects and plan to provide over

\$1 billion in funds over the next 20 years to help maintain the Corps' mainstem Missouri River projects. Thus, Mid-West's members not only have made long-term commitments to purchase the output of the Pick-Sloan projects, they have also made long-term commitments to provide adequate funding to sustain the projects.

My testimony has three elements: Support for WAPA and its mission; Support for a \$35 million reduction in WAPA's Net Zero Appropriation request; and WAPA transparency.

Support for WAPA: The Pick-Sloan Missouri Basin Program, which was part of the Flood Control Act of 1944, set the plan for the development of the Missouri River. The Pick-Sloan Program now has an installed capacity of 2981 megawatts and associated energy that is marketed to Mid-West preference utility members across the Upper Great Plains.

In exchange for the long-term commitments to purchase WAPA power, Mid-West members pay rates that recover the capital costs of the federal investment (plus interest) in hydropower generation and transmission facilities, hydropower's share of joint costs (dams, spillways, etc.) and other project purposes' costs assigned by Congress to hydropower beneficiaries. WAPA's rates also cover the annual operations and maintenance costs of hydropower facilities. WAPA's and the other three federal power marketing administrations' (PMA's) cost-based rates are NOT subsidized by the U.S. Treasury.

Section 5 of the Flood Control Act of 1944 requires that the PMAs market federal power "in such a manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles . . ." This provision means that PMAs sell power at cost-based rates. Although past Administrations and various members of Congress have recommended raising the PMA rates to a market-based rather than the present cost-based system, Congress has consistently reaffirmed the use of cost-based rates for the PMAs and has

prohibited the Executive Branch from undertaking studies of any rates other than cost-based. Raising PMA rates to market level will take millions of dollars out of fragile rural economies. There have also been proposals to privatize the PMAs by selling them to the highest bidder. These ill-advised proposals would have a devastating impact on the rural economy of the Upper Great Plains.

Mid-West urges you to oppose any proposed sale of the PMAs or imposition of market-based rates on the sale of federal hydropower.

Support for a \$35 million Reduction in WAPA's Net Zero Appropriation: The WAPA budget is funded from multiple sources, including, for example, customer advances, appropriations, net-zero appropriations, direct access to receipts, revolving funds, and trust funds (work done on behalf of others). One of these sources, the net-zero appropriation, (known officially as "discretionary offsetting collections"), is funded by Congress with the caveat that all funds from this source be reimbursed within the year they are spent, essentially netting the appropriation to "zero." The net-zero appropriations are an important source of funding for the agency and comprise 18%-20% of WAPA's gross budget. In FY2016, the approved net-zero amount was \$214 million.

The net-zero appropriations system adopted by this Subcommittee and Congress works well. It helps millions of consumers in our region and is not a burden to the U.S. Treasury. We strongly support its continuation, but recommend an adjustment for 2018 to recognize a budgeting inconsistency.

The net-zero portion of WAPA's budget is developed by a careful analysis of their annual expenses, some components of which include expenses for the Parker-Davis and the Pacific

Northwest-Southwest Intertie Projects in WAPA's Desert Southwest Region (DSW). Parker-Davis and the Intertie are estimated to be approximately \$35 million of the \$214 million total.

Funding for Parker-Davis and Intertie expenses are both provided within the same year to WAPA directly from their power customers due to contractual arrangements and through net-zero implementation, resulting in a double-funding condition. WAPA carries the surplus funding until expended.

The overfunding continues to increase the buildup of unobligated balances beyond WAPA's strategic planning needs, which have been developed jointly with their customers. If the additional funds are spent beyond planned levels, it results in upward pressure on customer rates. Further, while the additional funding accrues from the DSW budgeting practices, it can affect other projects throughout WAPA, depending on where WAPA spends the funds. They are not limited to the Parker-Davis or Intertie Projects in the net-zero budget.

Mid-West recommends that WAPA's net-zero request (discretionary offsetting collections) be reduced to address the Parker-Davis and Intertie double budgeting in the FY2018 budget by \$35 million and by equivalent amounts in future fiscal years until WAPA corrects the situation internally through appropriate budget formulation.

WAPA Transparency: Mid-West has a good working relationship with WAPA and its sister federal agencies, the U.S. Army Corps of Engineers (Corps) and Bureau of Reclamation (Reclamation) regarding the flow of current and projected financial information. The basis for this is a Memorandum of Understanding (MOU) signed in 2004 between WAPA, the Corps, Reclamation and customers represented by Mid-West, the Western States Power Corporation, and the Loveland Area Customer Association. The purposes of the MOU are: to provide a forum to promote active participation, communication and coordination to ensure that Federal

generation, transmission, and other services are provided reliably at the lowest rates consistent with sound business principles; to develop a common financial reporting format; to provide early opportunities to exchange and discuss relevant work program information, and to facilitate a process that provides non-federal funding of Federal agencies' programs. Working collaboratively under this MOU, Mid-West has been able to review agency costs and direction, and to provide comments on those issues.

More recently, Mid-West and other WAPA customer groups working with WAPA have established a new process to delve more deeply into WAPA headquarters' costs on a schedule that allows for meaningful customer input. This process was established outside of the MOU at the customers' request working collaboratively with WAPA.

While Mid-West members still have healthy disagreements with some of WAPA's (and the Corps' and Reclamation's) spending proposals, we have been able to work together to obtain the data we need to provide informed comments. We respect the efforts of the employees and the leadership of these agencies in managing the federal assets under complicated circumstances and in the face of competing multipurpose and multi-State demands.

Summary: In conclusion, Mid-West's members strongly support WAPA and will oppose any effort to sell it (or the other PMAs) or to charge market-based rates. Mid-West's members support a \$35 million reduction in WAPA's net zero appropriation request for 2018 to address the Parker-Davis and Intertie double budgeting. Finally, Mid-West's members appreciate their working relationship with WAPA, the Corps and Reclamation. We work collaboratively to exchange data and ideas for the benefit of the people of the Upper Great Plains.

William K. Drummond: WKDrummond@meconsumers.com
(303) 463-4979

Mr. SIMPSON. Thank you.

Ms. KAPTUR. Mr. Chairman, I do have a question of this witness. For the record, thank you so much for testifying. I am trying to still secure in my own mind the different rates that consumers, businesses, industries pay across the country for kilowatt hour, for usage, depending on the type of energy system that they are subject to. I am wondering sir, if you could provide the per kilowatt cost on average to your residential consumers, your industrial consumers, and then if there are specials in the rural areas, I would like to know what those are, and I want to compare those to my region of the county, which has a very different energy umbrella than your own.

Mr. DRUMMOND. Certainly.

Ms. KAPTUR. That would be very valuable to me.

Mr. DRUMMOND. No, I would be happy to provide that. I do not have it with me right today. I can tell you that for most of my members, the cost of power that they get from their—not only the Western Area Power Administration, but also their other power suppliers amounts on average to about half of their total cost of doing business. The rest of the cost of doing business includes distribution systems, the back office that is necessary to provide bills, the power management systems, et cetera. So that is roughly how the wholesale supply versus the other costs of doing business work out. But I can get you our average cost of supplying that power. I would be happy to do that.

Ms. KAPTUR. Thank you so much.

Mr. DRUMMOND. Yes, ma'am.

Mr. SIMPSON. Thank you. Jorge.

[The information follows:]



May 16, 2017

BY ELECTRONIC MAIL

Chairman Michael Simpson
House Committee on Appropriations
Subcommittee on Energy and Water Development,
and Related Agencies
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

Ranking Member Marcia Kaptur
House Committee on Appropriations
Subcommittee on Energy and Water Development,
and Related Agencies
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

Chairman Simpson and Ranking Member Kaptur;

It was an honor to appear before your Subcommittee on May 4, 2017. At the hearing, Ranking Member Kaptur asked me to provide the "...per kilowatt-hour cost on average to your residential consumers, your industrial consumers, and then if there are special rates in rural areas..." for my members.

Mid-West Electric Consumers Association (Mid-West) does not play any role in its member utility retail rate issues and thus does not collect that information from its member utilities. Mid-West has over 300 utility members. Searching the Energy Information Administration website I was able to find the average retail rates for the states in which Mid-West members provide electric service. That information is attached.

I am hopeful this information is responsive to Ranking Member Kaptur's request.

Very truly yours,

A handwritten signature in black ink, appearing to read "William K. Drummond". The signature is fluid and cursive, with a large initial "W" and "D".

William K. Drummond
Executive Director

Average Retail Electric Rates
For 2015
Energy Information Administration
(Cents per Kilowatt-hour)

Colorado	9.94
Iowa	8.35
Kansas	10.14
Minnesota	9.53
Montana	8.90
Nebraska	8.91
North Dakota	8.75
South Dakota	9.47
Wyoming	7.97

WEDNESDAY, MAY 3, 2017.

**GRAND CANYON STATE ELECTRIC COOPERATIVE
ASSOCIATION**

WITNESS

JORGE S. CANACA, DIRECTOR OF FEDERAL RELATIONS AND REGULATORY AFFAIRS, GRAND CANYON STATE ELECTRIC COOPERATIVE ASSOCIATION

Mr. CANACA. Mr. Chairman and Ranking Member and subcommittee members, thank you for holding this hearing and providing the opportunity for public testimony. My name is Jorge Canaca. I am the director of Federal relations and regulatory affairs for the Grand Canyon State Electric Cooperative Association. We are a regional service organization representing the interests of electric cooperative utilities and their customers and submit the following testimony which will focus on the Western Area Power Administration's budget practices, the need for budget transparency and the need for customer involvement.

We respectfully request the subcommittee provide adequate funding for Western to meet its primary statutory obligations to market, sell, and transmit preference power. However, due to potential agency-wide customer impact and the inappropriate nature of double budgeting practices, we recommend that Western's net zero request be reduced in the fiscal year 2018 budget by 35 million and by equivalent amounts in future fiscal years until Western corrects the situation through budget formulation.

We further ask the subcommittee to cap the use of net zero authority to ensure that it is not duplicative of funding the Desert Southwest Region Office already receives through prepayment authority. The Grand Canyon Electric Cooperative Association is a member organization consisting of six electric distribution and generation transmission cooperatives who collectively service approximately 500,000 rural residents across Arizona. Our member cooperatives are customer-owned, not-for-profit utilities and on average one-third of our members live at or below the Federal poverty level.

Now, for 75 years, electric cooperatives have been proud to keep the lights on by providing safe, reliable, and affordable electricity and America's 838 not-for-profit electric distribution cooperatives provide service to 42 million people in 47 States, and collectively, their service territories cover 75 percent of the U.S. land mass.

Now, under the Reclamation Project Act and Flood Control Act, as Bill mentioned earlier, Western is required to market preference power at the lowest possible rates to customers consistent with sound business practices. Electric cooperatives were some of the first purchasers of Federal hydropower delivered to homes, farms, ranches, and rural businesses.

Currently, Western relies on congressional appropriations and funds generated directly by customer-owned utilities that are power contractors to maintain its capital program mission. From a budget scoring perspective, Western is considered budget neutral and not a draw on the Treasury. This is only possible because preference power customers reimburse the cost of Western's capital investment through rates and are thus ultimately responsible for repayment of the Federal investment. Now, to that end, we support continued funding for Western to meet its statutory mission. We believe Western is a valued partner. But recently, however, we have witnessed Western's financial practices come under scrutiny.

A 2015 GAO report identified concerns with management and size of unobligated balances held by Western and recommended that Western implement a strategy and take action to reduce these balances. Now, while we applaud Western for addressing a self-created financial mismanagement issue, and returning hundreds of millions of dollars to the Treasury, the electric cooperative customers believe the accrual of unobligated balances was a direct result of net zero budget authority granted to Western in 2010. So that is the double budgeting issue.

Now, therefore, we also ask the subcommittee to rescind \$70 million in unobligated balances accrued through the use of prepayment authority and the net zero appropriations. According to its own estimates, Western returned 328 million to the Treasury Reclamation Fund in fiscal year 2016 and a total of 894 in the previous 5 years. Yet, during that same period, our electric rates increased by 32 percent. These increases in both power rates and unobligated balances occurred during a period when the government was operating under continuing resolutions.

And in conclusion, I would just like to add that Western has pursued expanded budget authority while systematic funding problems surfaced. With respect to some of Western's major projects, customers did not have timely, meaningful participation in Western's 10-year planning and Federal budget development. And most importantly, much of Western's financial processes and decision-making schedules are not transparent to the customer. By working together, Congress, Western, and preference power customers can address the multiple goals and challenges of Federal hydropower resource and maximize the benefit of the system for all.

Now, let me conclude my testimony by thanking the members of the subcommittee for their support and special thanks to Arizona Congressman Paul Gosar for his continued leadership in the House on this important issue to Arizona's electric rate payers.

[The information follows:]



Grand Canyon State
Electric Cooperative Association, Inc.

Your Touchstone Energy® Cooperatives 

June 5, 2017

Chairman Michael Simpson
House Committee on Appropriations
Subcommittee on Energy and Water Development,
and Related Agencies
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

Ranking Member Marcia Kaptur
House Committee on Appropriations
Subcommittee on Energy and Water Development,
and Related Agencies
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

Chairman Simpson and Ranking Member Kaptur;

In response to Ranking Member Kaptur's request for information regarding the: *per KWh cost of energy, on average, for residential, industrial consumers and rural communities (or any special rates in rural areas for our members).*

The Grand Canyon State Cooperative Association does not collect or track its members' utility retail rate information. After querying our six member cooperatives, they reported that the best source for information related to various electric rates across the subcategories requested are compiled by the Energy Information Administration (<https://www.eia.gov/electricity/state/>). After searching their database and reports provided, I was able to find the attached information.

I hope this information is helpful to Ranking Member Kaptur

Sincerely,

Jorge S. Canaca
Director of Federal Relations and Regulatory Affairs

Average retail price of electricity

Average retail price of electricity description	cents per kilowatthour units	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arizona : all sectors	cents per kilowatthour	8.24	8.54	9.11	9.56	9.69	9.71	9.81	10.14	10.18	10.34	10.4
Arizona : residential	cents per kilowatthour	9.4	9.66	10.27	10.73	10.97	11.08	11.29	11.71	11.9	12.13	12.21
Arizona : commercial	cents per kilowatthour	8.02	8.27	8.93	9.35	9.47	9.5	9.53	9.85	10.13	10.39	10.49
Arizona : industrial	cents per kilowatthour	5.69	6.05	6.57	6.65	6.63	6.55	6.53	6.66	6.46	6.26	6.07

Source: U.S. Energy Information Administration

Testimony of Jorge Canaca
Director of Federal Relations and Regulatory Affairs
Grand Canyon State Electric Cooperative Association, Inc.

Mr. Chairmen and Members of the Subcommittee, thank you for holding this hearing and for providing the public testimony opportunity on the Fiscal Year 2018 Budget. My name is Jorge Canaca; I am the Director of Federal Relations and Regulatory Affairs for the Grand Canyon State Electric Cooperative Association, a regional service organization representing the interests of electric cooperative utilities and their consumers and together with the Arizona Municipal Power Users Association (AMPUA) a non-profit electric membership comprised of Arizona cities and towns, special districts, distribution, generation and transmission cooperatives submit the following testimony which will focus on the Western Area Power Administration's (Western) budget practices, the need for budget transparency and necessary customer involvement.

Budget Request

The Grand Canyon State Electric Cooperative Association and AMPUA respectfully, request the Subcommittee provide adequate funding for Western to meet its primary statutory obligations to market, sell, and transmit preference power. However, due to potential agency-wide customer impacts and the inappropriate nature of double-budgeting practices, we recommend that Western's Net Zero request (*discretionary offsetting collections*) be reduced in the FY2018 budget by \$35 million and by equivalent amounts in future fiscal years until Western corrects the situation internally through appropriate budget formulation. Any additional reductions to Western's Net Zero budget authority that would reflect Western's true annual expenditures is welcomed. We further ask the Subcommittee to cap the use of Net Zero authority to ensure that it is not

duplicative of funding that the Desert Southwest Regional Office (DSW) receives through pre-payment authority.

The Electrification of Rural America

The Grand Canyon State Electric Cooperative Association (GCSECA) is a membership organization consisting of six electric distribution and Arizona Generation and Transmission Cooperatives (AZ>) who collectively serve approximately 500,000 rural residents across 12 counties. GCSECA's member cooperatives are not-for-profit utilities that are owned by the people they serve, most of whom live in rural areas. On average, one third of these consumer-members live at or below the federal poverty level. Electric cooperatives are driven by their mission to power rural communities and empower their members to improve their quality of life. Affordable electricity is the lifeblood of the American economy, and for 75-years, electric cooperatives have been proud to keep the lights on. Because of their critical role in providing safe, affordable, reliable, and universally accessible electric service, electric cooperatives are vital to the economic health of rural communities. America's 838 not-for-profit, consumer-owned electric distribution cooperatives provide service to 42 million people in 47 states. Their service territories, collectively cover 75% of the U.S. landmass.

Western's Budgeting Practices

Under the Reclamation Project Act and Flood Control Act, Western is required to market preference power at the lowest possible rates to customers consistent with sound business practices. Electric cooperatives were some of the first purchasers of federal hydropower and in turn delivering that power to homes, farms, ranches and businesses in the Desert Southwest Region (DSW). Currently, Western relies upon congressional appropriations and funds generated directly by customer-owned utilities such as the Electric

Cooperatives and AMPUA that are firm power contractors to maintain its capital program mission.

From a budget scoring perspective, Western is considered budget neutral and not a draw on the Treasury. This is only because federal power customers repay the costs of Western's capital investments in their particular region through rates, and are thus ultimately responsible for repayment of the federal investment. Customer funding has become a reliable funding source for Western. To that end, we support continued funding for Western to meet its statutory and authorized mission as appropriate. We believe Western is a valuable partner and also support its personnel.

Recently, however, we have witnessed Western's financial practices come under scrutiny as a result of the 2015 GAO report, titled *Sequestration and Shutdown, Selected Agencies Generally Managed Unobligated Balances in Reviewed Accounts, but Balances Exceeded Target Levels in Two Accounts* (GAO-16-26). This report identified concerns with the management and size of the unobligated balances held by Western and GAO recommended that Western implement a strategy to actions to reduce these funds. While we applaud Western for addressing a self-created financial mismanagement issue by returning hundreds of millions of dollars to Treasury, the Electric Cooperatives and AMPUA customers believe that the continued accrual of unobligated balances was a direct result of the Net Zero budget authority granted to Western in 2010. Therefore, we ask the Subcommittee to rescind \$70 million in unobligated balances that Western has accrued through the use of prepayment authority and Net Zero appropriations.

Increasing Rates and the Case for Budget Transparency

As mentioned earlier, according to its own estimates, Western returned \$328 million to the Treasury Reclamation Fund in FY16 and a total of \$894 million in the previous five-

years. Yet in that same period of time, the electric rates for cooperatives customers increased by an average of the 6.5% each year. In total, the Electric Cooperatives have experienced a 32% increase in rates over the past 5 years. These increases in both customer rates and in Western's unobligated balances occurred during a period when the Government was operating under Continuing Resolutions.

Moving forward and in order to have a better improved dialogue with Western and a clear understanding of their budget practices, we ask that the Subcommittee support transparency legislation. In the Senate, Arizona Senators McCain and Flake introduced the Western Area Power Administration Transparency Act which seeks to increase transparency for customers. In essence, the bill would require Western to create a public website containing detailed information about customer rates and agency expenses.

In Conclusion

As Western has pursued expanded budget authorities systematic Western funding problems have amassed. With respect to some of Western's major projects, customers do not have timely, meaningful participation in Western's ten-year planning and federal budget development processes. Most importantly, much of Western's financial process and decision making schedules are not transparent. Communication with customers is limited at best. By working together, Congress, Western and the federal power customers can address the multiple goals of the federal hydropower resource in the Desert Southwest Region and maximize the benefit of the system for all.

Let me conclude my testimony by thanking the members of the Subcommittee for their support, and special thanks to Congressman Paul Gosar for his continued leadership in the House on this important issue to Arizona's electric ratepayers.

Mr. SIMPSON. All right, thank you for being here today and for your testimony, and as you can tell, I have a habit of hammering people's names, and I apologize for that.

Mr. CANACA. It is perfectly fine, sir.

Ms. KAPTUR. Mr. Chairman, thank you. I would like to also ask this witness if you could provide for the record, follow-up on page 4 of your testimony, you say your rate payers paid electric rates for cooperative customers increased by an average of 6.5 percent each year. Could you provide an updated summary for our committee of the per kilowatt cost of energy for your customers in the residential and industrial and rural consumer arenas? Can you do that?

Mr. CANACA. Absolutely. I would be happy to.

Ms. KAPTUR. Thank you.

Mr. SIMPSON. Thank you. Robert Lynch.

WEDNESDAY, MAY 3, 2017.

IRRIGATION AND ELECTRICAL DISTRICTS' ASSOCIATION OF AZ

WITNESS

ROBERT S. LYNCH, COUNSEL TO THE IRRIGATION AND ELECTRICAL DISTRICTS' ASSOCIATION OF AZ, ROBERT S. LYNCH & ASSOCIATES

Mr. LYNCH. I am Bob Lynch and I am an attorney in Phoenix, Arizona. Let me first talk to you about the net zero concept. When it was originally authorized, it was authorized for Pick-Sloan, Bill Drummond's group that he represents is the majority of their customers. And we went along with it, but it was not supposed to apply in the Colorado River Basin. We did not need it, we did not want it. And just our way of explaining it to you is, well, I have an 8-year-old granddaughter. She is smart, she is good looking, she is talented. But if I took her shopping, would I give her my credit card? No.

Well, in our view, the way this worked out in the Desert Southwest Region, WAPA has a net zero credit card, except we do not get to see the shopping list. All we see is what they bought when they hand us the bill. And we are trying to work to change that. We established a preference customer committee with the co-ops and the MUNIs to try to have a dialogue with Western, WAPA, to see if we can straighten this out. But for now, we are out of luck. What we found out just recently, within the last couple of weeks, is that last spring, the Desert Southwest Office started converting all of their advanced funding that we had been paying for, including O&M, to net zero. And so they were taking, you know, our existing rate and paying and we were paying, and we were paying in, and paying the O&M and they were converting it to this net zero appropriation, which accounts for part of the double budgeting issue that you have heard about.

We think we can fix it, but it is going to require their cooperation. And if we do not get the cooperation, I would respectfully request the opportunity to come back here and tell you all about it and tell you what I think ought to happen to them because it is happening to us now and it needs fixing.

On the transparency issue, WAPA is very transparent about what they have done to us. They are just not very transparent about what they are going to do to us next. And we have got to try to fix that, also. And if we do not get it fixed, we will be back again asking for your help. And one of the things that has come up in all of this is consolidation. WAPA has consolidated a lot of functions in their headquarters. In 2010, they had 260 FTEs; starting in fiscal year 2018, they will have 390. Not all those folks live in Denver. Some of them are in Sacramento and Loveland and Phoenix and every other place while the problem is they do not talk to us. If you are somebody in Sacramento doing something for the whole agency, why do you care what people in Phoenix think? And to the best of our knowledge, they are not being asked to talk to us. So to us, consolidation has turned out to be the enemy of cooperation. And we do not know exactly how to fix that, to tell you the truth.

A couple of things happened on Monday that sort of changed my testimony. Number one, in the explanatory statement for the Consolidated Appropriation Bill, on page 41, there is a comment about termination provisions in contracts and you are telling Western, give us a report in 60 days. Well, I lived it, starting in the 70's, just in case you would like to hear the rest of the story, I would be happy to supply it to you.

The other thing is that there is a \$34 million authorization for 2017 to reduce unobligated balances, but it says "may." Now, in the Clinton administration, a colleague of mine who was solicitor of the Department of the Interior wrote to Bruce Babbitt and said, if it is in the bill, you have got to obey it; if it is in the committee report, you do not. So I do not know what "may" means or what you think "may" means in that explanatory statement, but I would caution you to keep an eye on this because if they do not reduce it, then that 35 million we are all asking for could be 69 or 70 and we would be happy to have it. And to the best of my knowledge, it would not bother Western at all in terms of their budget.

So thank you for the opportunity to be here today and talk to you about these important subjects, because they do affect the pocket-books of an awful lot of folk.

[The information follows:]

TESTIMONY OF ROBERT S. LYNCH,
ROBERT S. LYNCH & ASSOCIATES,
BEFORE THE ENERGY AND WATER DEVELOPMENT, AND RELATED
AGENCIES SUBCOMMITTEE OF THE HOUSE APPROPRIATIONS COMMITTEE

MAY 3, 2017

Mr. Chairman, Ranking Member Kaptur, Members of the Subcommittee, thank you for providing the opportunity for public testimony on the Fiscal Year 2018 Budget. In the distant past, I testified before you on an annual basis. I thought then, and I think now, that the process benefits from such interaction.

My testimony today will focus on the Western Area Power Administration (WAPA) and the Bureau of Reclamation (Reclamation), the two agencies that provide critical hydropower and water resources to our clients in Arizona. Our firm represents, among others, the Irrigation & Electrical Districts' Association of Arizona (IEDA), whose twelve (12) Members and thirteen (13) Associate Members provide power and water resources to over half the population of the state and the majority of its irrigated agriculture.¹ Thus, how these agencies spend money affects IEDA Members and Associate Members, and their consumers, directly and immediately.

Bringing WAPA Unobligated Balances into Line

For a change, you have someone before you not asking for money. Instead, we are asking that you reduce WAPA's "Net Zero" authority for FY'18 by \$35 million. IEDA has joined forces with the Arizona Municipal Power Users' Association (AMPUA) and the Grand

¹ Aguila Irrigation District, Ak-Chin Energy Services, Buckeye Water Conservation and Drainage District, Central Arizona Water Conservation District, Electrical District No. 3, Electrical District No. 4, Electrical District No. 6, Electrical District No. 7, Electrical District No. 8, Harquahala Valley Power District, Hohokam Irrigation and Drainage District, Maricopa County Municipal Water District No. 1, McMullen Valley Water Conservation and Drainage District, Page Electric Utility, Roosevelt Irrigation District, City of Safford, Salt River Project, San Carlos Irrigation Project, Town of Thatcher, Tonopah Irrigation District, Wellton-Mohawk Irrigation and Drainage District, Yuma County Water Users Association, Yuma Irrigation District, Yuma-Mesa Irrigation and Drainage District.

Canyon State Electric Cooperatives Association (Grand Canyon) to investigate the burgeoning unobligated balances at WAPA's Desert Southwest Regional Office (DSW). We found that the transition DSW made last spring from asking us for advance funding for Operation and Maintenance (O&M) expenses to burying these costs in a "Net Zero" request exacerbated DSW's existing unobligated balances problem. Effectively, DSW was double collecting for O&M.

WAPA has already acknowledged, as documented by a 2015 General Accounting Office report,² that its unobligated balances for FY'14 exceeded \$40 million in just one account. WAPA admitted that it had further work to do to get its unobligated balances "further in line with [its] strategies." GAO 16-26, Recommendations. Moreover, Congressman Gosar and six (6) other members of the Arizona Delegation have recognized the problem in their bipartisan letter of April 5th to the Chairman and Ranking Member. We very much appreciate their support.

We have an additional request. We are asking you to consult with WAPA about an additional reduction in "Net Zero" authority of yet another \$35 million. Since you received the Delegation letter, we have confirmed that DSW unobligated balances, already too large, are accruing at least \$35 million more in FY'17. Given the timing of acquiring this information, and the cumulative effect of these over-collections, we are asking you to explore whether the FY'18 reduction could be doubled to \$70 million. WAPA DSW will have no shortage of remaining unobligated balances to get them through next year, assuming that it might even need them. The funding switch last year made a bad situation worse. It needs correcting. Your action directing

² GAO Report 16-26 re Selected Agencies' Unobligated Balances, October 2015.

this reduction will help WAPA and its DSW Office right the ship, a task WAPA has acknowledged is a work in progress. Everybody wins.

Transparency

Our group (IEDA, AMPUA, and Grand Canyon) has formed a preference customer committee to explore with WAPA's DSW office how we might alter procedures and schedules so the customers have timely input into all the decisional tracks DSW must follow in making spending decisions. To date, we have assurances from DSW that WAPA's goals are the same. We shall see. But let me be clear. If this effort falters, we will be back seeking mandates for the good behavior we seek now through dialogue.

Building Partnerships – Increasing Customer Responsibility – Aging Infrastructure

Financing

Here again, our group (IEDA, AMPUA, and Grand Canyon) has tasked our committee with setting the procedural stage for thinking outside the box. At the policy level, we may need your help, however. For instance, Reclamation has authority to transfer O & M responsibility for certain facilities to specified contractors that shoulder those tasks and costs themselves ("transferred works"). We are examining what I would call "transferred tasks," activities we might undertake and pay for ourselves and bring the finished products to the agency (Reclamation or WAPA), relieving it of the need to undertake tasks more easily contracted out to project contractors. If our goals turn out to have authority impediments, we will seek legislation letting us assume a larger role and responsibility in the partnership concept we believe is our necessary mutual future with these agencies

This increase in customer responsibility may be most critical in financing aging infrastructure. The competition for appropriated dollars in this area is fierce. Here again, we

may be proposing additional ways WAPA and Reclamation project contractors can engage in capital formation outside the appropriations process to address the documented critical needs of the agencies.

Conclusion

This is not time to sit on one's hands waiting for someone else to find solutions. We all need to be seeking solutions or each of us will continue to be part of the problem. That is unacceptable.

Thank you for the opportunity to present these views. Please let us know if we may assist you in your deliberations.

Mr. SIMPSON. Thank you. I appreciate your testimony. And “may” means they may or they may not. And “shall” means they shall. And the history is, that if it is in bill language, they do have to follow it. In report language, it is strongly suggested that they follow it because next year they are going to have to be answerable for it. So that is kind of where it ranks in everything. But we thank you for being here and for your testimony. Thank you, sir.

Nicki.

WEDNESDAY, MAY 3, 2017.

SOUTHWESTERN POWER RESOURCES ASSOCIATION

WITNESS

NICKI FULLER, EXECUTIVE DIRECTOR, SOUTHWESTERN POWER RESOURCES ASSOCIATION

Ms. FULLER. Thank you, sir. And I believe I am the last person to talk about the PMAs, so you will only have to hear about this one more time.

Mr. SIMPSON. Okay.

Ms. FULLER. Mr. Chairman and members of the subcommittee. My name is Nicki Fuller and I am the executive director of the Southwestern Power Resources Association.

I come before you today as a bit of a unicorn. I am a grateful constituent, a happy customer, and we have a Federal program that works and pay its own way, without any cost to the taxpayer.

In addition, I am proud of the hard work we have done in my region to protect the Federal infrastructure, to ensure we have a program that is successful and sustainable.

SPRA is a non-for-profit organization of rural electric cooperatives and public power systems in Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas, that are customers of the Southwestern Power Administration, which is part of the Department of Energy. Southwestern markets hydroelectric power generated at 24 multipurpose dams in the region. SPRA members serve over 8.2 million end users in this region.

Unlike most Federal programs, the PMAs like Southwestern pay their own way.

Every Federal dollar spent on Federal hydropower program is repaid through the rates charged to the customers. This includes all costs of generating and marketing the hydroelectric energy and capacity incurred by both the Corps and the PMA, plus interest on capital costs.

Southwestern receives a diminishing amount of appropriations every year in Congress in the amount of about \$11 million, or 7 percent of their total operating budget.

These appropriations plus all other expenses for Southwestern and for the Corps' cost for hydropower and a percentage of joint use expenses are included in the rates the customers pay. The taxpayers do not subsidize or pay for any activity of any PMA, including Southwestern.

As you will likely note from the testimony of other PMA customer groups across the country today, each PMA is very different. Cooperation between Southwestern and its customers is a primary

mission of SPRA. Quarterly, Southwestern updates my board on all issues of importance and asks for input. This transparency is the key to our long and successful relationship as business partners. The established practice of frequent communication has allowed these issues to be addressed in a manner which is fair to all parties.

Today, I will discuss two issues which are very important to SPRA and its members. They are, one, the need for increased financial flexibility of Southwestern and, two, customer funding of Federal infrastructure.

One, the system of Southwestern is very dependent upon rain and does not have the capacity to withstand a long-term drought. Regardless of the water conditions, Southwestern has a contractual obligation to my members to deliver the power it guarantees. For this reason, during a drought Southwestern must purchase power and these costs are passed through the power rates to the customers. SPRA has asked Southwestern if there is a way to pay for these purchases incrementally in advance to reduce rate spikes.

To achieve this incremental collection, Southwestern would need an account in the U.S. Treasury with the authority to hold funds across fiscal years with the ability to access it when needed. Unfortunately, this financial flexibility that is commonsense business practice has not been able to pass the legislative hurdles necessary for use. Financial flexibility tools such as the one mentioned above are key to the continued success of Southwestern. As energy and capacity markets become more evolved, Southwestern must have the ability to act consistent with sound business principles as it is statutorily obligated to do.

Mr. SIMPSON. May I ask you, is there legislation to do what you are suggesting here that has been introduced in Congress?

Ms. FULLER. There was last session and it scored. We are not sure why it scored. It is just a savings account in the Treasury. So it was not able to pass because of that reason.

Mr. SIMPSON. Okay.

Ms. KAPTUR. Introduce the legislation, please?

Ms. FULLER. Sure. It was in the Senate and it was Cassidy and McCaskill from Missouri and Louisiana.

Ms. KAPTUR. Okay.

Ms. FULLER. Thank you.

The financial flexibility not only makes good business sense, it is highly desired by us, the customers, to pay the rates.

My second point, customer-funding. With all the discussion of public-private partnerships, or P3, I want to inform the subcommittee about a long successful P3 program in our region. Beginning in the 1990s, Federal power customers began noticing increased outages of Corps hydropower plants which was causing the PMAs to have to purchase expensive replacement power.

Even though there was an increase in outages due to maintenance issues, SPRA saw significantly decreased appropriations for maintenance of this infrastructure. With this in mind, SPRA in partnership with the Corps in Southwestern, put together the trust MOA.

Under this agreement, the customers meet with the Corps and Southwestern to determine the funding needs for the following fis-

cal year. This cooperative process allows the customers, the ones that pay the expenses, to have input on how their money is spent and it allows the Corps to have a predictable revenue stream to sustain this Federal infrastructure.

We have committed to the Corps that we will fund through the trust MOA about \$2.4 billion for hydropower infrastructure over the next 30 years to complete rehabilitation of all 24 Corps hydropower plants marketed by Southwestern. Through this process, we are able to keep local control and oversight, sustain Federal infrastructure, and ensure the longevity and future of the Federal hydropower program.

In conclusion, I come to you today in the rare and enviable position of a constituent and customer that is happy. Unlike other Federal programs, this program costs the taxpayers absolutely nothing, yet benefits millions of citizens while investing in Federal infrastructure assets. These dams provide so many benefits to my region, including navigation, flood control, water supply, environmental programs, and recreation. Without the Federal hydropower customers paying the bills, more of these costs of these joint activities would be borne on the taxpayer.

Mr. Chairman, this concludes my testimony. Thank you for allowing me to come here today to discuss this important issue.

[The information follows:]

Testimony of Nicki Fuller
Executive Director of
The Southwestern Power Resources Association

Mr. Chairmen and members of the Subcommittee, my name is Nicki Fuller and I am the Executive Director of the Southwestern Power Resources Association (SPRA). I come before you today as a bit of a unicorn. I am a grateful constituent, a happy customer, and we have a federal program that works. First, I am grateful to you- members of this Subcommittee and Congress as a whole for supporting the federal hydropower program time and time again. Second, I am happy with the work done at the Southwestern Power Administration (Southwestern) and their continued commitment to cost-efficiency and transparency. Finally, I am proud of the hard work we have done in my region to protect the federal infrastructure to ensure we have a program that is successful and sustainable.

SPRA is a voluntary, not-for-profit organization of rural electric cooperatives and public power systems in Arkansas, Kansas, Louisiana, Missouri, Oklahoma and Texas. These cooperatives and systems are customers of the Southwestern, a Power Marketing Administration (PMA) which is a part of the Department of Energy (DOE). Southwestern markets hydroelectric power generated at 24 multi-purpose Army Corps of Engineers (Corps) water projects in this region. SPRA members serve over 8.2 million end-users in this six state region with environmentally-friendly federal hydropower. The Flood Control Act of 1944 (58 Stat. 887, 890; 16 U.S.C.A. 825s) is Southwestern's main authorizing legislation. Through Section 5 of this Act and a series of Executive Orders, Southwestern's Administrator is authorized to "transmit and dispose of ... power and energy in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles."

Unlike most federal programs, the PMAs like Southwestern pay their own way. Every dollar spent on the federal hydropower power program is repaid through rates charged to

customers. This includes the construction, operation and maintenance, and transmission costs of generating and marketing the hydroelectric energy and capacity incurred by both the Corps and the PMA, plus interest on capital costs. Southwestern receives a diminishing amount of appropriations every year from Congress, today in the amount of about \$11 million dollars or less than 5% of their total operating budget. These appropriations plus *all other expenses* for Southwestern and for the Corps' costs for hydropower and a percentage of joint use expenses are included in the rates that the customers pay. The tax payers do not subsidize or pay for any activity of any PMA, including Southwestern.

As you will likely note from the testimony of other PMA customer groups across the country today, each PMA is very different. Not only are the statutory and legal frameworks in which the PMAs operate different, the customers themselves and the relationship they have with their PMAs are diverse. At SPRA and within Southwestern's footprint, we consider ourselves extremely fortunate. For SPRA's 60 years of existence, I and those that have come before me, have made cooperation between Southwestern and its customers a primary mission.

I began my career in public power working for Southwestern. Within my first 24 hours on the job, I was told that the customers pay my wage and are like my Board of Directors. This customer-service approach still exists today, and is evident in Southwestern and its employees. Quarterly, Southwestern updates myself and my Board on all issues of importance, and asks for input on matters large and small. This transparency is the key to our long and successful relationship as business partners. That is not to say there have not been bumps in the road along the way. However, the established practice of frequent communication has allowed these issues to be addressed in a manner which was fair to all parties.

Today I will discuss two issues which are very important to SPRA and its members. They are: 1) the need for increased financial flexibility of Southwestern and 2) Customer Funding of infrastructure.

Increased Financial Flexibility

Unlike the giant reservoirs that are common sights along the northern Missouri river and across the Pacific Northwest, the system of Southwestern is very dependent upon in-flow of water. Most of the Corps owned dams in my region do not have the storage capabilities to sustain a long-term drought. Regardless of the water conditions, Southwestern has a contractual obligation to my members to deliver the power it guarantees. For this reason, when the area is in a drought Southwestern must purchase the power necessary to fulfill these contractual obligations. As mentioned above, because Southwestern's customers pay all of its costs, these costs are passed on to them through the power rates. During the past period of drought, SPRA asked Southwestern if there was a way to pay for these purchases incrementally over a period of years, in advance, so these costs aren't so onerous during periods of drought.

To achieve this incremental collection, Southwestern would need a special type of account at the US Treasury- one with the authority to hold funds across fiscal years with the ability access when needed. In 2015, language was transmitted to Congress to establish such a fund. Unfortunately, this financial flexibility that is common sense business practice, has not been able to pass the legislative hurdles necessary for use.

Financial flexibility tools such as the one mentioned above are key the continued success of Southwestern. As energy and capacity markets become more evolved, Southwestern must have the ability to act "consistent with sound business principles," as it is statutorily obligated to

do. This financial flexibility not only makes good sense, it is also highly desired by Southwestern's customers - which are the one that pay all of the expenses.

Customer Funding of Infrastructure

With all the discussion of "Public Private Partnerships" or "P3", I want to inform the Subcommittee about the long, successful P3 program in our region. Beginning in the 1990s, federal power customers began noticing increased unscheduled outages at Corps and Bureau of Reclamation hydropower plants. These outages were increasing costs to the PMA customers because significant outages often make it necessary for PMAs to purchase expensive replacement energy to meet their contractual obligations to their customers. Further, because of federal budget cycles, waiting for appropriated funding for a crippled plant that requires significant equipment repair and/or replacement before returning to service might extend the outage – and the cost – over multiple years, all while the customers pay the bill.

Even though there was increase in outages due to maintenance issues, SPRA saw significantly decreased appropriations for maintenance of this infrastructure. Reduced appropriations to the federal power program do not represent savings to the U.S. Treasury. We pay the costs, whether we provide the funding directly to the Corps or indirectly through appropriations that are subsequently returned to the Treasury. By paying up front, before the equipment failed, we could save millions of dollars for our utility customers and sustain this important federal infrastructure.

With this in mind, SPRA in partnership with the Corps and Southwestern, put together the Trust Memorandum of Agreement (Trust MOA). Under this agreement, the customers meet with the Corps and Southwestern to determine the funding needs for the following fiscal year. Together we rank projects based on need and risk of failure and then choose the projects should

be funded in the next fiscal year. This cooperative process allows the customers, the ones that pay the expenses, to have input on how their money is spent and it allows the Corps to have a predictable revenue stream to sustain this federal infrastructure. We have committed to the Corps that we will fund through the Trust MOA about \$2.4 billion for hydropower infrastructure over the next 30 years to complete rehabilitation of all 24 Corps hydropower plants marketed by Southwestern. Through this process we are able to keep local control and oversight, sustain federal infrastructure, and assure the longevity and future of the federal hydropower program.

In conclusion, I come to you today in the rare and enviable position of a constituent and customer that is happy. We have a strong working relationship with Southwestern, which has proved invaluable for the 8.2 million federal hydropower customers in the Midwest. Unlike other federal programs, this program and existing partnerships costs the taxpayers absolutely nothing yet benefit millions of citizens while investing in federal infrastructure assets. Additional financial flexibility for Southwestern would help ensure the continued success of this program and partnership. We are proud of the work that we have done in our area with Southwestern and the Corps to be good stewards of the federal infrastructure, and ensure its viability. These dams provide so many benefits to my region including navigation, flood control, water supply, environmental programs, and recreation. Without the federal hydropower customers paying the bills, more of the costs of these joint activities would be borne on the taxpayer. Thank you for your tireless efforts to protect the PMAs and ensure this cost-based public power is allowed to continue serving the needs of over 8 million homes in the Midwest. Mr. Chairman, this concludes my testimony. Thank you for allowing me to come here today to discuss this important issue. I would be pleased to address any questions that you or the Members of the Subcommittee may have.

Mr. SIMPSON. Thank you, Nicki. We appreciate it.

Ms. FULLER. Thank you.

Ms. KAPTUR. Mr. Chairman, I just wanted to ask Ms. Fuller, if she could also submit for the record the per kilowatt hour cost to your consumers, residential/industrial.

Ms. FULLER. Absolutely, I would be happy to.

Ms. KAPTUR. For the record.

Ms. FULLER. Yes.

Ms. KAPTUR. Thank you.

Ms. FULLER. Thank you very much.

Mr. SIMPSON. Sheri.

WEDNESDAY, MAY 3, 2017.

**OFFICE OF TECHNOLOGY & INNOVATION,
COMMONWEALTH OF PENNSYLVANIA**

WITNESS

SHERI COLLINS, DEPUTY SECRETARY OF THE OFFICE OF TECHNOLOGY & INNOVATION, COMMONWEALTH OF PENNSYLVANIA

Ms. COLLINS. Good afternoon. Chairman Simpson, thank you, members of this committee, for allowing me to speak before you today and to offer my comments on the important role of the Appalachian Regional Commission plays in supporting the 420 counties across our 13 States. The ARC works tirelessly alongside our local development districts, nonprofit organizations and the States to bring our respective ARC regions into socioeconomic parity with the rest of this great country.

In my capacity, I have the distinct pleasure of serving as Governor Tom Wolf's State alternate to the Appalachian Regional Commission. For the first time since 1991, Pennsylvania's governor is serving as the State's co-chair for the ARC program, and we could not be more excited and proud to have our governor represent the ARC regions. Governor Wolf sends his regards to you, Chairman Simpson, and to members of the committee, and appreciates your interest in this program.

I have been a Commonwealth employee for 30 years; the last 12 at the Pennsylvania Department of Community and Economic Development. As deputy secretary for the Office of Technology and Innovation, my primary focus has always been on supporting Pennsylvania's innovators and entrepreneurs and the programs that support them, including the world-renowned Ben Franklin Technology Partners.

In 2015, I was given the opportunity to serve as the governor's State-alternate to the ARC program. It was not until I started to traverse the Commonwealth, visiting completed projects and conducting site visits on those projects to be submitted for approval that I fully understood and appreciated the ARC program and the impact that this Federal funding has on the citizens of Appalachia.

Oftentimes, I think that those of us who sit near to or under the Capitol dome oftentimes fail to appreciate the world around us. We get so focused on what is right in front of us, that we lose sight of areas like Appalachia and we fail to recognize that not everyone

in this great Nation has the same opportunities afforded to them as maybe you or I do.

I myself do not hail from Appalachia, but I have become a huge supporter of the ARC program. And have seen up close and very personal the impact this funding has had on our businesses and our citizens alike.

On a recent visit to the Scranton School for the Deaf and Hard of Hearing Children, I was able to see firsthand the impact ARC funds are having on our most valuable assets, our children. This specialized school, located in Scranton, Pennsylvania, is a non-profit, tuition-free school that serves children from birth to eighth grade. The school's mission is to prepare each deaf and hard-of-hearing student for all aspects of life throughout continuum of high quality individualized educational and extracurricular programs and is an active partner in resource for the community. The school is committed to ensuring that each and every student is capable of achieving his or her maximum potential.

ARC funds in the amount of \$25,000, along with a \$25,000 match from the Margaret Briggs Foundation, were used to purchase smart panels, specialized lighting, computers, a drone, and editing software that allows deaf and hard-of-hearing children to improve their skills using technology, expressive communication skills using American sign language, sign-supported English, and spoken English. This technology also allows the students to virtually interact with the student body at the Western Pennsylvania School for the Deaf as well as a small subset of deaf and hard-of-hearing students from other countries, including Sri Lanka and Ireland. This type of virtual connectivity allows the students to learn in a fun and interactive way and to see that there are children all around the globe who are deaf and hard-of-hearing just like them.

Another example of how ARC funds has impacted the residents of Appalachia is located in Sullivan County, Pennsylvania. The Sullivan County Dental Clinic provides services to low-income patients. A 2010 assessment found that 33 percent of local adults had claimed that they had never had their teeth cleaned while regional pediatric oral surgeon characterized the area as the epicenter of tooth decay in Pennsylvania.

Chairman Simpson, as a second-generation dentist, you surely can appreciate the importance of good oral hygiene and the need for accessible and affordable dental care. An ARC grant in the amount of \$150,000 coupled with the mandatory matching funds will support the expansion and renovation of the Sullivan County Dental Clinic. This designated health professional shortage area will be renovated to allow low-income patients access to critical dental services in a private and spacious environment as to the current overly crowded and open one that they have now. The modifications to the dental clinic will help to lower the barriers to dental care, improving health conditions for patients and the community.

And lastly, I would like to share with you a project out of Congressman Fleischmann's State, Tennessee. In 2014, in partnership with my State counterpart office, the Tennessee Department of Economic and Community Development, ARC invested \$300,000 to the Appalachian Service Project in Johnson City, Tennessee to help

build homes for low-income homeowners living in some of the State's most economically distressed areas. This project included veterans and their families. In the first 2 years of the project, 16 homes were completed, several of which were specifically for veterans. In many cases, these homes replaced substandard, unsafe, and inefficient housing units.

In addition to financing the builds, ARC dollars helped local partners provide additional supportive services, such as financial counseling, reduced cost childcare and job training. As President Walter Crouch of the ASP said, when we talk about the veterans housing issue, a lot of people think we are talking about vets who may be living under bridges and that sort of thing, but what they do not realize is many vets and their families live in substandard housing or mobile units that need a lot of repair. Without support from the ARC, I think it goes without saying that these projects would not have come to fruition.

As I close, I would ask every member of the subcommittee to take a long hard look at the work of the ARC and its supporting partners, such as our Local Development Districts. The work that the ARC has done since 1965 has transformed communities into vibrant epicenters, pardon me, and has enriched the lives of our brothers and sisters in ways that you may not imagine. Between October 2015 and January 2017, the ARC has invested \$175.5 million in a total of 662 projects. The ARC funds have been matched by more than \$257.4 million and will attract an additional \$443.3 million in leveraged private investments in Appalachia, creating 23,670 jobs and educating over 49,000 students and workers in the region. While the 13 States that embody Appalachia have made great progress, there is still plenty of work to do to advance the region. Your continued financial support of this program is critical and necessary for the citizens and businesses of Appalachia. Thank you.

[The information follows:]

**STATEMENT SUBMITTED FOR THE RECORD
ON BEHALF OF
THE STATES OF THE APPALACHIAN REGIONAL COMMISSION**

**HOUSE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON ENERGY AND WATER
May 3, 2017**

**Sheri Collins, ARC Alternate for 2017 States' Co-Chair
Governor Tom Wolf, Pennsylvania**

**Sandy Dunahoo, ARC Alternate
Governor Matt Bevin, Kentucky**

Chairman Simpson and Members of the Subcommittee, on behalf of the Governors of the Appalachian Region we appreciate the opportunity and urge your commitment in FY2018 to sustaining the important work and uniquely successful Federal-State partnership of the Appalachian Regional Commission.

ARC was created by Congress and the States of the Region in 1965 and has been repeatedly reauthorized with the mission of helping to bring Appalachia into socioeconomic parity with the rest of the nation by addressing unique regional challenges that few other parts of the country face— mountainous terrain and isolation, dispersed population, inadequate infrastructure, lack of financial and human resources, loss of historic industries, and a weak track record in applying for and receiving assistance from other federal programs.

The Commission serves over 25 million Americans in 420 counties designated by Congress, has strong bipartisan support, and was authorized through October 1, 2020 in the FAST Act surface transportation law enacted in December 2015.

In FY2016 Congress provided an ARC appropriation of \$146 million to support the Commission's operations and regular programs, including annual funding for the 73 local development districts, special funding to support economic diversification in coal-impacted communities, and additional money designated for work on broadband and workforce development in particular distressed areas of Appalachia. The FY2017 Continuing Resolution continues funding at this level.

In addition to Federal funds, the 13 Appalachian States assess themselves each year to support half of the Commission's operating costs with State appropriations, and also provide a portion of project investments through commitment of matching funds. This partnership approach has been and remains a foundational element of the Commission's success since its creation.

ARC requires performance outcomes for its grants, and project funding decisions reflect local priorities through a flexible "bottom up" approach, enabling

communities working through their Local Development Districts to tailor federal assistance to their individual needs.

It is a simple fact that ARC's work does not duplicate other federal programs. Commission resources extend the reach of those programs into the most challenged parts of Appalachia by providing the necessary gap funding that enables economically distressed communities to compete successfully in national programs, and support local economic diversification that would not otherwise occur .

ARC also has a focus and express record of success attracting private sector investment to areas that otherwise would not likely be seen as competitive investment opportunities. From FY2012-FY2016, on average every \$1 of ARC grant funds leveraged \$6.71 of private investment.

ARC targets its resources to the areas of greatest need at a rate significantly exceeding its authorization requirements. From FY2012-FY2016, nearly 70 percent of ARC's grant dollars went to support projects across the Region that primarily or substantially benefit economically distressed counties and areas.

Since it was created in 1965, ARC has compiled an impressive record of creating economic opportunity in Appalachia. The number of high poverty counties in Appalachia has been cut by more than two-thirds, from 295 in 1960 to 91 today; and the regional poverty rate has been cut almost in half, from 31 percent to 17 percent.

The percentage of adults with a high school diploma has increased by more than 150 percent, and students in Appalachia now graduate from high school at nearly the same rate as that of the nation as a whole. Infant mortality has been reduced by two-thirds, and rural health care infrastructure has been strengthened through the addition of more than 400 primary health care facilities.

A 2015 independent study found that over the period 1970–2012, employment and per capita income growth rates were higher in Appalachian counties which received ARC investments than in similar non-Appalachian counties that did not.

In the past five years, ARC-funded infrastructure projects have provided over 110,251 Appalachian households with access to clean water and sanitation facilities. A 2007 independent evaluation of 104 ARC infrastructure projects found that the \$29.4 million ARC invested in these projects had led to the creation of 17,800 new jobs, resulted in a net expansion of \$1.3 billion in personal income in Appalachia, and leveraged \$1.7 billion in private sector investment.

Since their creation in 1977, ARC-supported revolving loan funds have provided nearly \$197 million in entrepreneurial capital to small businesses across Appalachia, leveraged \$1.5 billion of other business investment, and created and or retained 91,000 jobs and leveraged an additional \$1.48 billion in private investments for the Appalachian Region.

It is also important to note the contributions that the people of the Appalachian region make to our nation's defense. In 2011-2015, over 9 percent of adult civilians in the Appalachian Region were veterans, compared to the national average of 8.3%,

In 2014, in partnership with the Tennessee Department of Economic and Community Development, ARC invested \$300,000 to the Appalachian Service Project (ASP) in Johnson City, Tennessee to help build homes for low-income homeowners living in some of the state's most economically distressed areas. This included veterans and their families. In the first two years of the project, 16 homes were completed -- several specifically for veterans. In many cases, these homes replaced substandard, unsafe and inefficient housing units.

In addition to financing the builds, ARC dollars helped local partners provide additional supportive services such as financial counseling, reduced-cost child care, and job training. "When we talk about the veteran's housing issue, a lot of people think we are talking about vets who might live under bridges and that sort of thing," Walter Crouch, President of ASP said. "What they don't realize is many vets and their families live in sub-standard housing or in an older mobile home that needs a lot of repair."

We also want to highlight a few additional specific ARC-supported projects which are making a difference right now, in our states and others, which would not happen without ARC involvement.

In Pennsylvania, the Scranton School for the Deaf and Hard of Hearing Children is a specialized, non-profit, tuition free school that serves children from birth to 8th grade. The school prepares each student for all aspects of life through a continuum of high-quality, individualized educational and extra-curricular programs and is committed to ensuring that each and every student is capable of achieving his or her maximum potential.

ARC funds in the amount of \$25,000, along with a \$25,000 match from The Margaret Briggs Foundation, were used to purchase SMART panels, specialized lighting, computers, a drone, and editing software that allows deaf and hard of hearing children to improve their skills using technology, expressive communication skills using American Sign Language, Sign-Supported English, and Spoken English. This technology also allows the students to virtually interact with the student body at the Western Pennsylvania School for the Deaf and elsewhere.

Another example of how ARC funds impact the residents of Appalachian Pennsylvania is the Sullivan County Dental Clinic, providing services to low-income patients. A 2010 assessment found that 33% of local adults claimed that they had never had their teeth cleaned while a regional pediatric oral surgeon characterized the area as the "epicenter of tooth decay in Pennsylvania".

An ARC grant in the amount of \$150,000, coupled with mandatory matching funds, supports expansion and renovation of the Sullivan County Dental Clinic, in a designated Health Professional Shortage Area, to allow low-income patients access to critical dental services in a private and spacious environment as opposed to the current overly crowded and open one. Modifications to the dental clinic will help to lower the barriers to dental care, improving health conditions for patients and the community.

Back in Tennessee, through TNECD, ARC has been a longstanding investor in LaunchTN, a public-private partnership making Tennessee a destination for entrepreneurship, innovation and high-quality jobs. In the past four years, LaunchTN has helped accelerate 500 companies, created over 1,300 jobs, and facilitated over \$1 billion in additional venture investment in Tennessee. In 2016, ARC continued its support for LaunchTN with a \$750,000 investment in the three LaunchTN regional entrepreneurial centers specifically serving Tennessee's Appalachian communities. Each center offers intensive programs for Tennessee's rural entrepreneurs including business-planning training, bootcamps, and mentorship. The centers are projected to create an additional 40 businesses and serve over 300 entrepreneurial students and nearly 500 businesses in Appalachian Tennessee.

In Appalachian Ohio, ARC funds are making it possible to train workers, build infrastructure, and expand market opportunities to meet the needs of the growing renewable energy market sector and diversify the local economy. ARC invested \$1.4 million for Hocking College in Nelsonville, Ohio, to develop the Appalachia RISES (Revitalizing an Industry-Ready Skilling Ecosystem for Sustainability) Initiative and work with other training institutions to create and support workforce development to meet the needs of several emerging alternative energy sectors, including solar.

Another grant went to Rural Action in The Plains, Ohio, to develop a strategic plan and feasibility study for the Appalachian Ohio Solar Supply-Chain Initiative. This regional planning effort will focus building a partnership to develop a regional solar manufacturing supply-chain in response to a major utility's plan to deploy new solar resources in Ohio and could create hundreds of new jobs in the solar industry.

In Appalachian New York, ARC support made it possible for Alfred State's School of Applied Technology campus in Wellsville to break ground on The Advanced Manufacturing Center, which will be used for training electrical, welding, and machine tool students in monitoring and management of renewable energy and sustainable advanced manufacturing, like the installation and monitoring of commercial-grade solar energy systems. Each year, Alfred State expects 50 students to complete the advanced course work and gain employment in a related field.

Despite these very real successes which are multiplied across the Region, Appalachia's economy continues to face major challenges from the decline in the coal sector and trade-related impacts on the region's manufacturing base.

Nearly one-fifth of Appalachia's counties still suffer from persistent and severe economic distress, and per-capita market income in Appalachia was nearly 26 percent lower than the nation in 2014. We appreciate the Congressional recognition of the vital role of broadband access in distressed counties in central Appalachia initiated in FY2014.

The Region has been disproportionately affected by the loss of manufacturing jobs. From 2000-2014, Appalachia had a net loss of 622,000 manufacturing jobs, and we appreciate the focused resources that Congress has made available starting in FY2015 to support workforce development in the aviation and automotive sectors in distressed counties of southern Appalachia.

Eighty-two percent of the 40,851 coal mining jobs lost in the United States from 2011-2016 were in the Appalachian Region, 33,502 of them direct mining jobs. The POWER Initiative, begun in FY2016 and continued into FY2017, has brought specific focus and resources to bear to support a range of local economic diversification efforts in coal-impacted communities especially in central Appalachia.

Roughly 20 percent of Appalachian households are still not served by a public water system, compared with 10 percent of the rest of the nation's households, and 47 percent of Appalachian households are not served by a public sewage system, compared with a national average of 24 percent.

Appalachia has higher rates of cancer, heart disease, and diabetes than the nation and central Appalachia is wracked by widespread abuse of prescription drugs. In 2010, the Appalachian region's mortality rate was 27 percent higher than the national average. Net population loss occurred in almost two-thirds of ARC counties between 2000 and 2010, and the Region lags in the proportion of adults with a college degree, 22 percent compared with 29 percent for the nation.

The successes of past years and remaining challenges today make a compelling case for continued focus on the ARC's statutory mission of bringing the Appalachian Region to parity with the rest of America. Now is emphatically not the time to consider elimination of this critical Federal-State partnership.

On behalf of all the Appalachian Governors, and our Local Development Districts, other partners, and our 25 million citizens, we thank you again for your continuing recognition of the challenges facing Appalachian communities, and your sustained support for the ARC partnership.

Mr. SIMPSON. Thank you. Sandy.

WEDNESDAY, MAY 3, 2017.

OFFICE OF KENTUCKY GOVERNOR MATT BEVIN

WITNESS

SANDY DUNAHOO, COMMISSIONER FOR THE DEPARTMENT FOR LOCAL GOVERNMENT, OFFICE OF KENTUCKY GOVERNOR MATT BEVIN

Ms. DUNAHOO. Good afternoon, Mr. Chairman and members of the committee. It is a pleasure to be here today. I am commissioner for the Department for Local Government in the Governor's Office in the Commonwealth of Kentucky. I respectfully come before your committee today with over 30 years of government public service and private consulting in the Appalachian region. I have been involved in hundreds of millions of dollars of projects created and developed for the sole purpose of improving the standard and substandard living conditions of the people of Appalachia. Today, I am here to share with you a personal story on a personal level regarding the work of the Appalachian Regional Commission and the impact that it has had.

My father was born in Owsley County, Kentucky, at the turn of the century and he was one of 12 brothers and sisters. They lived in a four-room house. They sustained their family by farm products. They worked in the fields, they raised pigs, they grew crops, and the family lived by selling these products to friends and neighbors. There were no opportunities for them to earn a wage because there were very few jobs available. Educational opportunities were very difficult. No one in his family attained an education higher than the eighth grade. So eventually, they left Kentucky; they left their home. They went to places like Connersville, Indiana; Dighton, Ohio; Indianapolis; different communities north to seek jobs, seek employment. So eventually, 10 of his siblings left Kentucky. As they left to seek their fortune, they never forgot home and they always had a yearning to come back. But again, it was so difficult; there were no opportunities and they just could not do that. But they prospered and they did well, and they were hard-working and they were commonsense people, and they attained amazingly high levels of wealth just through their hard work, commitment, and dedication. Fine folks.

Today, I manage the family property, the same property where my father was born and his siblings grew up. And it is a different world today for me and for my young son, and the reason for that is the Appalachian Regional Commission. There are opportunities available to us today that my family would have never dreamed about years ago. We have access to county-wide broadband internet; we have clean water, running water in our home, city water; we have access to city sewer—it is a few miles away, but it is possible to get it there; and the children in the community now have opportunities that were never available to them before. Some have become lawyers, doctors, pharmacists; they move on to levels of higher education; they have computers in the school, all because of the Appalachian Regional Commission.

While this sounds wonderful—and it is; it is an incredible transformation from where we were when my father lived in Kentucky—we are far from being finished with this work. The work of the Appalachian Regional Commission still remains. At the beginning of the ARC, we had 214 distressed counties in the commission. Today, we have 84. Thirty-eight of the 84 are still in Kentucky. We are in the heart of Appalachia and we have the most distressed counties in the region.

So what we are doing in our State is taking an aggressive effort to try to rectify this situation. We are doing everything we can to steward and marshal our resources wisely so that we can look toward funding the needs that we have within our State. We are looking at the mirror and we are taking a hard look at ourselves, and we are determining what is our future path going to be, and how are we going to get there, and how are going to raise our counties up from the distressed status, and we are making progress.

We are cutting red tape, we are reducing the burden on small businesses, we are incentivizing economic development, and we are having—beginning to realize growth in the very same areas that have been struck by poverty for years. We are, again, asking the tough questions, making the tough decisions. Sometimes they are not so popular, but we are on the right path and we are beginning to realize results in an area that has been chronically distressed for years.

Many people misunderstand the people of Appalachia, the strength, the resiliency, the ability to sustain, the ability to live with little, but they also misunderstand the value in people such as these. We have an incredible work ethic. Our people truly are only asking for an opportunity to succeed. So my story to you today is, while we have made great strides with the Appalachian Regional Commission since the early 1960s, the work is far from done, but we are working toward a path that someday we hope we can move the rest of these 84 counties to sustainability as we have the counties that have been able to attain before.

We would like to thank each of you for your support of the ARC in the past and we would like to thank publicly Congressman Rogers for his support of the ARC, particularly since most of these counties are in his region. And most of all, I would like to thank you for listening to our story in Kentucky today and hope that we can trust you to help us move forward. Thank you.

Mr. SIMPSON. Thank you, Sandy, and before if you guys would stick around for just a minute, I want to get in the testimony of Amy from the Delta Regional Commission and then we can ask some questions so go ahead Amy.

WEDNESDAY, MAY 3, 2017.

ARKANSAS ECONOMIC DEVELOPMENT COMMISSION

WITNESS

AMY FECHER, EXECUTIVE VICE PRESIDENT OF OPERATIONS, ARKANSAS ECONOMIC DEVELOPMENT COMMISSION

Ms. FECHER. Thank you, Mr. Chairman and ranking member. My name is Amy Fecher and I represent the State of Arkansas and

Governor Asa Hutchinson as his Designee to the Delta Regional Authority Board of Governors. I am here today to provide my testimony emphasizing the importance of the Delta Regional Authority and the continued need for investments that it provides in the Delta region.

The Delta Regional Authority is an independent federal agency created in Congress in 2000 that serves 252 parishes and counties in an eight state region. DRA operates as a federal state partnership and works with the governors to improve economic outcomes and enhance the quality of life for the regions' 10 million residents. DRA makes strategic investments into basic public infrastructure, transportation infrastructure, work force training and education and business development with an emphasis on the entrepreneurship to advance economic and community development in the region. The lower Mississippi River region though rich in natural and human resources lags behind the rest of the U.S. in economic growth and prosperity.

In FY 2016, 234 of the 252 counties and parishes within the region were deemed economically distressed. 21 percent of the region lives in poverty and only 20 percent of the Delta's population has a bachelor's degree or higher putting our regions' workers at a disadvantage completely with the rest of the nation. I believe DRA can serve as a valuable tool to carry out the goals of President Trump and Congress to strengthen our nation's infrastructure and economy.

DRA receives the majority of its appropriations from this subcommittee. Since FY 2002 DRA has invested approximately \$163 million into basic public infrastructure and transportation improvements, workforce training and education as well as business development projects. These investments have helped leverage 3.5 billion in other public and private funds.

As an independent agency operating as a federal state partnership, DRA works closely with each of the eight governors and their designees to invest in economic and community development projects supporting the needs of their respective states. DRA aligns investments with each state's economic development goals and per Congressional mandate DRA must invest 50 percent of its appropriation into basic public infrastructure and transportation infrastructure as well as 75 percent of our allotment in economically distressed areas. The infrastructure projects include water and sewer improvements, road infrastructure and small inland port maintenance and expansion.

One example in my home state in Helena, Arkansas where DRA wrong with public and private partners repaired a damaged, closed rail line servicing the Helena Harbor. As of this week this port is open again and servicing 40 cars per day. This investment immediately saved jobs and has since seen expansion from the private sector. One CEO made the statement the rail was the critical factor in us locating in Helena, Arkansas.

Much of DRA's foot print is comprised primarily of small, rural communities. Often Delta stakeholders voice their concerns regarding the difficulty of navigating federal resources from DRA's larger counterparts and do not have the capacity to develop and fund projects on their own. DRA addressees these concerns by investing

in and supporting our most rural communities. From 2010 through 2016, 59 percent of DRA's funds were invested into communities with a population of 10,000 or less.

One of the benefits of DRA is its ability to move quickly to assist the needs of the Delta communities and the private industry. With a rolling application timeline DRA has helped Arkansas as well as other Delta states successfully close deals that create jobs and grow our states economies. DRA's flexibility to help us ensure necessary public safety in the aftermath and recovery of natural disasters. Recently DRA made an emergency investment last month in Higginson, Arkansas. A small rural community of 600 people was hit by a tornado and suffered major damage to their sewer plant. DRA provided \$23,000 to assist with the restoration for these facilities. Lastly I would like to emphasize the importance of the Delta Leadership Institute. This unique program which I had the honor to graduate from in 2013 is training the types of community leaders that are running our region's communities often as a part-time job with very few resources. DLI is growing the knowledge, skill set and dynamic network of leaders that our communities and region need to compete in the U.S. as well as globally.

I can personally attest that going through this program has helped me in my role at the Arkansas Economic Development Commission. I hope the information I have provided today speaks to the overwhelming value of the DRA investments throughout the Delta region. DRA's primary goal is to help bring economic prosperity to one of the most distressed areas in the country and it is a successful model of public-private partnerships.

Thank you for the opportunity to provide this testimony and I urge you to continue funding DRA so that it can continue to make strategic investments in infrastructure, businesses, and families in the Delta region. Thank you.

[The information follows:]

U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

Testimony of Amy Fecher on behalf of the Delta Regional Authority
May 3, 2017

Mr. Chairman, Ranking Member and all other members of the Committee. My name is Amy Fecher, and I represent the State of Arkansas and Governor Asa Hutchinson as his Designee to the Delta Regional Authority Board of Governors. I am here today to provide my testimony, emphasizing the critical importance of the Delta Regional Authority and the continued need for the investments that it provides to the communities of the Mississippi River Delta region.

The Delta Regional Authority (“DRA” or “the Authority”) is an independent federal agency created by Congress in the “Delta Regional Authority Act of 2000” that serves 252 counties and parishes in an eight-state region: Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee. DRA operates as a federal-state partnership and works with the governors and its local development districts by utilizing market-proven processes to improve economic outcomes and enhance the quality of life for the 10 million residents located throughout its region. Per congressional mandate, the Authority makes strategic investments into basic public infrastructure, transportation infrastructure, workforce training and education, and business development with an emphasis on entrepreneurship, to advance economic and community development in the Mississippi River Delta region and Alabama Black Belt.

According to 7 USC CHAPTER 50, SUBCHAPTER VI: DELTA REGIONAL AUTHORITY, “the lower Mississippi River region though rich in natural and human resources, lags behind the rest of the United States in economic growth and prosperity.” As of FY 2016, 234 of the 252 counties and parishes within the DRA footprint are deemed economically distressed; 21.3 percent of the region lives in poverty; approximately 91 percent of DRA’s counties and

parishes are considered Health Professional Shortage Areas (HPSAs); and only 55.9 percent of adults have a high school diploma or GED. On behalf of the State of Arkansas and Governor Hutchinson, I believe that DRA can serve as a valuable tool to carry out the goals of President Trump and Congress to strengthen our nation's infrastructure and economy.

DRA receives the majority of its appropriations from this subcommittee and the U.S. Senate Committee on Appropriations, Subcommittee on Energy and Water Development. Since FY 2002, DRA has invested approximately \$163 million into basic public infrastructure and transportation improvements, workforce training and education, and business development projects. These investments have helped leverage nearly \$3.5 billion in other public and private funds. With investments in more than 1,000 projects, DRA has assisted in: 1) 37,119 jobs created and retained, 2) 7,372 individuals trained, and 3) providing 66,114 families with access to improved water and sewer services. In FY 2016, DRA invested \$21.5 million in 91 projects, helping leverage \$296.1 million in other public and private funds. These FY 2016 investments will assist in: 1) creating and retaining 5,059 jobs, 2) training 2,964 individuals, and 3) providing access to improved water and sewer services to 23,428 families.

As an independent agency operating as a federal-state partnership, DRA works closely with each of the eight governors and their designees to invest in economic and community development projects supporting the needs of their respective states. In accordance with DRA statute, each state is required to develop a strategic plan, complementing the goals of DRA's Regional Development Plan, and emphasizing how to utilize their DRA investment allocation within the DRA footprint in their respective state. To align its investments with each state's economic development goals, DRA works with each governor by allowing them to certify and select projects within their state. Selected projects must receive a voting majority of the DRA Board of Governors and the Federal

Co-Chairman (appointed by the President and confirmed by the Senate) to ensure optimal investments. Per congressional mandate, DRA must invest 50 percent of its appropriations into basic public infrastructure and transportation infrastructure, and 75 percent in economically distressed areas.

Basic Public Infrastructure & Transportation Infrastructure

In FY 2016, DRA invested in a variety of infrastructure projects throughout the region, including water and sewer improvements, road infrastructure, and small inland port maintenance and expansion. Examples of these investments include:

- **Bull Shoals Wastewater System (AR)** - \$500,000 DRA investment to provide crucial wastewater services to more than 1,200 families in the community.
- **Brookhaven Industrial Park Infrastructure (MS)** - \$1.25 million DRA investment for access road improvements that assisted with the retention of 1,500 jobs.
- **New Bourbon Port/Levee Repair (MO)** - \$1.25 million DRA investment to repair the damaged levee to allow the port to be functional for existing industry.

Business Development with Emphasis on Entrepreneurship

In FY 2016, DRA invested in business development projects throughout the region. One example of these investments includes:

- **Growing Southern Illinois (IL)** - \$160,000 DRA investment to assist in strengthening the entrepreneurial ecosystem in 16 Delta counties. Services include mentoring, management skills, and access to capital.

Workforce Development

In FY 2016, DRA invested in a variety of workforce development projects throughout the region. In Arkansas, we understand that infrastructure investments are key to the economic viability of

both urban and rural communities; however, we also recognize the importance of a skilled workforce to advance economic development efforts throughout the country. DRA understands that a quality workforce is essential to gain new or expand existing industries, and therefore makes strategic investments to complement each Delta state's existing workforce development initiatives. One example of DRA's workforce development investments includes:

- **South Arkansas Community College Advanced Manufacturing Training Center (AR)** - \$200,000 DRA investment to assist with the construction of a 9,000 square-foot facility for classroom training space to assist industry-supported training programs.

As previously mentioned, much of the DRA footprint is considered economically distressed and is comprised primarily of small, rural communities. Often, Delta stakeholders voice their concerns regarding the difficulty of navigating federal resources from DRA's larger counterparts. From 2010-2016, DRA invested 32.5 percent of its funds into communities with a population of 2,500 or less, and 26.4 percent of its funds were invested into communities with a population between 2,501-10,000. Therefore, 59 percent of DRA's funds were invested into communities with a population of 10,000 or less. Too often, these small rural communities do not have the capacity to develop and fund projects on their own. Since its establishment, the Authority has assisted these communities through its own investments, leveraging DRA funds with other public and private investments, or by connecting them with other federal partners to identify the availability of applicable funding programs and resources.

One of the benefits of DRA is its ability to move quickly to assist the needs of Delta communities and private industry. If projects are deemed eligible and certified by the governor, DRA has the ability to fund projects outside of the application timeline. At times, there are projects necessitating industry to move quickly to seize an economic opportunity and create jobs, and

DRA's flexibility has allowed Arkansas and other Delta states to successfully secure significant economic development projects. Additionally, DRA is able to support vital public infrastructure in communities that sustain damage due to a disaster through its small emergency/contingency fund. For example, the Authority recently approved two emergency investments last month: In Higginson, AR, a small community of 600 people was hit by a tornado and suffered major damage to their sewer plant. DRA provided \$23,000 to assist with the restoration of these facilities. In Crossville, IL another tornado damaged natural gas lines and a water tank. DRA provided \$43,000 to expeditiously help restore these services to the community. Both emergency investments were crucial to ensure necessary public safety in the aftermath and recovery of these disasters.

Lastly, I would be remiss if I did not discuss one of DRA's longest running and most impactful programs – the Delta Leadership Institute (DLI). This program, which I had the honor to graduate from in 2013, is designed to teach individuals from across the Delta region about economic and community development, regional collaboration, and new, innovative best practices to advance our rural communities. Each year a group of 50 individuals are selected to go through the year-long program. These individuals then go back to their respective communities with knowledge, skills, and a dynamic network of fellow leaders and policy experts to aid their communities. To date, the DLI has graduated more than 450 leaders.

I hope the information I have provided today speaks to the overwhelming value of DRA investments throughout the Delta region. DRA's primary goal is to help bring economic prosperity to one of the most distressed areas in the country, and is a successful model of public-private partnerships. Thank you for the opportunity to provide this testimony, and I urge you to continue funding DRA so that it can continue to make strategic investments in the Delta region's basic public infrastructure and transportation, workforce training, and business development.

Mr. SIMPSON. Thank you for being here. If you guys would like to jump up to the table again, if you could because I am sure we will have a question. And go ahead and stay there. Pull up another chair because I do want to talk about these for just a second, if you could.

And I do not want you to take this as a criticism or anything else. I know what you do is important work. In this bill, I guess in the Omnibus that we are going to be voting on in just a few minutes, or at least the rule for it, there is also the Denali Regional Commission, \$15 million; \$25 million for the Delta Regional Commission; 152 million for the Appalachian Regional Commission or Association, whatever it is.

And I understand both the need and why we are doing this or why it has been started. And I know why—you do not have to be a brain surgeon to figure out why they have been going on. Hobson tried to get rid of these for a number of years when I was first on this committee when he was the chairman of the committee.

All of the circumstances you just described exist throughout this country. You go to Great Lakes and the loss of the manufacturing jobs up there. Go to Detroit and look at the unemployment. Look at the problems that exist there. You go to the Intermountain West, those problems exist there.

And I am not suggesting that we eliminate these things. What I am suggesting is that somehow there needs to be some equity across this country. There is no Intermountain Regional Commission. There is no Great Lakes Regional Commission. There is no Heartland of America Regional Commission. And all of the problems that you describe do exist throughout the country.

When you talk about a dental clinic, I can take you to the need for dentistry throughout Idaho. Have you ever been on an Indian Reservation? Ethnic population with the highest rate of cavities around and no access, in many cases, to dentists. These things exist everywhere. Why should we fund these and nothing else?

Anybody care to—

Ms. DUNAHOO. I would love to answer and I know time is of the essence, so we could certainly provide a written statement with further information. But I can give you a little bit of information and let you know that I have been in my position for a year and a half now. And coming new into my position I asked many of those same questions even though I had utilized the program for years, particularly in Kentucky when we look at the dollar amount of the investment that has gone into the Appalachian region and why have we not seen more benefit than we have?

And then the next question became are we truly lower than the rest of the Nation? So I began looking at income levels, per capita income. And we are indeed below the rest of the Nation in our 38 stressed counties that I mentioned earlier.

We have had a downturn in the economy, but in our office we also manage Coal Severance and the Coal Program. And I can tell you in the year that coal was the greatest in severance dollars received by the Commonwealth of Kentucky, we received \$313 million in severance dollars, that our counties were still the poorest in the Nation. So that is a systematic problem. And the loss of one industry, while it was traumatic, very traumatic to our people, we

cannot even hope to be as good as we were in the good old days because we were still the poorest in the Nation.

So when we have a situation such as that and then we immediately begin to wean the program, the effects are devastating. So what we need is to have some time to work through, as I said in my statement, to look in the mirror, figure out what we can do, find ways to move forward to develop our region. We have had great success in the last year and a half. We still obviously have a way to go and that is what we need to be able to do.

Mr. SIMPSON. Well, and I appreciate that. I mean, as I said, I am not trying to criticize anything. I am also cognizant of the fact that I have been around for a while and I have seen how government programs work. And when you talk about ending the need for a program, that is a fantasy. That never ends. It goes on and it will go on and you will find new needs for it. It is just human nature. It is what we do. It is what I do in Idaho, you know.

But I find it kind of fascinating how we kind of select areas and decide that we are going to—and it is because of the congressmen at the time or the senators at the time that establish this. I mean, I have got to tell you, in all honesty, the reason that Chairman Hobson used to try to get rid of them because he wanted to get rid of the Denali Commission and Senator Stevens was chairman of the full Appropriations in the Senate and he just wanted to kind of stick him in the side.

He did not want to get rid of it, but that was—but, you know, I came across last year within the Department of Energy where at energy sites across the country they can charge what are called PILT payments, payment in lieu of taxes, for the energy sites. And it is voluntary between the local energy department and that site. And in some areas, communities are making pretty good money on PILT payments and in others they are not even being paid. And I told them this year we are either going to do it uniformly or we are not going to do it at all because it needs to be fairer.

And that is kind of what I am looking at here. How do you address those same needs that you have and the rest of the country, and maybe it is through something like this. Maybe it is through something like this nationally, I do not know. But it is a discussion that we all ought to have because I will tell you that these programs are in danger, I think. In reducing times, budgets being reduced in the future, I can see the pressure to unfund these programs, essentially take the savings out of that. And so we better have a justification for them. And you better be able to make that justification to Marcy's constituents and to my constituents and the rest of this Congress.

That is really all I—

Ms. KAPTUR. Thank you, Mr. Chairman. Our chairman is someone that one can work with on every issue, but I hear what he is saying. And I want to thank you, also, for your compelling testimony.

And as women, I would say, also, you are dealing with some of the most intractable issues in terms of economic change. I was very impressed, Ms. Collins, with some numbers you provided for the region. Appalachia, I mean, just think about this, since 2000 has lost, counting manufacturing jobs and coal jobs, over 655,000 jobs. Six

hundred and fifty-five thousand jobs. That is a neutron bomb over a region.

And I will tell you, we have a struggle here, and the chairman puts his finger on it, you know, for regional equity and so forth with community adjustment when these massive job losses occur. I complained about—I am from northern Ohio, but we have Appalachia in southern Ohio, and just to walk through some of those communities and to see what they are enduring, most people in this Capitol will never get there.

I just saw the movie “Hacksaw Ridge”, and I think Desmond Doss, he came from Lynchburg, Virginia. And though that is not directly in, you know, the states in which you live, I thought that is the spirit you were talking about. America really does not understand that sometimes.

And so we do not have a flexible system to target. We do not have any program really that deals with this kind of economic transformation. I saw where a solar company is going to be investing now in I do not know if it is Kentucky or West Virginia, I read, for coal adjustment and moving from a coal community to a major solar investment. I thought, yeah, okay.

But we saw them up in auto and steel country. As I sit here and listen to you, one of my communities is undergoing hundreds and hundreds and hundreds of job terminations because of dumped Korean steel and Chinese steel, and we cannot stop it. And it is not that the workers there did not try their mightiest, but we cannot get the government of the United States to respond fast enough to what is occurring there. You know, there will be a 2- or 3-year trade proceeding and it will eventually find that, yes, in fact, these people were hurt. But by then, they are devastated, their communities are devastated, and we do not have quickly flexible response mechanisms for economic readjustment in many of these places.

So I guess I would say, Mr. Chairman, in answer to your plea, maybe they are representing some of the first ways America tried to deal with economic adjustment, but we do not have a very good solution.

Mr. SIMPSON. Well, as I said, Marcy, and I agree with your comments, it is a tough—and we are voting right now, by the way.

Ms. KAPTUR. Are we? Oh.

Mr. SIMPSON. But it is a difficult issue because I will tell you that the lost coal mining jobs in Appalachia region is no different than the lost timber jobs in Idaho, and they have gone down to where, in my district, we do not have any sawmills left. Hell, I am from Idaho, you know. In the other district there is not very many sawmills left and there used to be sawmills throughout the towns. That was their economic development was a sawmill. So the same thing happens in places and we have got to find a better way to do it than competing against one another.

But let me tell you, I do appreciate what you do. It is necessary and we will continue to work with you, but we need to have a broader discussion on how to deal with this.

So thank you all for being here and thank you for testifying today.

Ms. DUNAHOO. Thank you.

Mr. SIMPSON. You bet.

Ms. DUNAHOO. Thank you both.
Mr. SIMPSON. The hearing is closed.

WEDNESDAY, MAY 24, 2017.

UNITED STATES ARMY CORPS OF ENGINEERS (CIVIL WORKS) AND BUREAU OF RECLAMATION

WITNESSES

DOUG LAMONT, SENIOR OFFICIAL PERFORMING THE DUTIES OF THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

LIEUTENANT GENERAL TODD SEMONITE, COMMANDING GENERAL AND CHIEF OF ENGINEERS

SCOTT J. CAMERON, ACTING ASSISTANT SECRETARY FOR WATER AND SCIENCE, DEPARTMENT OF THE INTERIOR

ALAN MIKKELSEN, ACTING COMMISSIONER, BUREAU OF RECLAMATION

Mr. SIMPSON. Good morning. This is our first hearing since the release of the fiscal year 2018 budget request. Although we just received the President's budget yesterday, we begin our oversight hearings today.

As we do every year, we will work to understand what is contained within this proposal, and ensure that the fiscal year 2018 Energy and Water Appropriation Bill provides responsible funding for the programs under our jurisdiction. We are here today to look at the fiscal year 2018 budget request for the Civil Works Program for the U.S. Army Corps of Engineers and the Bureau of Reclamation.

I would like to welcome our witnesses, Doug Lamont, senior official performing the duties of the Assistant Secretary of the Army for Civil Works; Lieutenant General Todd Semonite, the Commanding General and Chief of Engineers; Scott Cameron, the Acting Assistant Secretary for Water and Science of the Department of Interior; and Alan Mikkelsen, the Acting Commissioner for the Bureau of Reclamation.

The Bureau of Reclamation and Corps' Civil Works Programs include a wide variety of water resources and power activities essential to the public safety, economic, and environmental goals of our Nation. This committee works hard each year to build an appropriations bill that provides strong support for these programs, and that strikes a good balance across mission areas.

The omnibus included \$1.3 billion for the Bureau of Reclamation and provided more than \$6 billion to the Corps. Funding within the Corps met the new Harbor Maintenance Trust Fund's targets established under WRDA, and made full use of the estimated annual revenue of the Inland Waterway Trust Fund. Congress clearly recognizes the importance of both of these programs.

While I was disappointed to see that the budget request has proposed to cut the Corps' funding, the good news is that this is the better Corps number than we saw during the last several years of the Obama administration. I am hopeful that this is an indication

that this administration recognizes the importance of this infrastructure work.

I look forward to hearing from each of you on this budget request and learning more about the priorities included in this proposal, and how you plan to address the various challenges facing your agencies. Again, I would like to welcome our witnesses to the subcommittee. I would ask all of you to please ensure that the hearing record, questions for the record, and any supporting information requested by the subcommittee are delivered in final form to us no later than 4 weeks from the time you receive them.

Members who have additional questions for the record will have until the close of business Friday to provide them to the subcommittee office.

With that, I'll turn to Mr. Aguilar for an opening statement, if he has one.

Mr. AGUILAR. Thank you, Mr. Chairman. I want to thank the witnesses for appearing today. Unfortunately, Ms. Kaptur had another obligation. I am happy to be here, looking forward to the exchange that we are going to have on these important, vital programs, and we will do our best to use the process of questions for the record as well for those members who are not attending. Thank you so much.

Mr. SIMPSON. And let me just say that this is—you are going to see members coming in and out today because there are several hearings going on in various committees. In fact, I have got to step out to ask the Secretary of Education a couple of questions when that hearing starts over there for a few minutes. So, you will see members coming and going to a variety of hearings.

Mr. Lamont, I understand you are first.

Mr. LAMONT. Good morning, sir. My name is Douglas Lamont. I am the senior official performing the duties of the Assistant Secretary of the Army for Civil Works. I must say that this has been an extraordinary year and I want to apologize to the Chair and to the committee for last-minute details on release of the President's budget and also on the work plan.

We will work with the committee. We will work with Chairman Simpson here to ensure that General Semonite and I provide you the information that you require.

I want to thank you for the opportunity to present the President's budget for fiscal year 2018. The fiscal year 18's Civil Works budget reflects the Administration's priority through targeted investments that will reduce the risk of flood impacts to communities, facilitate waterborne transportation, restore aquatic ecosystems, and support American jobs.

The budget emphasizes maintaining the water resources infrastructure that the Corps owns and manages, and on finding innovative ways to rehab it and hand it over to others, or retire it. Here are some funding highlights.

The 2018 Civil Works budget provides \$5.002 billion in gross discretionary appropriations for the Army Civil Works Program, focusing on investments that will yield high economic and environmental returns in order to address significant risk to public safety. The budget focuses on funding our three major mission areas and allocates 42 percent to commercial navigation, 20 percent to flood

and storm damage reduction projects, and 7 percent to aquatic ecosystem restoration.

Other sound investments include allocating \$247 million to hydropower, \$118 million to clean up sites contaminated during the early years of the Nation's nuclear weapons program, and \$200 million for the Corps' regulatory activities.

The budget does not propose any new starts, choosing to focus instead on advancing ongoing work and maintaining our existing infrastructure. It funds 26 feasibility studies to completion, and funds one construction project to completion. The budget funds inland waterway capital investments of \$175 million for the ongoing work at Olmsted Locks and Dam of which \$26 million will be derived from the Inland Waterways Trust Fund.

The budget also includes \$299 million, including \$34 million for the dam safety remaining item, for the overall dam safety program.

This funding will enable the Corps to evaluate and implement effective risk reduction strategies and measures at dams where needed. The budget prioritizes funding to operate and maintain water resources infrastructure by providing \$3.1 billion in the Operations and Maintenance account, and \$142 million for operation and maintenance in the Mississippi River and Tributaries account.

Funding for maintaining commercial navigation, flood and storm damage reduction, and hydropower projects are informed by assessments of a risk-based nature on project condition and consequences of failure. The budget includes \$765 million for operation maintenance of inland navigation projects and \$654 million for operation maintenance of flood risk management projects, excluding remaining items.

These funding levels will enable a continued reduction of unscheduled lock closure due to preventable mechanical breakdowns and reduce risk at flood risk management projects. The budget provides \$965 million from the Harbor Maintenance Trust Fund to maintain coastal channels and related work, which is the highest amount ever budgeted.

The budget supports a Corps program that has a diverse set of tools and approaches to working with local communities, whether that means funding projects with our cost-sharing partners or providing planning assistance and technical assistance to help our communities make better informed decisions. Other funding Corps efforts include mitigation of impacts to fish on the Columbia River Basin, and priority work in the Upper Mississippi River and Missouri Rivers.

I look forward to working with the committee to advance the Corps' Army Civil Works Program. Thank you, sir.

[The information follows:]

DEPARTMENT OF THE ARMY

**WRITTEN STATEMENT
OF**

**DOUGLAS W. LAMONT, P.E.
SENIOR OFFICIAL PERFORMING THE DUTIES OF THE
ASSISTANT SECRETARY OF THE ARMY
(CIVIL WORKS)**

BEFORE

**COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT
UNITED STATES HOUSE OF REPRESENTATIVES**

ON

**THE FISCAL YEAR 2018 BUDGET
FOR THE ARMY CORPS OF ENGINEERS, CIVIL WORKS**

May 24, 2017

Thank you Chairman Simpson and distinguished members of the subcommittee for the opportunity to present the President's Budget for the Civil Works program of the Army Corps of Engineers for fiscal year (FY) 2018. The President's Budget for FY 2018 for the Civil Works program of the Army Corps of Engineers funds the development, restoration, and protection of the Nation's water, wetlands, and related resources, through studies, construction, and operation and maintenance of projects, the Corps regulatory program, the cleanup of certain sites contaminated as a result of the Nation's early atomic weapons development program, and emergency response preparedness. The Budget focuses on high performing work within the three main water resources missions of the Corps: commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration.

The Civil Works program, which this Budget supports, relies on strong relationships between the Corps and local communities; these strong relationships allow us to work together to meet water resources needs across all of our missions.

The Budget provides \$5.002 billion in discretionary funding for the Civil Works program, including approximately \$2.098 billion to support commercial navigation; \$1.37 billion for flood and storm damage reduction; and \$336 million for aquatic ecosystem restoration. Of these amounts, \$965 million would be derived from the Harbor Maintenance Trust Fund and \$26 million would be derived from the Inland Waterways Trust Fund.

The Budget prioritizes funding to operate and maintain water resources infrastructure by providing \$3.1 billion in the Operation and Maintenance account, and \$142 million for operation and maintenance in the Mississippi River and Tributaries account. Our funding allocations for the maintenance of commercial navigation, flood and storm damage reduction, and hydropower projects are informed by assessments of risk based on project condition and the consequences of a failure.

The Budget includes \$765 million for operation and maintenance of inland navigation projects and \$654 million for operation and maintenance of flood risk management projects, excluding remaining items. These funding levels will enable continued reduction of unscheduled lock closures due to preventable mechanical breakdowns and reduced risk at flood risk management projects.

The Budget provides \$965 million to be derived from the Harbor Maintenance Trust Fund (HMTF) to maintain coastal channels and related work, which is the highest amount ever budgeted, consisting of \$923 million from the Operation and Maintenance account, \$5 million from the Mississippi River & Tributaries account, and \$37 million from the Construction account.

The Budget provides \$1.020 billion in the Construction account, and \$108 million in the Mississippi River and Tributaries account prioritizing projects with a high net economic, environmental, and safety return to the Nation. The Budget continues to include efficient funding for the Olmsted Locks and Dam project at \$175 million and

proposes a new user fee to produce additional revenue to help finance future inland waterways navigation capital investments to support economic growth. This is necessary because the current excise tax on diesel fuel used in inland waterways commerce will not produce the revenue needed to cover anticipated future investment needs.

The Budget also includes \$299 million (including \$34 million for the Dam Safety remaining item) for the dam safety program. When coupled with anticipated unobligated carryover balances on these important projects, this funding will enable the Corps to evaluate and implement effective risk reduction strategies at our dams where needed.

The Budget provides \$86 million in funding for the Investigations account, and \$3 million for investigations in the Mississippi River and Tributaries account.

The Budget focuses on bringing ongoing studies to a conclusion. The Budget funds to completion 26 ongoing feasibility studies and includes \$15 million for Floodplain Management Services and \$5 million for the Planning Assistance to States program to provide local communities with technical and planning assistance to enable them to reduce their flood risk, with emphasis on non-structural approaches.

All feasibility studies funded in the Budget have signed Feasibility Cost-Sharing Agreements, and have developed a plan that outlines their scope, schedule, and cost, which has been agreed upon by the District, Division, Corps Headquarters, and the local sponsor.

The Budget also includes funds to complete the Loxahatchee River Watershed Study within the South Florida Everglades Restoration program.

Lastly, the Budget includes a proposed provision to divest the Washington Aqueduct. The Washington Aqueduct is the only local water supply system in the Nation owned and operated by the Corps. Ownership of local water supply is best carried out by State or local government or the private sector where there are appropriate market and regulatory incentives. The proposal to eliminate the Corps' role in local water supply and increase the State/local/private sector's role would encourage a more efficient allocation of economic resources and mitigate risk to taxpayers.

Thank you all for inviting me to attend today on behalf of the Administration. General Semonite will provide further remarks on the Army Civil Works 2018 Budget.

Mr. SIMPSON. Thank you. Lieutenant General.

General SEMONITE. Chairman Simpson, Ranking Member Kaptur, and distinguished members of the subcommittee, I am Lieutenant General Todd Semonite, Commanding General of the Corps of Engineers and 54th Chief of Engineers. I am honored to be here today accompanied by Mr. Lamont to provide testimony on the President's fiscal year 2018 budget for the Civil Works Program for the United States Army Corps of Engineers.

I have been in command of the Corps for just over a year, and I continue to be amazed by the breadth and complexity of the Civil Works Program, as well as the expertise and dedication of the professionals that work in our organization. While this is my first time appearing before this subcommittee, I have had the opportunity to work with a number of you individually, and I look forward to continuing to build our relationship during my tenure as Chief of Engineers.

It is my belief that the credibility of the Corps is measured by our ability to deliver results that are on time, on budget, and of exceptional quality. To do this and to maintain our status as a world-class organization now and into the future we are focusing on three fundamentals we call strengthen our foundation, deliver the program, and achieve our vision.

I want to give you some highlights of my fundamentals.

First, as with any structure, our foundation must be our strength, the bedrock upon which our present rests and our future is built. For the Corps, this means having the discipline to accomplish routine tasks to a high standard. It means demonstrating that we are reliable and competent partners, assisting in shared efforts to be responsible stewards of the Nation's water resources.

We are committed to transform our processes, invest in the technical competency of our most valued asset, and that is our people, and to be collaborative and transparent. Our strength is validated by earning trust in all we do, by demonstrating technical expertise, competence, and professionalism across our organization.

We earn our credibility, our reputation, and our value by delivering the program, our second big fundamental. This is our lifeblood. This is our passion. This is our mission and this is our number one priority. In all that we do we strive to ensure that cost, timelines, and expected quality are understood upfront and successfully accomplished in the end.

And finally, in order to achieve our vision, we endeavor to anticipate the conditions, challenges, and opportunities in an uncertain future by taking prudent, logical, and decisive steps today to prepare. We do this by implementing strategic transformation within the Corps, continually pursuing four goals outlined within our campaign plan, and an aim point of 2025.

Our first campaign goal is to continue to work across the globe with a presence in more than 100 countries supporting national security and the combatant commanders in civil works, military missions, and water resource research and development expertise.

We are proud to serve this great Nation and our fellow citizens, and we are proud of the work the Corps does to be able to support America's foreign policy.

Our second major goal is to continue to work at making the Corps more efficient and effective while delivering integrated water resource solutions for national missions and to address infrastructure challenges. This involves modernizing the project planning process, enhancing budget development for a more holistic outcome, and making better risk-informed investment decisions, as well as improving delivery methodology.

Our third major goal is to continue to be proactive in reducing disaster risk and responding to disasters under the national response and recovery support framework, as well as within our authorities for flood risk management. I am very proud of our team for the work we do with FEMA and our fellow partners, as well as with State and local agencies in this area.

And our fourth and final goal is preparing for tomorrow, which focuses on our people and ensuring we have a pipeline of the best engineering and technical expertise, as well as a strong workforce development and talent management program. We continue to tailor development programs to employ aspirations, to retain talent, and insulate culture that embraces a career of service.

In closing, I would offer that our excellence demands commitment of every Corps employee. As Chief of Engineers I am striving to develop what General Shinseki, former Army Chief of Staff, called irreversible momentum towards being a world-class organization.

World class means that the Corps must continue to be able to engineer solutions for the Nation's toughest challenge. That is our vision. You have my commitment that the teammates of the Corps have a passion to achieve that vision. Thank you for allowing me the time to be able to address the committee today.

[The information follows:]

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS

COMPLETE STATEMENT OF

LIEUTENANT GENERAL TODD T. SEMONITE

CHIEF OF ENGINEERS

U.S. ARMY CORPS OF ENGINEERS

BEFORE

COMMITTEE ON APPROPRIATIONS

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

UNITED STATES HOUSE OF REPRESENTATIVES

ON

THE FISCAL YEAR 2018 BUDGET

FOR THE ARMY CORPS OF ENGINEERS, CIVIL WORKS

MAY 24, 2017

Mr. Chairman and Members of the Subcommittee:

I am honored to testify before your committee today, along with Mr. Douglas Lamont, the Senior Official Performing the Duties of the Assistant Secretary of the Army (Civil Works), on the President's Fiscal Year 2018 (FY 2018) Budget for the United States Army Corps of Engineers (Corps) Civil Works Program. This is my first time to testify before this Subcommittee and I look forward to working together during my tenure as Chief of Engineers.

I have been in command of the Corps for just over a year, and I want to briefly update you on where we're headed.

As an organization, the Corps' credibility is measured by our ability to deliver results that are on time, on budget, and of exceptional quality. To do this, and to keep us "world class", now and into the future, we're focusing on three fundamentals we call "Strengthen the Foundation," "Deliver the Program," and "Achieve our Vision."

First, as with any structure, our **Foundation** must be our **Strength** – the bedrock upon which our present rests and our future is built. For the Corps, this means having the discipline to do the routine things to a high standard. It means demonstrating we are reliable and worthy partners to assist in a shared effort by all levels of government and the private sector to be responsible stewards of our nation's water resources – and to earn its trust – in all we do, from top to bottom, big to small, tactical to strategic. It means having teams and processes that ask and answer the right questions, like, "do we have the capabilities, capacity, and authorities," before we launch. And, it means empowering leaders to think strategically because they are confident in the discipline of our ranks.

Second, we earn our credibility, our reputation, and our value by **Delivering the Program**. This is our lifesblood. This is our passion. This is our mission. And this is our No. 1 priority. In all we do, we'll ensure that costs, milestones, and expected quality are both understood and met.

Finally, to **Achieve our Vision**, we'll do our best to anticipate the conditions, challenges, and opportunities in an unknowable future and take prudent, decisive steps today to prepare. We're doing this by operationalizing strategic change with our Campaign Plan and its four (4) Goals – Support National Security, Deliver Integrated Water Resource Solutions, Reduce Disaster Risk, and Prepare for Tomorrow.

First, we continue our work across the globe with presence in more than 110 countries **Supporting National Security** and our Combatant Commanders with Civil Works, Military Missions, and Water Resources Research and Development expertise. We are proud to serve this great Nation and our fellow citizens and we are proud of the work the Corps does to support America's foreign policy. Corps civilian employees nationwide have volunteered – and continue to volunteer – to support our Nation's missions and vital interests abroad, often in harm's way. Many have served on multiple deployments.

Second, we continue to work at making the Corps more efficient and effective while **Delivering Integrated Water Resource Solutions** for national missions and to address infrastructure challenges. This involves modernizing the project planning process, enhancing budget development for more holistic outcomes, making better risk-informed investment decisions, and improving delivery methods.

Third, we continue to be proactive in **Reducing Disaster Risks** and responding to disasters under the National Response Framework, National Disaster Recovery Framework, P.L. 84-99 as amended, and Corps project authorities for flood risk management. I am so proud of our team for the work we do with our partners at FEMA and State and local agencies in this area.

Fourth, **Preparing for Tomorrow** remains about our people and ensuring we have a pipeline of the best Science, Technology, Engineering and Mathematics teammates, as well as strong Workforce Development and Talent Management programs. We continue to tailor development programs to employee aspirations to retain talent and instill a culture that embraces a career of service. We've enjoyed success here, and continue to significantly improve our agency ranking in the Federal Employee Viewpoint Survey and on the list of best places to work in the Federal government. We are proud to say that we continue to help our Nation's Wounded Warriors transition out of active duty into fulfilling careers. In fact, this year we set a goal to assist 225 transitioning Wounded Warriors. I'm proud to say that we've nearly reached this goal by assisting 185 Wounded Warriors through the end of the 2nd quarter. Over the past five years, we've helped just over 1,300 Wounded Warriors find meaningful careers within the Corps and other organizations.

In closing, may I say that our excellence demands the bone-deep commitment of every Corps employee. I'm striving to develop what GEN Shinseki, former Army Chief of Staff, called "irreversible momentum" toward being a "world-class" organization. I use those two words on purpose because when I talk with my Corps team, I want all of us to have something to relate to. Whether a regulatory biologist or construction engineer, a human resource specialist or dam operator, an administrative professional or general officer, "world class" means that for the Corps to continue "engineering solutions to the nation's toughest challenges," which is our vision, we all must be leaders of superior integrity and technical competence. We know our multi-billion program doesn't deliver itself. Nor is the Nation served just by the work that we do, but more importantly, by your entire Corps Team – 34,000 strong. Thank you for allowing me the time to address the committee.

SUMMARY OF FY 2018 BUDGET

The FY 2018 Civil Works Budget is a performance-based budget, and reflects a focus on the work that will provide high economic and environmental returns to the Nation or address a significant risk to safety. Investments by the Civil Works program will reduce the risks of flood impacts in communities throughout the Nation, facilitate commercial navigation, restore and protect aquatic ecosystems, generate low-cost renewable

hydropower, and support American jobs. Continued investment in critical Civil Works infrastructure projects is an investment in the Nation's economy, security, and quality of life – now and in the future.

The Budget focuses on high-performing projects and programs within the three main water resources missions of the Corps: commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration. The FY 2018 Budget includes \$5.002 billion in gross discretionary funding for Civil Works activities throughout the Nation, including the construction of water resources projects that will provide high economic, environmental and public safety returns on the Nation's investment.

The Budget also proposes the necessary level of funding for the Regulatory program to protect and preserve water-related resources of the Nation.

INVESTIGATIONS PROGRAM

The FY 2018 Budget provides \$86 million in the Investigations account, and \$1 million in the Mississippi River and Tributaries account to evaluate and design projects within the Corps three main mission areas and for related work, including some research and development. The Budget also supports the Corps planning and technical assistance programs, including using its expertise to help local communities increase their resilience to, and preparedness for, flood risks such as the flood risks in coastal communities.

CONSTRUCTION PROGRAM

The Budget provides \$1.02 billion for the construction program in the Construction account, and \$110 million in the Mississippi River and Tributaries account, prioritizing projects with a high net economic, environmental and safety return to the Nation per dollar invested, as well as projects that address a significant risk to safety.

The goal of the construction program is to produce as much value as possible for the Nation from the available funds. The Corps uses objective performance measures to allocate this funding. For projects that are being funded primarily due to their economic return, these include benefit-to-cost ratios. For projects funded on the basis of their environmental return, priority is given to those projects that are highly effective at restoring degraded structures, functions or processes of aquatic ecosystems on a cost-effective basis as well as mitigation or environmental requirements. The selection process also prioritizes investments, on a risk informed basis, in dam safety assurance, seepage control, static instability correction and work at dams that the Corps owns and operates.

OPERATION AND MAINTENANCE (O&M) PROGRAM

All structures age and can deteriorate over time, causing a potential decline in reliability. As stewards of a large portfolio of water resources infrastructure, we are working to

ensure that its key features continue to provide appropriate levels of service to the American people.

The Corps is working to improve the efficiency and effectiveness of its operation and maintenance program. The Budget focuses on investments that address infrastructure maintenance needs on a risk assessment basis. In FY 2018, the Corps will further expand the implementation of a modern asset management program, dedicating an increased amount of its O&M funding to the key features of its infrastructure and for work that will reduce long-term O&M costs in real terms. The Budget also supports an energy sustainability program and pursues efficiencies in the acquisition and operation of our information technology.

The Budget for the operation and maintenance program provides \$3.1 billion in the O&M account, and \$142 million in the Mississippi River and Tributaries account, with a focus on the operation and maintenance of key commercial navigation, flood risk management, hydropower and other facilities. The Budget gives priority to coastal ports and inland waterways with high levels of commercial traffic, and includes \$965 million for work financed through the Harbor Maintenance Trust Fund. The Budget also funds some small ports, including an emphasis on those that support significant commercial fishing, subsistence, or public transportation benefits. The Budget provides O&M funding for safety improvements at the dams and levees that the Corps owns and operates based on the risk and consequence of a failure. According to our analyses, 297 of the 715 dams in our current inventory have either already had some form of modification, or an interim risk reduction measure, or may require them over the next 50 years, if they are to continue to serve their authorized purposes. Additional measures are considered and evaluated as new and existing issues are identified.

Generally, the O&M program supports completed works owned or operated by the Corps, including administrative buildings and laboratories. Work to be accomplished includes: operation of locks and dams along the inland waterways; dredging of inland and coastal Federal channels; operating multi-purpose dams and reservoirs for flood risk reduction, hydropower, recreation, and related purposes; maintenance and repair of facilities; monitoring of completed projects; and general management of Corps facilities and the land associated with these purposes including work to serve as a responsible steward of the resources on Corps lands.

The FY 2018 Budget provides \$247 million in the O&M account for hydropower activities in order to maintain basic power components such as generators, turbines, transformers and circuit breakers at Corps hydropower facilities to keep them operating efficiently and effectively. The Corps is the largest hydropower producer in the U.S., operating 24 percent of the Nation's hydropower capacity.

REIMBURSABLE PROGRAM

Through the Interagency and International Services (IIS) Reimbursable Program, the Corps assists other Federal agencies, state, local, tribal governments, and those of

other countries with timely, cost-effective solutions. These agencies can turn to the Corps, which already has these capabilities, rather than develop their own internal workforce and expertise to act as their design and construction agent. Such intergovernmental cooperation is effective for agencies and the taxpayer, and uses the skills and talents that we bring from our Civil Works and Military Missions programs. The work is principally technical oversight and management of engineering, environmental, and construction projects. The work itself is typically performed by private sector firms and is financed by the agencies we service. IIS Reimbursable Program activities in support of our domestic stakeholders totaled \$1.04 billion in FY 2016. We only accept agency requests that are consistent with our core technical expertise, in the national interest, and that can be executed without impacting our primary mission areas.

EMERGENCY MANAGEMENT

The FY 2018 Budget provides \$35 million in funding for the Flood Control and Coastal Emergencies account to enable the Corps to prepare for emergency operations in response to natural disasters. The Budget for the emergency management program also includes \$5.5 million for the National Emergency Preparedness Program – an increase of \$1 million from prior years.

An additional \$3 million is included in the Investigations account for the Corps participation in the development and expansion of intergovernmental teams, known as Silver Jackets, which collaboratively reduce the risks associated with flooding and other natural hazards. The Silver Jackets program is an innovative program, which provides a national forum to address State and local flood risk management priorities. Each team is developed at the state level. The teams share lessons learned at the state level with each other, and each team works to apply the available Federal and State resources effectively to meet its State's flood risk management priorities. There are now 48 active teams (47 States and the District of Columbia); our goal is to have a Silver Jackets team for every State. The Floodplain Management Program of the Corps complements this effort by providing technical assistance.

CONCLUSION

The FY 2018 Budget represents a continuing, fiscally prudent investment in the Nation's water resources infrastructure and restoration of its aquatic ecosystems. The U.S. Army Corps of Engineers is committed to a performance-based Civil Works Program, based on innovative, resilient, and sustainable risk-informed solutions.

Thank you, Mr. Chairman and Members of Subcommittee. This concludes my statement. I look forward to answering any questions you or other Members of the Subcommittee may have.

Mr. SIMPSON. Thank you. Mr. Cameron.

Mr. CAMERON. Thank you, Mr. Chairman, members of the subcommittee. I am pleased to discuss with you today the President's budget request, the Bureau of Reclamation, and the Central Utah Project Completion Act. My name is Scott Cameron. I'm the Acting Assistant Secretary of the Interior for Water and Science.

Secretary Zinke appreciates the subcommittee's ongoing support of our programs. The overall Department of the Interior's 2018 budget request is \$11.7 billion, which emphasizes Interior's crucial role in promoting economic growth across America while also protecting the Nation's natural resources and cultural heritage, furthering the America First national energy goals, providing scientific information for responsibly managing our resources and energy development, and honoring our trust responsibility to Native American Tribes.

The Department's diverse mission affects the lives of all Americans. For example, in 2016, Interior's programs were associated with an estimated \$250 billion in economic output, and supported 1.6 million jobs and activities that included outdoor recreation and tourism, energy development, grazing, and timber harvesting.

The Bureau of Reclamation's activities, including recreation, contribute over \$48.1 billion in economic activity and support over 388,000 jobs each year. The Department, primarily through the Bureau of Reclamation, works with States, Tribes, local governments, and nongovernmental organizations to pursue a sustainable water supply for the West by providing Federal leadership and assistance on the efficient use of water.

The 2018 budget continues these efforts to address the challenges of water availability. Interior's \$1.1 billion budget request for Reclamation invests in our water and power infrastructure, facilitating the delivery of water to 31 million people in the West.

In addition, our programs focus on the protection and restoration of aquatic and riparian environments influenced by our facilities and operations. It is critical that Reclamation continues to invest in ecosystem restoration if we are to continue to supply water and power reliably.

This budget also continues to strengthen our Tribal Nations by implementing Indian water rights settlements. We are proposing that Reclamation invest \$151 million in Fiscal Year 2018 toward fulfillment of this Indian trust responsibility.

These activities include projects and actions to implement Indian water rights settlements, provide technical assistance to Tribes, and for ecosystem restoration.

Interior's budget furthers our commitment to developing domestic energy resources in order to make America stronger and boost the Nation's economy. Hydropower is a renewable and reliable resource providing clean energy to the Western United States. It is the Nation's largest renewable energy resource, and the Bureau of Reclamation is the second largest producer of hydropower in the United States, second only to my colleagues to my right.

We support the President's effort to create a leaner, more efficient government, and the Bureau of Reclamation will be actively involved in bringing forward the most promising ideas to improve

government effectiveness and efficiency, and to spur economic growth.

For example, Reclamation is developing a legislative proposal to facilitate the transfer of title of certain Reclamation projects and facilities when such transfers are beneficial to all parties. While Reclamation has engaged in efforts related to title transfer in the past on a case-by-case basis, this broader initiative will go further to facilitate greater local control of water infrastructure to allow local water managers to make their own decisions to improve water management at the local level while allowing Reclamation to focus management efforts on larger projects with a greater Federal nexus.

As part of this effort, Reclamation will engage with water users to identify projects and facilities that may be good candidates for such a transfer.

Finally, Interior's budget request includes the Central Utah Project Completion Act Office, which falls under the direct jurisdiction of the Assistant Secretary for Water and Science at the direction of Congress a number of years ago. The 2018 budget for this office is \$9 million.

Of this amount, \$4.8 million will be available for planning and construction activities administered by the Central Utah Water Conservancy District, continuing our partnership and the ongoing construction of the Utah Lake System's facilities.

In addition, about \$900,000 will be transferred to the Utah Reclamation, Mitigation, and Conservation account for use by the Utah Reclamation, Mitigation, and Conservation Commission. The 2018 budget also includes Interior's required program oversight activities and Endangered Species Recovery Program implementation through the Department's CUPCA Office.

The Central Utah Project provides 62,000 acre feet of water for irrigation of over 30,000 acres, and 100,000 acre feet for municipal and industrial purposes. This water will help address the water demands of the growing population in the Wasatch Front, one of the fastest growing areas in the Nation.

Thank you, again, for the opportunity to explain the President's budget request of the Bureau of Reclamation. I would be pleased to answer any questions the subcommittee might have at the appropriate time.

[The information follows:]

**Statement of Scott Cameron, representing the
Office of the Assistant Secretary for Water and Science
U.S. Department of the Interior
Before the
Subcommittee on Energy and Water Development, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
On The President's Fiscal Year 2018 Budget**

Wednesday, May 24, 2017

Thank you Chairman Simpson, Ranking Member Kaptur, and members of this Subcommittee for the opportunity to discuss with you the President's Fiscal Year 2018 Budget for the Department of the Interior's Bureau of Reclamation and Central Utah Project Completion Act. I am Scott Cameron, representing Interior's Office of the Assistant Secretary for Water and Science, and I appreciate your ongoing support of our programs.

The Department of the Interior's 2018 budget request is \$11.7 billion, which emphasizes Interior's crucial role in promoting economic growth across America while also protecting the Nation's natural resources and cultural heritage; furthering the America First national energy goals; providing vital scientific information to responsibly manage our resources and energy development; and honoring our Trust responsibilities to Native Americans. The Department's diverse mission affects the lives of all Americans; for example, in 2016 Interior's programs were associated with an estimated \$250 billion in economic output and supported 1.6 million jobs in activities that include outdoor recreation and tourism, energy development, grazing, and timber harvesting. The Bureau of Reclamation's activities, including recreation, contribute over \$48.1 billion in economic activity and support over 388,000 jobs each year.

The Department, primarily through the Bureau of Reclamation, works with States, Tribes, local governments, and non-governmental organizations to pursue a sustainable water supply for the West by providing federal leadership and assistance on the efficient use of water. The 2018 budget continues these efforts to address the challenges of water availability. Interior's \$1.1 billion budget request for Reclamation invests in our water and power infrastructure, facilitating the delivery of water to 31 million people in the West. In addition, our programs focus on the protection and restoration of aquatic and riparian environments influenced by our facilities and operations. It is critical that Reclamation continues to invest in ecosystem restoration if we are to continue to reliably supply water and power as we have historically.

This budget also continues to strengthen our Tribal Nations by implementing Indian water rights settlements. We are proposing that Reclamation invest \$151.3 million in FY18 towards fulfillment of this responsibility. These activities include projects and actions to implement

Indian water rights settlements, provide technical assistance to tribes, and for ecosystem restoration.

Interior's budget furthers our commitment to developing domestic energy resources in order to make America stronger and boost the Nation's economy. Hydropower is a renewable and reliable resource providing clean energy to the western United States. It is the nation's largest renewable energy resource and the Bureau of Reclamation is the second largest producer of hydropower in the United States.

Finally, Interior's budget request includes the Central Utah Project Completion Act Office, which falls under the jurisdiction of the Assistant Secretary for Water and Science. The Central Utah Project annually provides 62,000 acre-feet of water for irrigation of over 30,000 acres and over 100,000 acre-feet for municipal and industrial purposes, supplying water to nearly 400,000 people. This water will help address the water demands of the growing population in the Wasatch Front, one of the fastest growing areas in the Nation.

Let me address these items with a little more detail:

Energy

The Department has a significant role to play in securing an energy future for our Nation that puts America on track toward energy independence. Through increasing access to public lands and alleviating unnecessary regulatory burdens while balancing conservation objectives, the Department is working to ensure that the Nation's "all-of-the-above" energy development strategy includes not only conventional sources, but also hydropower.

Reclamation's 2018 request includes \$1.3 million to support sustainable hydropower initiatives which deliver value to Reclamation projects. These initiatives include activities designed to achieve operational efficiencies at Reclamation hydropower facilities and to promote the development of new, non-federal hydropower on existing, non-powered Reclamation infrastructure.

Funding will support ongoing work to create automated data collection and archive systems to aid in hydropower benchmarking, performance testing, regulatory compliance, and strategic decision making; and hydropower efficiency research to improve power facility operational efficiencies, electric output, and water conservation. Funding will also provide for the policy execution and oversight of non-federal hydropower development at existing Reclamation facilities through Lease of Power privilege or Federal Energy Regulatory Commission licensing and will allow Reclamation to work with Tribes to assist them in developing sustainable energy resources to better manage water resources.

Finally, funding will support the Memorandum of Understanding (MOU) for Hydropower, executed by the Department of the Interior, Department of the Army (through the U.S Army Corps of Engineers), and Department of Energy to advance reliable, affordable, and environmentally sustainable hydropower. Reclamation will use 2018 funding to support Reclamation's mission needs in the following areas: technology development; asset management; hydropower sustainability; quantifying hydropower capabilities and value in power systems; and information sharing, coordination, and strategic planning.

Stewardship of America's Lands and Waters

As the largest wholesaler of water in the country, Reclamation has a leading role – in coordination with other Federal agencies, State officials, local water users, and interested stakeholders – in developing strategies to help ensure water supplies for future generations. As managers of critical water resources, Reclamation ensures millions of customers receive the water and power supplies that support a healthy economy. To help address the many challenges faced by water managers, Reclamation continues the implementation of the WaterSMART Program. The funding proposed in Reclamation's 2018 WaterSMART budget supports collaboration with our non-Federal partners in efforts to address emerging water demands and water shortage issues in the West, to promote water conservation and improved water management, and to take actions to mitigate adverse environmental impacts of Reclamation projects.

Reclamation's WaterSMART Grants and Title XVI Water Reclamation and Reuse Program support water supply sustainability by leveraging Federal and non-Federal funding to conserve tens of thousands of acre-feet of water each year in urban and rural settings, and on both large and small scales. Through programs such as the Drought Response Program, initiated in 2015, Reclamation helps communities manage drought through on-the-ground projects that build resilience to drought in advance of a crisis, and the development of long-term, drought resilience strategies through drought contingency planning. Through the Basin Study Program, Reclamation collaborates with stakeholders to identify imbalances in water supply and demand, and to identify adaptation and mitigation strategies to address potential shortfalls. Through the Cooperative Watershed Management Program, Reclamation provides cost shared funding to watershed groups for projects to address water quality and quantity issues, and to improve ecological resiliency at the local level to help avoid conflicts over water.

The WaterSMART funding request in 2018 is \$59.1 million. However, this investment is highly leveraged through partner funding – for example, grants under the WaterSMART program require a 50:50 cost share.

Infrastructure and Safety

Reclamation's dams, water conveyances, and power generating facilities are integral components of our Nation's infrastructure that provide basic water and power services to millions of customers in hundreds of basins throughout the Western United States. Effectively managing the benefits that these structures provide is among the significant challenges facing Reclamation over the coming years. Reclamation manages 492 dams throughout the 17 Western States. Reclamation's budget request includes funding for specific Extraordinary Maintenance activities that are central to mission objectives of operating and maintaining projects to ensure delivery of water and power. Through constant monitoring and assessment, Reclamation strives to most effectively use its limited resources to ensure dam safety and to maintain the ability to store and divert water and to generate hydropower.

The Dam Safety Program continues to be one of Reclamation's highest priorities, utilizing the latest information and technology to evaluate and address the most pressing safety risks in order to ensure reliability and protect the downstream public. The Dam Safety Program has identified 363 high and significant hazard dams. Reclamation evaluates dams and monitors performance to ensure that risks do not exceed current Reclamation public protection guidelines. The 2018 budget request includes \$88.1 million for the Dam Safety Program.

Tribal Nations

The Department of the Interior upholds the Federal government's unique trust responsibilities to federally recognized Tribes, American Indians and Alaskan Natives. Interior's 2018 budget continues to meet Federal responsibilities outlined in enacted land and water rights claim settlements with Indian Tribes to ensure they have access to land and water to meet domestic, economic and cultural needs.

Reclamation's budget request supports a total of \$151.3 million in funding to support tribal nation efforts and initiatives. As part of this total, \$98.6 million is requested for the Indian water rights settlements authorized under several legislative statutes, including the Claims Resolution Act of 2010, the Omnibus Public Land Management Act of 2009, and the newly enacted Water Infrastructure Improvements for the Nation Act of 2016. Another \$10.4 million will support Reclamation's Native American Affairs program to improve capacity to work with and support Tribes in the resolution of their water rights claims and to develop sustainable water sharing agreements and management activities. The remaining \$42.3 million supports other tribal specific settlement projects.

Recreation and Sporting

Reclamation projects play a major role in meeting the increasing public demand for water-based outdoor recreation opportunities. Reclamation projects include approximately 6.5 million acres of land and water and over 200 recreation areas available to the public. This includes 12 designated National Recreation Areas that are managed by the National Park Service or United States Forest Service. Through non-federal partnerships, Reclamation assists local communities in attracting recreation-related investments and involves local citizens in the decision making process.

Reclamation directly manages over 35 recreation areas. Reclamation projects have created a variety of opportunities on the rivers downstream from the dams, including world class whitewater rafting and fishing opportunities. Reclamation projects also provide water to national wildlife refuges and state wildlife management areas that offer valuable fish and wildlife habitat along with hunting and fishing opportunities.

Invasive Mussels: With increased use of Reclamation reservoirs for recreation comes the increased need for monitoring and early detection of invasive quagga and zebra mussels, and for outreach and education to prevent infestation. The 2018 Reclamation budget includes \$7.7 million for prevention, early detection and monitoring, containment and control at existing facilities, outreach and education, and research focused on these issues. This funding will support Reclamation's mussels activities framework established in the Quagga-Zebra Mussels Action Plan for Western U.S. Waters.

Interior is working in close cooperation with the Western Governors Association, States, and Tribes to keep invasive mussels from infecting the Columbia River Basin, the last major uninfected watershed in the United States. Reclamation is developing a database of environmental conditions at its reservoirs that can support identification of areas susceptible to mussel infestation, as well as developing an infestation risk model to help identify where habitat conditions are most suitable for infestation in order to prioritize where resources should be deployed.

Management and Efficiencies

The Department supports the President's effort to create a leaner, more efficient government, one that delivers continually improving results for the American people and renews their faith in government. The Bureau of Reclamation is actively involved in bringing forward the most promising ideas to improve government effectiveness and efficiency, and to spur economic growth.

For example, Reclamation is developing a proposal to facilitate the transfer of title of certain Reclamation projects and facilities when such transfers are beneficial to all parties. While Reclamation has engaged in efforts related to title transfer in the past on a case by case basis, this broader initiative will go further to facilitate greater local control of water infrastructures to allow local water managers to make their own decisions to improve water management at the local level, while allowing Reclamation to focus management efforts on larger projects with a greater federal nexus. As part of this effort, Reclamation will engage with water users to identify projects and facilities that may be good candidates for such a transfer.

Central Utah Project

The Central Utah Project Completion Act (CUPCA), Titles II - VI of P.L. 102-575, provides for completion of the Central Utah Project (CUP) by the Central Utah Water Conservancy District (District). The Act also authorized funding for fish, wildlife, and recreation mitigation and conservation; established an account in the Treasury for deposit of these funds and other contributions; established the Utah Reclamation Mitigation and Conservation Commission to coordinate mitigation and conservation activities; and provided for the Ute Indian Rights Settlement.

The 2018 budget for the CUPCA program is \$9.0 million. Of this amount, \$4.8 million will be available for planning and construction activities administered by the Central Utah Water Conservancy District, continuing our partnership in the ongoing construction of the Utah Lake System facilities. In addition, \$898,000 will be transferred to the Utah Reclamation Mitigation and Conservation Account for use by the Utah Reclamation Mitigation and Conservation Commission. The 2018 budget also continues Interior's required program oversight activities and endangered species recovery program implementation through the Department's CUPCA Office.

Conclusion

Thank you for the opportunity to testify on behalf of the President's 2018 budget for the Department of the Interior's Bureau of Reclamation and Central Utah Project Completion Act. I look forward to working with the Committee to implement this budget. This concludes my testimony and I am happy to answer questions.

Mr. MIKKELSEN. Thank you, Mr. Chairman, ranking members, and members of the subcommittee for the opportunity to discuss with you the President's budget for the Bureau of Reclamation. I am Acting Commissioner Alan Mikkelsen. Reclamation's Fiscal Year 2018 budget allocates funds to projects and programs based on objective, performance-based criteria. This allows us to most effectively administer Reclamation's responsibilities for our water and power infrastructure in the West. By doing so, the Bureau has become a leader in efforts to improve Western water management, confront growing imbalances in water supply and demand, and address past environmental harms.

Our budget continues to emphasize the following principles. First, shared responsibility through collaborative partnerships with non-federal partners. Second, merit-based funding through the awarding of grants and contracts based on published criteria. The selection of awards is guided by high-quality, evidence-based research and performance measures. And third, the importance of increased storage capacity. The Bureau recognizes the important goal of increasing and improving storage where it is both feasible and where there is significant stakeholder support.

Let me take a moment to provide you with an understanding of some of the exciting projects that we have under way. In our Great Plains Region, home to Representatives Fortenberry and Granger, we continue collaborating with our stakeholders to manage, develop, and protect water resources throughout the region, including the development of several rural water systems. Reclamation is also coordinating with numerous local entities to improve drought resiliency.

In the Upper Colorado Region, we request funding for two Indian water rights settlement projects: the Navajo-Gallup Water Supply Project and the Aamodt Litigation Settlement. These settlements provide permanent water supplies by building and improving water systems for sustainable municipal, industrial, and domestic water supplies in these communities. Of course the Upper Colorado is the home of Glen Canyon Dam and beautiful Lake Powell.

The Lower Colorado Region encompasses the Lower Colorado River Basin and is home to the Hoover Dam and includes the districts of Representatives Calvert, Roybal-Allard, and Mr. Aguilar. Given the ongoing drought in the Southwest, the priority focus here is the annual delivery of 7½ million acre feet of water to California, Arizona, and Nevada, with another 1.5 million acre feet to Mexico.

Nearly 80 percent of this region's budget is either paid for directly by our partners or through the sale of hydropower generation. In addition to struggling with the worst drought in more than 100 years, the region is also looking at additional ways to assist California with their implementation of other important water irrigation and conservation initiatives.

The Mid-Pacific Region has suffered from its own unique set of drought-related problems. Recent precipitation has alleviated some of the emergency water supply issues, but one good year, I want to emphasize, will not solve all problems related to a multiyear drought. Additionally, recent heavy rains have caused flooding concerns and have highlighted the importance of maintaining Rec-

lamation's infrastructure and continuing feasibility studies for additional storage. The region works with a diverse group of stakeholders to implement water management solutions with a goal of balancing human and environmental needs for water.

Finally there is the Pacific Northwest Region, home to Grand Coulee Dam, one of the largest hydropower facilities in the world. In addition to yourself, Mr. Chairman, this region is represented by Representatives Herrera Beutler and Mr. Newhouse. Our focus here for the coming year will be on the Boise River Feasibility Study. That research is designed to increase storage opportunities at the Anderson Ranch, Arrow Rock, and Lucky Peak Dams. It will guide us as we continue construction of the Cle Elum fish passage as part of the larger Yakima integrated plan. We will continue with the design and implementation activities at the Lewiston Orchards Water Exchange.

And finally, we will implement multiple biological opinion actions as part of the Columbia and Snake River salmon recovery programs operating under the Federal Columbia River power system.

2018 promises to be another exciting year for Reclamation. I again thank the committee and am prepared to answer any questions you may have about the Bureau's Fiscal Year 2018 budget request. Thank you.

[The information follows:]

**Statement of Alan Mikkelsen, Acting Commissioner
U.S. Bureau of Reclamation
Before the
Subcommittee on Energy and Water Development, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
On The President's Fiscal Year 2018 Budget
Wednesday, May 24, 2017**

Thank you, Chairman Simpson, Ranking Member Kaptur, and members of this subcommittee for the opportunity to discuss with you the President's Fiscal Year (FY) 2018 Budget for the Bureau of Reclamation. I am Alan Mikkelsen, the Acting Commissioner of the Bureau of Reclamation.

Reclamation's FY 2018 Budget sustains Reclamation's efforts to deliver water and generate hydropower, consistent with applicable State and Federal law, in a cost-efficient and environmentally responsible manner. It also supports the Administration and Department of the Interior (Department) goals of ensuring the efficient generation of energy, provision of secure water supplies, varied use of our resources, celebration of America's recreation opportunities, and fulfilling our commitments to tribal nations.

Reclamation's FY 2018 budget allocates funds to projects and programs based on objective, performance-based criteria to most effectively administer responsibilities for our water and power infrastructure in the West. It has been said that Reclamation is a leader in efforts to improve western water management, confront growing imbalances in water supply and demand, address environmental effects of its projects, engage in efforts to adapt to increased uncertainty, and manage water-supply risk and public safety.

Our budget request continues this year to emphasize the following two principles:

First, Shared Responsibility through collaborative partnerships with non-Federal partners, and

Second, Merit-Based Funding through the awarding of grants and contracts based on published criteria. The selection of awards is guided by high-quality, evidence-based research and performance measures.

Reclamation is requesting a net total of \$1,056 million in discretionary appropriations, which is anticipated to be leveraged by approximately \$850 million in other Federal and non-Federal funds for FY 2018. This reflects a decrease of 13.1% from the FY 2017 annualized continuing resolution total discretionary funding of \$1,206 million. Of the total, \$960 million is for the Water and Related Resources account, which is Reclamation's largest account; \$59 million is for the Policy and Administration account; \$37 million is for the California Bay Delta Restoration account; and \$41.4 million is for the Central Valley Project Restoration Fund.

Reclamation's mission is to deliver water and power in an economically and environmentally sustainable manner in the interest of the American public. As such, it has designed the infrastructure it manages to account for future uncertainties related to water supplies, competing water needs, and significant variability in weather conditions from year to year. The robustness of the water system is tested through droughts and floods. Historically high precipitation throughout much of the Western United States—in particular in California during late 2016 and early 2017—is providing for a much improved outlook for water supplies as compared to recent drought stricken years. Even during these times there remain portions of the West that are still abnormally dry or in moderate drought. Additionally, long-term impacts from droughts and multi-year droughts, such as those in the Colorado River Basin, are not recovered in a single wet year.

Hydropower production is vulnerable to altered water availability resulting from weather variation. Reclamation must be in a position to manage through drought periods. Additionally, Reclamation must ensure that its infrastructure can appropriately handle the wet period and floods currently being experienced. The investments described in Reclamation's FY 2018 budget will further these efforts.

Reclamation's dams, water conveyances, and power generating facilities are integral components of the Nation's infrastructure. Effectively managing the benefits provided by these structures are among the many significant challenges that Reclamation faces, over the next five years and beyond, in its ability to achieve progress in the areas of certainty, sustainability and resiliency with respect to water supplies. Increasing population and competing demands are increasingly impacting already strained systems. Reclamation's water and power projects and activities throughout the western United States are not only foundational for essential and safe water supplies for both agricultural and municipal and industrial purposes, but also provide renewable energy in the form of hydropower, and sustain ecosystems that support fish and wildlife, recreation, and rural economies.

Reclamation's budget includes a substantial request for Indian water rights settlements, continuing the high priority of this program to meet trust and treaty obligations. With the passage of the Water Infrastructure Improvements for the Nation Act (Public Law 114-322) (WIIN), the Blackfoot Water Rights Settlement will require significant funding in order to meet the settlement's enforcement date of January 21, 2025. The FY 2018 Budget includes \$10 million for this settlement.

Reclamation is continuing its efforts to strengthen its evidence-based decision-making in various program components. This includes the WaterSMART program, science and technology, precipitation variability adaptation strategies, and the improved planning of future Indian water rights settlements. This effort demonstrates the effectiveness, efficiency, and innovation of Reclamation programs.

Reclamation's projects and programs are foundational to driving and maintaining economic growth in hundreds of basins throughout the western States. Reclamation manages water for agricultural, municipal and industrial use and also provides flood control and recreation for millions of people. Reclamation operates 53 hydroelectric power plants that account for 19

percent of the hydroelectric capacity and generation in the United States. Annually, Reclamation generates 37 billion kilowatt hours of electricity, enough to meet the annual needs of over 3.5 million households, and collects over \$1.0 billion in gross revenues for the Federal government. Reclamation's activities, including recreation benefits, provide an economic contribution of \$48.1 billion, and support approximately 388,000 jobs.

This budget is focused on meeting the Secretary's priorities on sharing and multi-use of our nation's natural resources. This is balanced with fulfilling Indian water rights obligations, creating jobs, ecosystem restoration in the California Bay-Delta and San Joaquin River, and maintaining sustainable, secure water supplies. In order to meet Reclamation's mission goals, its programs must build a better understanding of water resources and the protection and restoration of the aquatic and riparian environments influenced by Reclamation operations. Ecosystem restoration involves a large number of activities, including Reclamation's Endangered Species Act recovery programs and river restoration projects, which directly address the environmental aspects of the Reclamation mission.

Account Level Details

The FY 2018 budget for Reclamation totals \$1.097 billion in gross budget authority. The budget is partially offset by discretionary receipts in the Central Valley Project Restoration Fund (\$41.4 million) resulting in net discretionary budget authority of \$1.056 billion.

Water and Related Resources - \$960.0 million

The FY 2018 Water and Related Resources budget provides funding for five major program activities – Water and Energy Management and Development (\$313.7 million), Land Management and Development (\$44.2 million), Fish and Wildlife Management and Development (\$153.0 million), Facility Operations (\$296.0 million), and Facility Maintenance and Rehabilitation (\$153.2 million). The funding proposed in Reclamation's FY 2018 Budget supports key programs important to the Department and in line with Administration objectives. These programs include:

Infrastructure: The proposed budget includes \$51.7 million for various Extraordinary Maintenance projects and activities across Reclamation. This budget is central to mission objectives of operating and maintaining projects to ensure delivery of water and power benefits. Reclamation's Extraordinary Maintenance budget is part of an overall Asset Management Strategy that relies on condition assessments, condition/performance metrics, technological research and deployment, and strategic collaboration to continue to improve the management of its assets and deal with its aging infrastructure challenges. Additional Extraordinary Maintenance items are directly funded by revenues, customers, or other Federal agencies.

Dam Safety: The safety and reliability of Reclamation dams is one of Reclamation's highest priorities. The Dam Safety Program is critical to effectively manage risks to the downstream public, property, project, and natural resources. The \$88.1 million requested for the Safety of Dams Evaluation and Modification Program provides for risk management activities at

Reclamation's high and significant hazard dams where loss of life or significant economic damage would likely occur if the dam were to fail. The budget also includes preconstruction and construction activities for several ongoing and planned Dam Safety modifications. In addition, funding is included in Reclamation's budget for the Department of the Interior's Dam Safety Program.

Reclamation utilizes the Safety of Dams Act to address dam safety issues related to new hydrologic, seismic or change in state-of-the-art design and construction practices. Approximately 50 percent of Reclamation's dams were built between 1900 and 1950, and approximately 90 percent of the dams were built before currently used state-of-the-art design and construction practices were put in place. Continued safe performance is paramount and requires an emphasis on the risk management activities provided by the program.

Land and Water Stewardship: Reclamation's efforts to address the West's water challenges are also accomplished through the WaterSMART program – Sustain and Manage America's Resources for Tomorrow. At \$59.1 million, WaterSMART helps to achieve sustainable water management and maintain economic productivity in the western United States. It addresses current and future water shortages, including drought; degraded water quality; increased demands for water and power from growing populations and energy needs; amplified recognition of environmental water requirements; and the potential for decreased water supply availability due to hydrologic variability.

In order to fully support the 17 Western States, ecosystem restoration is a key underpinning of Reclamation's mission. Ecosystem restoration involves a number of Reclamation's activities, including Reclamation's Endangered Species Act recovery programs, which directly address the environmental aspects of the Reclamation mission. Other programs that contribute towards this objective include the Columbia/Snake River Salmon Recovery Program, the Middle Rio Grande Project Collaborative Program and the Multi-Species Conservation Program within the Lower Colorado River Operations Program.

Tribal Nations: Reclamation supports tribal nations through a number of its projects and programs that range from endangered species recovery, to rural water supply, to performing its role, as designated by Congress and the Secretary of the Interior, in implementation of enacted water rights settlements. Reclamation also strives to improve coordination and application of expertise to analyze potential Indian water settlements more effectively and expeditiously. FY 2018 funding will strengthen Department-wide capabilities in the Secretary's Indian Water Rights Office to achieve an integrated and systematic approach to Indian water rights negotiations to consider the full range of economic, legal, and technical attributes of proposed settlements.

The FY 2018 budget requests discretionary funds to continue the implementation of two of the four Indian Water Rights Settlements enacted in December 2010 (Crow and Aamodt), as well as the Navajo-Gallup Water Supply Project authorized in 2009. In addition, Reclamation proposes including \$10.0 million as the first contribution for the Blackfeet Water Rights Settlement enacted in December 2016. FY 2016 appropriations completed discretionary funding requirements for the Taos settlement and mandatory funds will be used to implement the White

Mountain Apache settlement authorized in the Claims Resolution Act. Funding to support tribal nations is also included within a number of projects, including the Mni Wiconi Project for required tribal operation and maintenance (\$13.5 million), the Nez Perce Settlement within Columbia and Snake River Salmon Recovery Project (\$6.2 million), the San Carlos Apache Tribe Water Settlement Act (\$1.6 million), and the Ak Chin Indian Water Rights Settlement Act (\$16.2 million).

Research and Development: Reclamation has identified several key areas for investment where coordination with other Department bureaus will leverage results to more effectively achieve mission outcomes. Reclamation's FY 2018 budget for research and development (R&D) programs include both Science and Technology, and Desalination and Water Purification—both of which focus on Reclamation's mission of water and power deliveries.

Scientific and engineering innovation promotes sustainable economic growth and job creation, supports maintaining and improving our water and power infrastructure, spurs continued production of energy resources, sustains reliable water and power delivery to our customers, improves safety, limits the impacts of invasive species and ensures we can meet our environmental compliance responsibilities. These activities support the Administration's priorities for the FY 2018 Budget, including job creation by supporting technology transfer activities that may lead to new business opportunities for private industry. The program is also supporting research to address Administration priorities related to maintaining and improving our water and power infrastructure by partnering with the U.S. Army Corps of Engineers to foster research projects to develop technologies that extend the operating life and reduce maintenance costs of Reclamation's structures. The Administration priority related to energy from all sources is supported by research that ensures we are maximizing reliability, reduce maintenance costs, and exploring new energy development opportunities. Research on safety is ensuring our workers can perform their jobs safely and securely with some projects supported through partnership with the Office of Naval Research.

The Desalination and Water Purification program priorities include development of improved and innovative methods of desalination, incorporating efficient water-energy nexus solutions into desalination processes, and reducing the costs in order to expand new water supplies in a sustainable manner and thereby relieve stress on drought stricken communities, Western rural communities, Native Americans, and Western river basins. The research and testing funded out of this program supports the Administration's priorities for the FY2018 Budget, including job creation by supporting innovative new solutions that spur the creation of new businesses by entrepreneurs and advances our competitive edge in the area of water treatment and desalination.

Central Valley Project Restoration Fund (CVPRF) - \$41.4 million

This fund was established by the Central Valley Project Improvement Act, Title XXXIV of P.L. 102-575, October 30, 1992. The budget of \$41.4 million is expected to be offset by discretionary receipts totaling \$41.4 million, which is the maximum amount that can be collected from project beneficiaries under provisions of Section 3407(d) of the Act. The discretionary receipts are adjusted on an annual basis to maintain payments totaling \$30.0 million (October 1992 price levels) on a three-year rolling average basis. The reduction is the result of the three-year rolling average provision and the lower collections scheduled in FY 2018. The budget of \$41.4 million

for the CVPRF was developed after considering the effects of the San Joaquin River Restoration Settlement Act (P.L. 111-11, March 30, 2009) which redirects certain fees, estimated at \$2.0 million in FY 2018, collected from the Friant Division water users to the San Joaquin Restoration Fund.

California Bay-Delta Restoration Fund - \$37 million

The 2004 California Bay-Delta Restoration Act authorized multiple federal agencies to participate in the implementation of the CALFED Bay-Delta Program as outlined in the August 28, 2000, Record of Decision (ROD) for the CALFED Bay-Delta Program Programmatic Environmental Impact Statement and Environmental Impact Report. This legislation directed the implementing agencies to undertake a set of broadly described programmatic actions identified in the ROD to the extent authorized under existing law. In addition, the Act authorized \$389.0 million in Federal appropriations for new and expanded authorities. The Water Infrastructure Improvement for the Nation Act (P.L. 114-322) dated December 16, 2016 reauthorized the CALFED Bay Delta Authorization Act through FY 2019.

The FY 2018 Budget of \$37.0 million implements Reclamation's priority activities pursuant to the Act. This budget supports actions in the Interim Federal Action Plan under the following program activities: \$2.2 million for Renewed Federal State Partnership, \$4.7 million for Smarter Water Supply and Use, and \$30.1 million to address the Degraded Bay Delta Ecosystem.

Policy and Administration - \$59 million

The \$59 million budget will be used to: 1) develop, evaluate, and direct implementation of Reclamation-wide policy, rules, and regulations, including actions under the Government Performance and Results Modernization Act; and 2) manage and perform functions that are not properly chargeable to specific projects or program activities covered by a separate funding authority.

Working Capital Fund

This fund is operated for the purpose of managing financial activities such as acquisition and replacement of capital equipment, cost recovery for services provided to others, fleet management, administration of information technology services, and recovery of indirect costs in the Technical Service Center, Mission Support Organization, and regional and area offices. The fund is credited with appropriations and other funds for the purpose of providing or increasing capital. The fund operates on a self-supporting basis through user charges that are deposited in the fund. It is through the Working Capital Fund that Reclamation pays for many Departmental Centralized services.

This completes my statement. I would be happy to answer any questions.

Mr. SIMPSON. Thank you all for your testimony and, again, thank you for being here today. Just to get a bit of housekeeping out of the way, first, Mr. Lamont, can you tell the committee when we can expect to receive the fiscal year 2018 budget justification materials, including the J sheets?

Mr. LAMONT. Yes, Mr. Chairman. We are working diligently to get those to you as soon as possible. I regret that we are in a position that we have not been able to get them to you. We are working diligently with the Corps and with my staff and obviously with the Administration to get these cleared and get them to you as soon as possible. You have my commitment to do that.

Mr. SIMPSON. Any idea what length of time we are looking at?

Mr. LAMONT. We are hoping, if you will allow us, to provide you the first batch next week.

Mr. SIMPSON. Okay, thank you. For both the Corps and the Bureau, the Trump administration as well as the former Obama administration has promoted alternative financing as a tool for infrastructure development. This committee has been supportive of exploring this option but has also made it clear that Federal policies should be fair and equitable. We should not operate a system whereby a wealthy non-Federal sponsor receives a disproportionate share of Federal assistance.

For all four of you, do you agree that we should avoid policies that allow non-Federal sponsors to buy their way to the front of the Federal funding line and how have your agencies been taking these equity concerns into consideration as you explore alternative financing options? Go ahead.

Mr. LAMONT. Mr. Chairman, I will take that first. Clearly, with constrained Federal resources we are looking at every opportunity to partner in a cost-shared environment not only with our studies but obviously with our construction program. There is no preferential treatment to the project sponsors that may have resources that others may not have. We want to make sure that we are looking clearly at the need for the project and that we can defend it in addition to economics, but also from a public safety and health standpoint.

General SEMONITE. Mr. Chairman, I will just add that the fiscal year 2017 appropriations bill specifically says that we need policy in this area. We are a big advocate of P3s; we think there is a lot of merit here. On the other hand, we would like to be able to make sure that we understand what those rules are and how do we do this in the right way to avoid exactly what you are asking. So right now we are working with Mr. Lamont's office, to continue to be able to figure out how can we put some policy in effect. That language was very specific. Other than Fargo Moorhead, we are basically on a hold right now until that policy is done and we would like to work throughout the Administration and with your staff to continue to figure out what should that policy look like.

Mr. SIMPSON. Appreciate that.

Mr. CAMERON. Mr. Chairman, fundamentally, it is the technical and economic viability of a project they need to control, so we look at those aspects certainly first and foremost. We are also, much like the Corps, promoting public-private partnerships (P3). In fact, on May 9 in Denver, we held a daylong session with an overflow

crowd of I think more than 200 individuals from a wide variety of sectors, who are interested in having conversations with us about public-private partnerships and, you know, we look forward to leveraging everyone's dollars to move forward on good projects for the country.

Mr. MIKKELSEN. And as part of the P3 conference that we held in Denver, in conversations with people on sidebars, we also came to the understanding and realization that we have some folks out there, like you are talking about, that have access to private financing. And we would like to actually promote those opportunities for those particular people as much as possible so it actually frees money up for those people who may not have those same income streams or those opportunities for financing.

Mr. SIMPSON. Thank you. And I agree with you, General. We need to develop a policy in this area because otherwise, while I am very supportive of P3s and attracting private funding to some of these opportunities and for infrastructure projects and stuff like that, if the people that have those resources available move to the front of the line, it would be devastating, I think, across the country, and a bad policy. So we need to sit down and figure out how we are going to do this and how we are going to include that, those opportunities.

For the Corps, over the past several years the committee has worked to increase funding for the Corps to supplement inadequate budget requests. Congressional intent has been for the agency to use these funds for additional work in the year provided on a broad array of projects, not to forward fund fiscal—figure fiscal year needs of a limited number of projects. Do you expect to make any allocations of the fiscal year 2017 funds that will not be obligated by the end of this year?

Mr. LAMONT. Mr. Chairman, we have been putting together the work plan. We are looking at what we could obligate and what we could do for the remainder of the fiscal year. There is the possibility there could be funds that could slip into the next fiscal year, but that was not our intent, to focus on prefunding, if you will, for '18.

Mr. SIMPSON. But you were going to try to use those funds in this fiscal year to the extent you can?

Mr. LAMONT. Yes, sir.

Mr. SIMPSON. Okay. As you are all well aware, invasive species can cause significant economic and environmental damage. In the Western United States, the spread of quagga and zebra mussels are of particular concern. Can you please discuss the ongoing efforts at each agency to address the concerns and prevent the spread of these invasive species?

Mr. CAMERON. I will start off from the Interior Department's perspective. Secretary Zinke is very personally aware, given his own experience in Montana, of the risk of invasive species, both aquatic such as zebra and quagga mussels while also forest insect pests and in rangelands weeds as well.

We, early in the Administration, heard from Governor Otter in Idaho expressing his great concern about the Columbia River Basin potentially being infected by zebra and quagga mussels. We have been working very closely with the Western Governors Association

and those Pacific Northwest governors' offices to cooperate with the Corps, with our sister Federal agencies, and with the State governments in an effort to keep zebra and quagga mussels out of the Columbia River Basin.

Regional estimates are that it would represent about a half-a-billion-dollar annual hit to the Pacific Northwest economy, on par with the damage that they have done in the Great Lakes where zebra and quagga mussels fully infest the region. The Secretary is one of the three co-chairs of the National Invasive Species Council along with the Secretary of Agriculture and the Secretary of Commerce.

We actually plan on having the first meeting in a decade of the National Invasive Species Council in conjunction with the Western Governors Association meeting in Whitefish, Montana, on June 28, to talk about regional efforts in collaboration. More specifically, the Bureau of Reclamation's budget includes a four-and-a-half-million-dollar increase to try to protect the Columbia River Basin, realizing that some of the best ways to do that are to keep the mussels from moving north out of Lake Mead or Lake Powell or Lake Havasu, for instance.

So the Department's budget as a whole exceeds \$100 million for invasive species. We recognize that it is a significant ecological issue. More than 40 percent of our endangered species are endangered because some invasive has done something to them, for instance.

So I appreciate the question, Mr. Simpson, and look forward to working with you and all members of the subcommittee to address this significant national problem.

General SEMONITE. Chairman Simpson, really the accolades here go to the Department of Interior and the States for the great work we have done. We are just in support and this is mainly a program for watercraft inspection. Last year we had \$3.75 million in it. This year there is \$5 million to be able to make sure that we have water inspection stations in the States of Idaho, Montana, Washington, Wyoming, and Oregon. Those stations are up and running. The first one turned on in February. They came on from March to May, and this is the ability to be able to get down and check the boats and be able to make sure that we are doing every single thing preventative we can so we do not have a problem down the road. We do not see any problems. We are very, very strong supporters of that program.

Mr. SIMPSON. We do have, those are inspection stations, but we do have the wash stations installed and so forth at Lake Mead and—

General SEMONITE. Yes, sir.

Mr. SIMPSON. Okay. Mr. Aguilar.

Mr. AGUILAR. Thank you, Mr. Chairman. General, you talked in your testimony about modernization and I wanted to shift a little bit to some local permitting. Any modification, as you know, to facilities constructed by the Corps requires a 408 permit. The county I live in, San Bernardino County, currently has thirty 408 permits submitted to the Corps. The vast majority of these are related to projects from cities and developers such as storm drain connec-

tions, bridge widening, utility lines. That has taken several months for these permits.

What type of thought can the Corps give to streamlining the process and making it a little bit more simpler for something like a storm drain connection that was planned in the design of the facility?

General SEMONITE. Representative Aguilar, great question. We are committed to try to figure out how we can continue to push delegations down to be able to streamline this more. The challenge you have if you push everything down to the lowest level, there is some chance that you might have people making different decisions and we could be accused of not necessarily being consistent. If you retain everything at the highest level, then obviously everything is going to take an awful long time. So where is the sweet spot of how much you delegate down?

Right now we have five major issues we look at in 408s. We have already delegated three of those back down to either Division Commanders or District Commanders, and our staff is committed to continue to figure out where else can we continue to delegate. We also have a special focus now on how long does it take to do some of those 408s. Some, as you might imagine, might have national precedent, so those are the ones we have to keep at Headquarters, but you have my commitment to continue to look across the board on how we can empower, delegate, and set up our subordinates to be able to work this faster, not just in 408s, but the entire regulatory program. Our regulations and our permitting are taking too long and we have got to figure out how to continue to be able to support the taxpayers of getting those decisions earlier.

Mr. AGUILAR. When it comes to 404 permits for you or Mr. Lamont, has the Corps looked at exempting maintenance work on constructed facilities that are maintained by local agencies needing 404s as identified as necessary during Corps inspection process?

General SEMONITE. Sir, I do not know the exact answer to that, but I would love to get with you and figure out exactly where that applies and then come back and have my team lay out the 404 process. The 404s are other ones we are looking at continuing to try to expedite, but I am not sure exactly the cause of your question and I want to make sure I get you a good answer.

Mr. AGUILAR. We can put some more detail and submit it to you as well.

General SEMONITE. Sounds great, sir.

Mr. AGUILAR. For everyone. Many of the Western States have experienced extreme swings in precipitation recently from severe droughts in the past few years to above average rainfall and snowpack. How does this extreme shift in precipitation affect Corps and Reclamation projects and how have your agencies responded to these circumstances and the funding implications based on that weather?

Mr. CAMERON. I will take the first shot at that. So there is great deal of regional variability. As you know, Mr. Aguilar, California got a lot of rain this winter. Unfortunately, most of that rain went into the Pacific Ocean. So one of the things that we are talking with the State of California very aggressively about is exploring opportunities for new storage, so that if we are lucky enough in fu-

ture years to have a wet, rainy winter, we can store more of that water so that it is available for California cities and California's farmers during the summer.

In the Colorado Basin, we had a good snowy winter in the northern part of the basin. However, we still have drought conditions in the Colorado and we are working very closely with all the Colorado Basin States on a drought contingency plan, realizing that we cannot assume that next winter will be as snowy in the Rockies as this winter. And it is really important for all the States and the Federal Government to coordinate and move ahead aggressively, domestically and with Mexico, on the drought contingency plan.

General SEMONITE. And, sir, let me follow up on Mr. Cameron's answer. Really three things we are looking at: extreme rainfall, sea level rise, and prolonged droughts. What that is really causing, is for us to be able to go back and look at what are the historic trends. What are we doing to look at our predictive models that are out there and how do we utilize policy tools to be able to make sure that we can continue to be informed to put operational solutions in?

We have the ability to be able to do short- or long-term deviations as to how to operate these big systems. We have what is called a Water Control Manual for basically any big river system. We have, you know, very, very deliberate processes for how much water do you let in and out. But exactly what Mr. Cameron said, we must be adaptive to a degree to figure out how can we optimize the ability to be able to take care of water that we do have and continue to be flexible. And if we are so locked into a bureaucracy that says do not change because it is too hard to do that, we must continue to be able to make sure we are responsive based on the needs of the climate conditions.

Mr. AGUILAR. And, Mr. Chairman, if I could, one year of or a good winter of rain and snow does not necessarily alleviate all of our concerns following some of the worst drought that we have seen in about 160 years. As of mid-May, Lake Mead was 136 feet below full pool and is just under 40 percent full and over the last 10 years its averaged 1,100 feet elevation and it is 20 feet below that right now. That is only 5 feet above our trigger point where we have to start taking actions on our drought contingency plan.

Lake Powell is also suffering. It rests at just under 3,600 feet which is 108 feet below full pool. So we are not, we are definitely not, out of the drought cycle or situation, particularly in the Colorado River.

Mr. AGUILAR. Thank you. Thank you, Mr. Chairman.

Mr. FLEISCHMANN. Thank you, sir. Wish to thank each and every one of the panelists today for your testimony. And General Semonite, I thank you so much for your vocal support for critical projects like the Chickamauga Lock, which is in district, and for visiting with me personally and for your commitment. As a matter of fact, I believe you have actually visited the Chick Lock, so I thank you for stepping up in a very short period of time of this prioritization.

If I may, sir, Chickamauga Lock is a very important project. It is an integral component of the inland waterways system and it would keep 150,000 trucks off of our roads, keep the cost of ship-

ping of goods low for the many businesses that rely on it, and it is, of course, a very environmentally sound and safe inland waterway transport system that it would support. While I am excited about the ongoing work, I think we have received funds I believe over the past 3 years and I have actually witnessed the progress at new Chick Lock, I am concerned that the fiscal '18 budget does not include full funding for the inland waterway trust fund and the funding would be limited to the Olmsted project in Ohio. That means the Chick Lock is not currently slated to receive the critical funding needed to build on the current momentum. Please explain if you will, sir, the reasoning behind the amount allocated for these projects, sir.

Mr. LAMONT. Mr. Fleischmann, I will be happy to take that question.

Mr. FLEISCHMANN. Yes, sir.

Mr. LAMONT. I had the opportunity back in late February to actually visit Chickamauga Lock myself. And I understand, as a professional engineer, the situation there, basically a concern with the aging in infrastructure; I think that typifies it around the Nation.

To be frank with you, sir, in formulating the President's budget, what we were looking at is the high-performing broad projects, which basically comes down to the benefit-cost ratio being 2.5-to-1 or greater at a 7 percent discount rate. And that has been the criterion within this Administration and prior Administrations.

And I would say that it is not only the economics, but I alluded to this earlier with Chairman Simpson, we would need to look at, with each individual case, the condition of the infrastructure and whether there is imminent danger or failure, for example.

So, that is the one message I want to deliver, is that it is not based purely on economics, but we would also look, I am talking globally of our infrastructure in the Corps of Engineers, if there is any imminent failure, we want to make sure that we are funded to do the proper rehab.

Mr. FLEISCHMANN. Yes, sir. And I am sure you are aware the existing lock is an older, antiquated New Deal structure, and it has had some failures. Actually the Corps has done a very good job in maintaining that. It is like a sick patient. So, I look forward to working with the Corps towards getting a new Chick Lock completed hopefully by 2022 or 2023, and we look forward to working together with you.

Mr. LAMONT. Yes, sir. I witnessed the deflections with the miter gate and I saw the post-tensioning 10 feet apart, and that is pretty significant. I agree with you.

Mr. FLEISCHMANN. Yes, sir. Yes, sir. One follow-up question. I believe one of the reasons it is important that we return to regular order is to provide certainty for critical infrastructure projects, such as the Chickamauga Lock. My question, and either one of the gentlemen can answer this, will the Corps be able to release the funds in time for fiscal '17, so that projects like Chick will be able to provide funds before the contract runs out?

Mr. LAMONT. Yes, sir.

Mr. FLEISCHMANN. Thank you. I appreciate that. At this time I would like to recognize, Mr. Joyce, the gentleman from Ohio, 5 minutes.

Mr. JOYCE. Thank you, Mr. Chairman. Mr. Lamont and General Semonite, thank you for being here. I have a few questions pertaining to the dredging issue in Northeast Ohio. By way of background, the maintenance of the Cleveland Harbor, which includes the Cuyahoga River shipping channel, is vital to Ohio's and Cleveland's economy and many thousands of good-paying jobs. As is the case at other ports on the Great Lakes, dredged sediment in Cleveland has been placed upland for reasons of sediment quality.

That has been the practice for decades. More recent developments include the enactment of the State of Ohio law, which prohibits the placement of dredge material in Lake Erie, effective in 2020. The State's findings that the dredged sediment does not meet State water quality standards and would harm the fishing industry by raising PCB levels in fish, the judgment opinion and order of the U.S. District Court judge in favor of the State's position with respect to fiscal year 2015 dredging, successful efforts by the port to maintain confined disposal facility capacity, and the enactment of Section 1189 in WRDA 2016, pertaining to the Federal standard.

Given all of this, I feel strongly that the Army Corps should work with principal stakeholders to craft a long-term solution for upland placement and sediment reuse whenever possible.

First of all, the fiscal year 2017 funding level for the Cleveland Harbor is 5.85 million. I see the recently released Civil Works budget calls for 6.2 million for operation and maintenance of the Cleveland Harbor. Is that sufficient funding to dredge the Cleveland shipping channel and complete the upland placement of the dredged material this year?

General SEMONITE. Sir, first of all, I agree with you, we definitely need a long-term solution. We cannot continue to be able to work this way and let the courts make these decisions. We must be able to bring all the people together to figure out what is in the best interest of both the State and the Federal standard.

As you know, there is a decision out there. The Corps has not finalized a decision as to what we are going to do with respect to the judge's decision in May. We are still working with the Department of Justice as to what exactly our position is going to be. Once we determine that, then we will have to figure out what the bill is that will be incurred, and then how are we going to be able to care of that bill?

Right now in the '17 budget and the '18 budget we have not budgeted money for the judge's decision. We will have to go back in and figure out what happens based on how the Department of Justice and the Corps' litigation continues to play out.

I have been on the ground, I have a General Officer now down there working every couple weeks with the district, to get with the port to be able to make sure we can figure out what is in the best interest of the Federal Government and the State government in order to meet those requirements and to be able to continue to be able to work this out.

The challenge we could have is that if, in fact, we have a higher standard, that is going to cost more money. Right now the normal way we dispose of dredged material in the Cleveland Harbor costs \$9 a cubic foot. If we were to go to an upland placement across the board, the cost is \$21. So it is more than twice the amount. We are

trying to make sure that we are doing what the Federal regulations require, and so, therefore, do not impose additional costs back on the taxpayers. We are committed to continue to work with you and your team, so to be able to find a consensus here.

Mr. JOYCE. I appreciate that, but the court order was fairly clear, was it not?

General SEMONITE. Sir, and again, this is where we have to figure out what we are going to do with respect to the court order. We have not made that decision yet.

Mr. JOYCE. Again, the court order was fairly clear. Was it not, General?

General SEMONITE. It was with specific respect to Cleveland Harbor for the fiscal 2015 dredging year.

Mr. JOYCE. Okay.

General SEMONITE. It only was a very, very targeted decision.

Mr. JOYCE. I appreciate that, because it was a limited issue at that time that the court had to consider.

Second, I recall that when dredging finally got started last December, only a portion was completed before the weather and equipment brought a halt to the dredging, which finally resumed earlier this spring. What is the timeline for completing the dredging of the Cleveland shipping channel this year?

General SEMONITE. Congressman, I can get back to you with specific details, but my staff has told me that we will meet the December dredging timelines, and we should be able to make the standard that we have communicated to the port that we will continue to come through and have that dredging done by December.

Mr. JOYCE. Finally, the most recent surveying by the Corps reveals that significantly more sediment will need to be dredged from the river than was anticipated last year. How does the Corps plan to manage the increased load in terms of funding, the actual mechanical dredging process, as well as the CDF storage site?

General SEMONITE. As far as additional funding, if it is the same standard, we will be able to accommodate that in our budget. The challenge will occur if, in fact, there is a higher standard where everything will have to be placed upland. And so I really want to come and work with you to be able to tell you exactly what our numbers are. I have no interest in holding anything back. We will lay this out to you so you know exactly where we are.

And a lot of it goes back to the standard that we are applying, which is an EPA and Corps of Engineers Federal standard as to where things should be placed. And that is what we utilize.

Mr. JOYCE. Well, I appreciate that. And somewhere in the city right now is the CEO of ArcelorMittal, and they cannot be held hostage because they cannot get the ships down to the—

General SEMONITE. Sir, that is never the intent. We are certainly not going to hold that up.

Mr. JOYCE. I appreciate that, and I am not saying you are, but, while there is a feud between governmental agencies, they still have, people working and steel to be produced, which is very important activity for the United States.

General SEMONITE. Congressman, the dredging will happen. The question is, where does that dredge material go? That is the only issue. So the people that are using that channel are certainly not

going to be held hostage. We will commit to ensure that we are dredging on our timelines, unless there is some natural reason why we cannot dredge.

Mr. JOYCE. Great.

General SEMONITE. We owe that to you, and the shipping industry has to have some predictability. It is certainly not our intention to cause any kind of confusion that would not allow that predictability.

Mr. JOYCE. I am not saying you are trying to cause any confusion, I am just trying to clear this up, because governmental agencies should not be the cause of any of these problems.

General SEMONITE. Yes, sir.

Mr. JOYCE. We need to have everybody work in concert. That is why we have the GLRI, which under Chairman Calvert's authority does so well at making all of the agencies work together.

I see I am out of time, Mr. Chairman. I apologize.

Mr. FLEISCHMANN. Thank you. The gentleman yields back. I recognize Ms. Herrera Beutler for 5 minutes.

Ms. HERRERA BEUTLER. Thank you, Mr. Chairman. All right, this is more specifically for you, General, with regard to biological opinion. Recent district court decisions have significant implications for the Columbia River Federal Power System, affecting my district and actually Mr. Newhouse's and others here.

Could you, please, discuss briefly the status of the court ordered buy-up for the Columbia River Federal Power System, and what are the funding implications of this court order?

I also have a follow up about NEPA and additional spill to get in here. If you would like I could give them now, and you could hit it all at once.

General SEMONITE. No, if you want to give me your second question first, then I will answer the other one.

Ms. HERRERA BEUTLER. The District court order directed a comprehensive environmental review of the operations related to the system. The court and reclamation, along with BPA, are co-leads on this environmental impact statement process. Can you please describe the current status of the effort, the expected schedule for major milestones, as well as funding requirements for each agency?

General SEMONITE. We just closed the comment period. All three agencies are working very, very well together. We received over 400,000 comments, so what we are continuing to work through that judge's order to be able to make sure that we are transparent and we are taking all those pieces back in.

I do not have the exact date here, and I will find it in a minute. I think we are right on schedule; it was going to be the end of June of '17, to be able to continue to get a preliminary investigation, and then I think it is December 17 for the final investigation. I will double check and make sure I get you exactly the update of that status.

Ms. HERRERA BEUTLER. And let us see, spill, additional spill. The court recently ruled on a motion for injunctive relief ordering the agencies to work with the plaintiffs to develop a plan to implement increased spill in 2018. Can you please provide an update on activities to date? Are there concerns, and what is being done and what

can be done to alleviate this issue? And do you know what funding will be necessary to implement these efforts?

General SEMONITE. And Congresswoman, I am not aware of that one, so I am going to have to get back with you on exactly the details of that specific issue.

Ms. HERRERA BEUTLER. Well, I mean, it is pretty—the injunctive relief motion was somewhat recent, but it is pretty critical for talking about spring 2018. So, yes, I would love to have an update on that.

I mean, we spill a lot as a region. Ratepayers pay a lot to protect those wild runs, but we also expect to rely on that power, and protecting that access and that resource is very important to the folks and me, in the region. I still have a couple minutes, so I am going to move on.

Earlier this year, and this is for you, General—you are really important to our way of life as you have noticed; we pay a lot of attention to you all—the District Court ordered to develop a process and a schedule for sharing information on planned capital projects at the four Lower Snake River Dams, in case plaintiffs wanted to file to stop these projects while the NEPA review of operations of the power system is ongoing.

Mr. Lamont, this could go for either of you. Has the Corps developed this process, and has the court approved it? If so, please briefly describe what would be required of the Corps.

Mr. LAMONT. Congresswoman, as General Semonite has indicated, I do not want to misspeak on this one. What we would like to do is work with your staff and understand the concern a little better, and we will get back to your staff immediately.

General SEMONITE. We are definitely very aware of the decisions. The Lower Four Snake Dams: we are tracking exactly what we need to do to be able to lay out what the future conditions of those dams could be. But as to the spill and some of the other issues, I would much rather come and give you exactly where we are on this and lay this out to you and your staff in great detail.

Ms. HERRERA BEUTLER. I would appreciate that, in part because we have seen this movie before with regard to requiring basically more of an effort to look at the dams and whether they should be there. And getting this right and being on top of this, each of these questions, these are all going to be used. So, I want to make sure that you are following this very closely, and I would expect a detailed update on this.

And I am out of time. So, with that, I thank you, Mr. Chairman. I yield back.

Mr. FLEISCHMANN. Thank you. The gentelady yields back. At this time I would like to recognize Chairman Calvert for 5 minutes.

Mr. CALVERT. Thank you, Mr. Chairman. There was an incident in 1993 and caused about \$22 million in damage to Old Town Temecula in my district. Today, those damages would be much greater. We are in construction with the Corps on a project which will provide 100-year flood protection with the cities of Murrieta and Temecula.

Please understand that these populations have quadrupled since the project feasibility study where significant numbers of homeowners, businesses, infrastructure which remain vulnerable to

flooding, and we need to address this as soon as possible. To continue construction and keep this project on schedule we need \$2 million in fiscal year 2017 continuing construction funds to complete the second reach of phase 2 project, and to complete the LRR.

Mr. Lamont, General, can you comment to me what you will include in this fiscal year 2017 funding in your work plan? And we will send the reprogramming request forward as quickly as possible to keep the Murrieta Creek Project on schedule.

General SEMONITE. Congressman, we are very aware of this project and the importance of this. We have spent over \$20.4 million on this, and agree that the last \$2 million are very important. Right now it is our recommendation that that is funded in the fiscal year 2017 work plan to be able to take care of that \$2 million.

And there is also that \$400,000 to be able to continue to be able to reevaluate the benefit-cost ratio. Obviously Reach 4 is the one that is hard to do here, so that is where we are going to study to see if maybe the economics could make it happen. I have to be honest with you, though, that is probably a stretch on the benefit-cost ratio.

Mr. CALVERT. I have been working on this since I have been in Congress, 25 years, and I would like to get it done in my lifetime. This is an important project to the region. I think once the LRR is complete, it will prove up that this is a viable project and the cost-benefit ratio is there. Thank you for your answer, and I appreciate you working with me to get at least this reach complete.

I also have a Reclamation issue. As you are aware Reclamation has reinitiated consultation with CVP and SWP, smelt and salmon biologic opinions, for operations for those projects. As you know, the recently enacted WIN act requires that Reclamation ensure that any project contractor that desires will be included in the reconsult as described in section 4004.

Have any of the contractors made such a request and Reclamation provide assurance that any requesting contractor will be included as an applicant?

Mr. CAMERON. Mr. Calvert, we have had conversations with a number of the contractors. We are aware of the provision that you just described. We are, in fact, planning a meeting in the next week or two with interested contractors, to hear from them exactly how they would like to participate in these processes going forward.

We definitely plan to engage with them much more heavily, and much more substantively than they have had an opportunity in the past under the previous legal environment.

Mr. CALVERT. Now, we have been waiting in California for a long time to increase our water supply and build more storage, which was referenced just a while ago. Can you update me on the status of the storage feasibility studies, since we started those 20-some years ago, and when will we be finally done with them?

Mr. CAMERON. As you know, Mr. Calvert, there are several in queue. The feasibility report on raising Shasta was actually delivered to Congress. We are actively exploring cost share partners for the Shasta Project that would cost roughly \$1.3 billion, so we would not plan on taking it all out on Mr. Simpson's budget. So we are looking for some cost-sharing partners there.

Probably one of the most promising opportunities is the Sites Reservoir, which is north of the delta, as you know. For both the Sites and also the Temperance Flat opportunity on the San Joaquin, there are active consortia of water users in California who are pursuing potential funding through the State water bond that was recently passed. And we are working very closely with those project proponents. Our goal is to make sure they have the information they need when they need it so they can apply for and hopefully secure State water bond funding for those two projects.

We are also looking at the Los Vaqueros expansion project. That one is on a somewhat slower track and we are also exploring some changes in the San Luis Reservoir, a number of issues there, both water quality and potential water storage enhancement. It looks like from the State's perspective, Sites and Temperance Flat would appear to be the highest priorities, so we are trying to be responsive to the priorities as defined by the water users in California.

Mr. CALVERT. Right. Thank you. Just one quick question. This is on Oroville Dam and the issue of safety of dams in general. In February, as you know, Oroville Dam almost crumbled, which would have been a disaster certainly in Northern California. And we are lucky that the dam did not give way.

In light of this can you and the Corps and the Bureau talk very quickly about dam safety programs? What assurances can you offer that facilities that are owned and operated by both Reclamation and the Corps are safe? I mean, obviously, nobody saw this on Oroville Dam a year ago. And this, this could have been a complete disaster. General?

General SEMONITE. Sir, I will give you an update. I did testify in the Senate a couple of months ago on dam safety and I got very, very up to speed on our dams. We have 715 dams. I feel very confident that we will be able to continue to address the ones that are the highest risk. We rank our dams one through five. We have a very few that are in the worst category and we are fully funding those to continue to get those dams repaired. We have a few more, maybe 10 or 12, that are actually DSAC Level 2 dams. We continue to be able to rank those high up in our budget.

Right now, I think that the main thing is as you talked about safety. It really goes back to the risk out there, and how do we continue to manage that risk, be able to make sure we are either putting more engineering solutions there, or to be able to advise people where that risk is. And a lot of that goes with how do you operate that dam and how much water do you hold?

We are committed. We have over 1,500 people that are dam certified safety experts. While Oroville is not a Corps of Engineers dam, we are deeply involved in order to advise and also to learn what could we take from Oroville to make sure we are looking at our dams to be able to take the lessons learned. We are working on a dam in Mosul, Iraq, right now, to try to continue to figure out how to fix dams.

Mr. MIKKELSEN. Thank you, Mr. Chairman. Very briefly, Reclamation has probably one of the most state-of-the-art facilities for safety of dams work in the world. The Dam Safety Program continues to be one of our highest priorities. We inspect all of our dams, we conduct safety evaluation of existing dams, and then our

safety of dams (SOD) program makes sure that those priorities are implemented on a regular basis. We have got about I think, without looking, we have got about \$90 million in the budget this year for our Safety of Dams program. And the very first question I asked when I arrived in town was does Reclamation have any Orovilles? And I was assured that we absolutely do not.

Mr. CALVERT. Thank you.

Mr. FLEISCHMANN. Thank you, Mr. Chairman. At this time, I would like to recognize the gentleman from New York, Mr. Serrano, for 5 minutes.

Mr. SERRANO. Thank you, Mr. Chairman. I am sorry I was late. I was at another hearing, which is the story of our lives.

Gentlemen, I wanted to remind you and thank you on behalf of my constituents for the great work you have done on the Bronx River. I usually do not use these hearings to talk about my district, but rather in general about our country and how it affects my district. But it is really incredible, 15, 20 years ago, when you started helping us clean that river up, we found things in there that I cannot mention in public, many illegal things and even a Jeep. And now a beaver has returned and a second beaver returned. I do not know why, but they named the beaver José. And so you can figure out for yourself.

But I understand that the war continues and it has just become an area that you did not believe you could have inside a city. I mean, with running ways and places on the side, it is just wonderful. Anything new in the budget that speaks to the Bronx River and what the timeline is?

General SEMONITE. I do not have any new information, but we will certainly come and lay this out for you. I am not prepared to talk about the Bronx River today.

Mr. SERRANO. Okay.

General SEMONITE. I am not aware of any other budget updates.

Mr. SERRANO. I saw something, but I did not want to tell you I saw it.

Mr. MIKKELSEN. Sir, I echo General Semonite's situation here. I am not aware of that either, but I will work with the Chief of Engineers to make sure we are working with your staff.

Mr. SERRANO. Okay.

General SEMONITE. I will tell you, though, sir, when I was a Division Commander at Fort Hamilton back in '06 to '09, we found the first beaver and you and I were here about 7 or 8 years ago, talking about that beaver. So it goes back to the potential. There are a lot of opportunities to be able to continue to make these river systems better across the board, not just for water quality, but for recreation and for economic development.

Mr. SERRANO. Absolutely, and to our colleagues, the whole story of the beaver, which one of our colleagues knows about, is that a beaver—New York City was a beaver pelt colony in its beginnings, and a beaver had not returned to New York in 200 years until these folks and the community and the folks cleaned up the river. And so it became a major story, National Geographic, the whole thing.

And so they now find a second beaver, right. So they tell me to name the beaver. Now, I do not want to be a wise guy and name

the beaver, so I tell them, no, why don't you name the beaver to the Bronx Zoo? They put it on the Internet. You know what they named the beaver? Justin Beaver. Yeah. And I lost all my publicity very quickly.

General SEMONITE. Congressman Serrano, there is money in the budget for maintenance. It is not an awful lot, but I will have my staff come lay out to your staff exactly what, not only this year, but long term, how we see the Bronx River, and we will give you a full update.

Mr. SERRANO. Thank you so much. I do not know if you are familiar with the Caño Martín Peña in Puerto Rico, my other congressional district. And I wanted to congratulate you and the local folks, ENLACE, for the strong efforts in dredging the Caño, which is just a big issue, a monumental issue on the island. When do you expect this project to be completed and what are you asking for to complete it, if you are?

Mr. LAMONT. Mr. Congressman, preconstruction engineering and design has been initiated and it is continuing. There are no funds in the President's budget for any preconstruction engineering and design right now nationwide. What we are doing is focusing on completing our 16 feasibility studies where there have been funds appropriated over the last 2 fiscal years, and we are focusing also on the continuing construction and completions of our projects. I will work with you sir, on looking at Caño Martín Peña as far as any additional needs, and the potential for any reprogramming that might be needed to move this project along. I understand your concerns and the situation down there.

Mr. SERRANO. If I heard you correctly, you said there is no new money for these kinds of projects in the President's budget, but you have an opportunity to complete the ones you started already? Is that what you are alluding to?

Mr. LAMONT. The emphasis is on the prior appropriations that have been made in trying to complete or continue PED nationwide on the projects that would hopefully compete for new start construction consideration in the next budget cycle.

Mr. SERRANO. All right, thank you. Thank you, Mr. Chairman.

Mr. FLEISCHMANN. Thank you, sir. At this time, I would like to recognize the ranking member of this subcommittee, Ms. Kaptur.

Ms. KAPTUR. Thank you very much, Mr. Chairman, and I apologize for being late for this distinguished panel. I had to testify this morning at the Department of Commerce on a very daunting situation that faces our steel industry and it affects thousands of workers in my State, so I had to be there.

I read your testimony, gentlemen. Thank you so much for your service to our country and the great work you do. Each of us can point to successes in our own particular States and regions that you and the Corps have been a part of, so we value your work.

I also hope you will be a major player as the President proposes a new infrastructure bill, whatever that is. And I do not agree with Mr. Mulvaney's decision to cut your budget by \$1 billion-plus and I am hoping that some of that can be changed as a result of our action and work on the infrastructure bill. It is one of the greatest job creators we could have in this country.

I wanted to, also, General Semonite, you talked just briefly referencing a dam in Mosul. I wanted to ask you, would it be a lot of work or could you provide me some information about how the Corps links to other countries around the world in civil works projects. Just a brief summary, for example, I am particularly interested in places that are tender, such as Ukraine, and whether or not there have been any Civil Works agreements, either working with other parts of the military like our State partnership programs. Do you ever link to Guard Civil Works units that are doing work in those places? I do not really understand that set of relationships and I would really like to. Is that a hard thing to produce?

General SEMONITE. Not at all, ma'am. We do this all the time. We are in 110 countries. We work for obviously the ambassadors out there, for Department of State. We work for our combatant commanders, the four-star generals that are actually out there that are warfighters. They give us security cooperation requirements, then we go back out. The Civil Works team may go and do a climate change seminar in China. Right now, we are working in Vietnam to be able to help Vietnam to work in the Mekong Delta, because we know how to do it from Mississippi River.

There is money that is actually given to us in the budget, called "234" money, a very small amount, but it allows us to be able to take some of the things we have learned in this country with Civil Works and to be able to use that in the interest of diplomatic relations with other countries. We will lay this out. We do this every month on a regular, normal rhythm for the rest of our combatant commanders. We are very proud of what we do in other areas.

Ms. KAPTUR. I am very, very interested in this, particularly as concerns Ukraine, Lebanon, and Jordan. And so you may not be doing anything there, but if you are, I would like to know what it is and enhance my own understanding. So I thank you very much for mentioning that this morning. I want to associate myself with the questioning and the concerns of Congressman Joyce. Both of us share the Lake Erie coastline in one way or another and the issues of dredging. We have talked about this in many of our private meetings with you. But I really hope that we as a country can come to a place where we look at the beneficial reuse of sediments, whether they are those dredged through your good works or coming at us through various municipal treatment plants, be it water or sewage. The world is starved for organics. We in the Lake Erie region have the largest dredging budget singly because of the topography and the fact God gave me the largest watershed in the entire Great Lakes. So we have challenges.

But I keep looking at this and thinking of a private company like Scott's, for example, on steroids to deal with the volumes that we are talking about. And with modern technology, isn't that possible for us to find a market solution to these vast amounts of material?

So this is the 21st century. Over at EPA, they have this under the Resource Conservation and Recovery Act, RCRA, they have the authority to try to work on beneficial reuse. Those titles have not been exercised, zero, in several decades. So I am just one of the members out there looking at this amazing resource between Erie, Pennsylvania, as you may know, and Kalamazoo, Michigan, in that

big smile. It is the largest landscape industry in the United States of America and they need material all the time. And I am just thinking there has got to be a market solution here that benefits many players. And I appreciate what you have been doing with Cleveland Harbor and trying to crawl our way to some other way of behaving. I do not know if you have a comment on this, but in the area of beneficial reuse, it is really strikingly important in a region like ours.

Mr. LAMONT. Representative Kaptur, when I met you about a month ago, we talked about this very subject. I agree with you, this is a wasted resource. It is an opportunity, depending on the quality of the resource, for beneficial reuse. If it is a polluted sediment, that might be another consideration.

But up and down our coasts, we have heard from a number of project sponsors asking while you are dredging your harbors, is there the opportunity to put sand on the beach if it is of suitable quality? Now, that is not exactly your issue, but in your district, and certainly the sediment relative to the landscaping industry, there is a potential opportunity, I agree.

We have looked into our existing authorities, if there is an opportunity, for example, hypothetically, the dredgers would want to partner with the landscape industry or nursery industry and then partner with the State and the State could partner with the Corps of Engineers to maybe have a win-win situation here.

General SEMONITE. And just to add on to that, ma'am, WRDA 2016 directed us to do 10 pilots in this area. We are very excited about those pilots. We have gotten letters in from different States and we are going to make a decision by the end of '17. We are going to have a series of webinars to discuss the criteria, how are we going to decide what the pilots will be. We are going to be very, very open and transparent. But these are great opportunities to do exactly what we are doing. I am violently agreeing with you because we must figure out how we can use that material beneficially to save all of us money.

We are doing a pilot right now in Toledo that is working very well. We want to be able to figure out how we can save taxpayers money and maybe even get public interest in this so we can then empty some of these areas that are full of dredge material over the years.

Ms. KAPTUR. Thank you for your aggressive leadership on this, General. We truly, if there is some way I can help, please let us know, and I know Mr. Joyce would feel that same way. Am I out of time?

Mr. FLEISCHMANN. I would be glad to let you ask another question, sure.

Ms. KAPTUR. Thank you very much, Mr. Chairman. You know, I am going to go to the Asian carp and we do not want this critter in our Great Lakes, \$7 billion fishery. And when we last met, Mr. Lamont and I, thank you for meeting with us, you indicated you are waiting for a new Assistant Secretary for Civil Works to be confirmed before releasing the report. Is that still your position today and to your knowledge, has anybody been nominated yet?

Mr. LAMONT. No, ma'am, unfortunately, no one has been nominated to date. I continue to check with our White House liaison on

this matter every week, every Monday, in fact, and I am hopeful that we are able to release the report. I share your concerns about the economic and environmental consequences of the Asian carp migrating up into the Great Lakes system.

Ms. KAPTUR. Do you actually need that Assistant Secretary to be in place in order to release the report?

Mr. LAMONT. What I am trying to do is to work that so that is not the case, so that we are not in a delay situation, which we have been, unfortunately.

Ms. KAPTUR. And my understanding is correct, the report is complete?

Mr. LAMONT. The report—it is a draft report, ma'am, which would still need to go out for public review. And I want to work with our counterparts and the White House to make sure that we get that opportunity to get the report released.

Mr. JOYCE. Will the gentlelady yield?

Ms. KAPTUR. I would be pleased to yield to the gentlemen.

Mr. JOYCE. Can you elaborate on this or any other Army Corps efforts that you may have underway to prevent the further spread of the Asian carp?

Mr. LAMONT. We have met with the folks who have asked that this report be put on hold. We have expressed our concerns relative to the ability to get all sides of the story out there. What I mean by that is to get a draft report out on the streets so that the folks who are in favor of, for example, a modification to the Brandon Road Lock, would be able to comment on it, and the opposing interests would also be able to do that. I think we have made inroads, they understand that shareholder input and stakeholder input, if you will, is critical to the ability to complete this report. I agree with you. I am trying to do everything I can to convince the Administration that this needs to be done.

Mr. JOYCE. Thank you, I yield back.

Ms. KAPTUR. I just wanted to say that at one point you stated the release of the Brandon Road Report has been deferred pending further coordination and, in a way, you tried to answer Mr. Joyce there. What is the coordination? You say a draft report. What has to happen in order to release it? If it were not so vital to the entire Great Lakes, I would not be pressing, but it is.

Mr. LAMONT. No, I understand fully your concern. I share that concern, and I want to do everything I can, and hopefully I am not dancing around this. I am trying to do everything I can to convince the Administration to release the draft report, to elicit all stakeholder input on this, so that we can come to a potential solution that would serve everyone's interest. That is critical.

Ms. KAPTUR. All right. And I would just state for the record to the members that may not be aware of this. In the President's budget submission, he has eliminated the Great Lakes Restoration Initiative, and that is where the money is coming from to date, and it is not the right place to fish out the carp south of Chicago—move them 30 miles south just for the moment—but we do not have a regular funding source without a biological control to keep these things out. So, one of my questions is, either directly now or in an answer back to us, assuming that we cannot fix the Great Lakes Restoration Initiative—I hope we can—what area of your budget

could we plus up in order to move those fish back down the Mississippi? We have to.

Mr. SERRANO. Will they kill the beaver? I will take them.

Ms. KAPTUR. I was going to ask, can you send us some beavers? I do not know.

Mr. SERRANO. I am saying, if they kill the beaver, I won't take it, but I will take them if they do not kill the beaver.

Mr. LAMONT. Representative Kaptur, we do have enough funds to complete the draft report to get to a final feasibility report. That is one critical step. We might be able to work with you and your staff on looking at our Operations and Maintenance account on possible opportunities there.

Ms. KAPTUR. All right.

Mr. LAMONT. General Semonite and I would be happy to meet with you on that.

Ms. KAPTUR. Thank you. Thank you, Mr. Chairman.

Mr. SIMPSON. Mr. Fortenberry.

Mr. FORTENBERRY. Thank you Mr. Chairman. My questions will be directed to you, General Semonte. I am sorry, Semonite.

Mr. FORTENBERRY. I am sure you have been challenged quite a bit on the 408 permitting process. In Nebraska, we have a very unique situation in which we have municipal authorities called the Natural Resource Districts, which are taxing authorities, which are held accountable by elected officials who run for the Board of the NRDs, in which we call it. There are various regions of the State. They do an outstanding job of flood control, meeting the demands for recreational projects as well as environmental restoration. A number of their projects enjoy extraordinary high numbers in terms of the benefit-to-cost ratio. You have supplemented their efforts on a number of occasions.

There is a debate, of course, about the 408 permitting process as going beyond the original intention of the law in interfering, potentially, with the expedited issuance of initiation of new projects. That is one concern.

Second is, is there consideration in which you can enter into joint financing agreements so that projects that are already evaluated by our municipal taxing authorities, governance structures, that are shovel-ready and ready to go, could be entered into with a supplement from the Federal Government and jointly shared by, again, the local taxing authorities so that we can expeditiously move shovel-ready study versus waiting for piles of money to be set aside and the huge opportunity cost that results from a slow progress on important projects?

General SEMONITE. Congressman, we are very concerned about the speed of which we are doing permits, whether it is a 408 or all of the rest of the permits that we do under NEPA and 404. We have committed to be able to delegate some of these decisions. That allows the local commanders, the Colonels out there on the ground, to be able to make some of these decisions. There are about five different types. We have already delegated three of those down to the field, and our staff is looking at how we can continue to empower the team on the ground. The other thing is there are authorizations to be able to allow us to take monies; and what I probably need do, because it is a complicated area, is to ask my regulatory

staff to come meet with your staff and look at the specific boards you are talking about and what can we do when it comes to funding. I do not want to get ahead of the P3 discussion here, because it is really not P3, but if there are some ways we can expedite it, anything that we can do to speed up the process, we are committed to do that.

Mr. FORTENBERRY. Well, two things. In the 408 permitting process, there is a debate about whether you have taken authorities beyond where they were originally intended, which, again takes away authority from local initiatives.

General SEMONITE. True.

Mr. FORTENBERRY. Second is the aggressive partnering, and perhaps a new innovative way that would allow, again, municipal structures like we have uniquely in Nebraska that are dedicated to the similar mission. So these are held accountable to the public through elected officials and, again, they have their own taxing authority in which if there could be joint financing, we are ready to go and go quickly, that would meet the same objectives as the Corp of Engineers has.

General SEMONITE. And sir, we want to work with you on this. We just have to make sure we have figured out what our authorities are, what can we do, and if we can find better ways of doing things for the right reason, we are all in.

Mr. FORTENBERRY. So, are you indicating a shift of culture in the Corps in this regard? Are you looking at specific changes in the regulatory atmosphere, or all of the above?

General SEMONITE. I think talking, personally, very holistically—I have been in the Army 37 years; I have been in the Corps 12 years. Over time, we have moved to where an awful lot of things come to Washington, DC, for decisions. And so, in my 4 years, on my watch, wherever I can continue to make those decisions at the right level, that people are informed, they have the capacity, they have the authority to be able to do that, whatever I can do on my watch to streamline, we want to be able to do that.

Mr. FORTENBERRY. Well, again, I am talking about governance authorities that have the same mission, or similar parallel missions that you do, that are ready to go, and, obviously, this affects us the most, so we are going to try to do it right.

General SEMONITE. And sir, it is just a very complicated area. I do not want to get in front of anything we are doing for EPA or anything on which the Committee has given us other guidance. I just want to make sure we research this and figure out how can we find a common path ahead.

Mr. FORTENBERRY. Okay, can we then see your staff within the next month or so?

General SEMONITE. Yes, sir, the next couple of weeks, 2 weeks.

Mr. FORTENBERRY. Thank you, General. Thank you, Mr. Chairman.

Mr. SIMPSON. Ms. Wasserman Schultz.

Ms. WASSERMAN SCHULTZ. Thank you, Mr. Chairman. My initial question is of Assistant Secretary Lamont and Lieutenant General Semonite because I am kind of at a loss here. Because it appears that funding for other ecosystem restoration work by the Corps in South Florida, including the Everglades Ecosystem, you know, the

non-CERP South Florida ecosystem restoration funding has been cut by nearly \$30 million. Are we really not funding non-CERP projects under the Corps construction account at all or is it that the Corps is supposed to perform all the construction work on non-CERP projects with only the \$1 million allocated by this budget?

Mr. LAMONT. Ma'am, if I could get some clarification? You say, "non-CERP," could you give me an example?

Ms. WASSERMAN SCHULTZ. Like the C-111 South Dade project which helps to prevent groundwater from seeping out of the Everglades National Park. I mean, that is an example of a non-CERP project.

Mr. LAMONT. There is not a concerted effort to slow down the Everglades work and related work in that area. What we are trying to do is to continue an orderly process. And I know you may be looking at the top line number, for example.

Ms. WASSERMAN SCHULTZ. Yes. But here is why, Mr. Lamont, because non-CERP projects in fiscal year 2017 were funded at \$30.5 million, and that still was not enough. How is the Corps going to continue to work on these vital projects with \$1 million? I mean, really? We are never going to finish restoration of the Everglades if—

Mr. LAMONT. My understanding is these non-CERP projects are anticipated to complete with prior year funds. That has been the emphasis. I do not want to give you the impression that we are trying—

Ms. WASSERMAN SCHULTZ. Are you suggesting—

Mr. LAMONT [continuing]. To slow things down.

Ms. WASSERMAN SCHULTZ [continuing]. There are enough prior year's funds? There were not in fiscal year 2017.

Mr. LAMONT. Ma'am?

Ms. WASSERMAN SCHULTZ. There are enough prior year funds to complete non-CERP projects?

Mr. LAMONT. Yes.

Ms. WASSERMAN SCHULTZ. Well, not so far.

Mr. LAMONT. If you need additional information, I will work with you on that.

Ms. WASSERMAN SCHULTZ. If you could show me, that would be wonderful.

Mr. LAMONT. Okay.

Ms. WASSERMAN SCHULTZ. And then I have a question for both of you about Port Everglades. Because you are zeroing out new starts, and we need construction funding for these projects across the country, the proposed budget requests a steep decrease in overall Corps construction funding.

For example, Port Everglades, in my district, requires widening and deepening. We are authorized in the water bill. It is critical to our region that the Port Everglades Channel is widened and deepened. We have to go from planning, and design, and engineering to the construction. How many new starts does the Corps need to address all navigation construction projects that should be started in fiscal year 2018, including Port Everglades? And, also, how much construction funding would be required to appropriately address all of these projects in fiscal year 2018?

Mr. LAMONT. Let me try to address first your concern on Port Everglades. As with all Civil Works projects, they need to compete, and the competition is based on a benefit-cost ratio at a 7 percent discount rate. No matter what Administration, that is the criteria we must deal with.

My understanding is on Port Everglades that preconstruction engineering and design is fully funded in the work plan for \$2.8 million. We are trying to keep this project moving along. It has already been authorized. I worked personally on defending the Chief's report on this project in my former position, so I know exactly what you are saying. I have been to Port Everglades. I have seen the amazing amount of traffic through that small port.

Ms. WASSERMAN SCHULTZ. And if you recall, we were significantly delayed by an error in the formula that the Corps made themselves. And so, we are already behind the eight ball, significantly behind where we should be, where construction funding should be in the pipeline already because we should have made the last water bill.

Mr. LAMONT. Yes, ma'am.

Ms. WASSERMAN SCHULTZ. And it was because of the Corps' error that we did not.

Mr. LAMONT. Along with, unfortunately, all the mitigation requirements that the project—

Ms. WASSERMAN SCHULTZ. Yes.

Mr. LAMONT [continuing]. Drew out through our coordination process. I agree with you.

Ms. WASSERMAN SCHULTZ. And lastly, you mentioned in your statement, Lieutenant General Semonite, that the budget gives priority to coastal ports with high levels of commercial traffic. Again, Port Everglades is one of the top 10 busiest ports in the United States, but the budget allocates only \$420,000 in Corps' Operations And Maintenance. What criteria was used in crafting the amounts allocated in this budget? Because I can tell you right now, \$420,000 is sorely insufficient for the operation and maintenance of such a vital port like Port Everglades. Either one of you can answer.

General SEMONITE. Congresswoman, there is a large backlog in O&M. It is over \$2 billion right now, so it is just that we cannot do all the things we need to do across all the ports. And if there is anybody that is a fan of both the coastal ports and the inner waterways when it comes back to the imports and the exports and the economic value of this country, it is me. I have been involved in a lot of them. This is when we must keep pushing to try to get all the right funds we need to get to these projects.

Ms. WASSERMAN SCHULTZ. Would you gentlemen mind, as I wrap up, Mr. Chairman, coming in and giving me a more granular briefing?

General SEMONITE. Not at all, ma'am, that would be great.

Ms. WASSERMAN SCHULTZ. Thank you so much. I yield back.

Mr. SIMPSON. Mr. Lamont and General, can you please discuss the status of the Columbia River Treaty? I know you got a new line item in this budget, \$9.5 million for Columbia River Treaty, 2024 implementation. Where are we on that?

General SEMONITE. Sir, I will give you more details, but our staff, Major General Spellmon up in the Northwestern Division, is work-

ing this to be able to continue, to be able to stay on track, to be able to get the plan in place.

Right now, we are looking at some challenges with the storage and what is in the old plan with prepaid storage and what is going to happen with new storage. We are concerned about how that is going to work, and we have got to be able to make sure that we can set the conditions in the next couple of years so that we do not lose any equities with the United States as we continue to renegotiate this with Canada. But, I will certainly come in and lay this out or have the Division Commander do that as well.

Mr. SIMPSON. Okay.

General SEMONITE. It is ongoing. We have the best team working it up in the Northwestern Division to be able to ensure we are protecting the equities that we have had in some of the prior treaties.

Mr. SIMPSON. I would appreciate an update on where we are on the Columbia Treaty negotiations. But the \$9.5 million is just to do the work necessary? Continuing to negotiate this treaty and being involved in it and so forth?

General SEMONITE. That is my understanding.

Mr. SIMPSON. And what we have done in the past has just come out of the Army Corps budget, and this time we have line itemed it out?

General SEMONITE. Yes, Mr. Chairman. Because there is so much extra effort that is really required. We have a lot of people working this, so I think that is where there is a delineation now to be able to make sure that we have dedicated funding so we do not end up somehow getting that effort cut.

Mr. SIMPSON. Okay.

Mr. CAMERON. If I could, Mr. Chairman. The Department of the Interior is coordinating with the Corps and the State Department as well, because we clearly have interest in this issue.

Mr. SIMPSON. Yes. Mr. Mikkelsen, you mentioned in your testimony that the flooding that is going on currently in Western States, if it is not a drought, it is a flood. It seems like nothing in between. And as you know, we had a record amount of snow in a lot of the Pacific Northwest and, unfortunately, the melting pattern has been rather rapid.

What is the Bureau and what is the Army Corps doing about the flooding that is going on, particularly in Idaho and other Western States? As you know, we have had washouts of roads and everything else. It is a mess up there right now.

Mr. MIKKELSEN. Mr. Chairman, Reclamation has been monitoring reservoir elevations, reservoir levels in conjunction with releases ever since we started with runoff this spring. And to the maximum extent possible, given the limitations of the system and the existing snowpack, we have probably minimized flooding to the tune of hundreds of millions of dollars at this point.

For instance, just in Idaho, on the Boise River we are running about 9,700 cubic feet per second (CFS) through downtown Boise. That is about as much as we can run, but we have been running that for a long time to just make sure that we do not have to have any surge events happening.

Mr. SIMPSON. Good.

General SEMONITE. Mr. Chairman, very, very similar. A lot of it is, pre-storm, pre-event, how we can continue to be able to draw down to the right level.

Our teams are out on the ground working very, very closely with local and State authorities. If there is damage out there, then we can utilize our FCCE money that has been appropriated. We are able to ensure that we are able to repair some of those damages if that is the case.

I think the main thing also is being very transparent, and we have a lot of systems that we can put on the web, so everybody can see where we see the water going, and continue to try to be advised of what is out there.

Mr. SIMPSON. Thank you. Who is next? What order are we in? We are going to start the second round. Ms. Kaptur.

Ms. KAPTUR. Thank you, Mr. Chairman. General Semonite, I might ask your help in the following way. I know that General Toy is going to be doing hearings throughout the Great Lakes, and I would like to use this opportunity to see if you might be able to help me.

The dates we have been given are dates that it is impossible for a member to be there because we are voting, and I would very much like to gather all of the mayors from my long district along the lake to meet with him and deal with some of the significant issues we face on our watershed.

So if you could just take—maybe you could help make that happen if there is some way to reschedule or add another day or something. There is really a lot of pent-up desire to meet with the general. So perhaps you could take that message back for me?

General SEMONITE. We will definitely take it on, ma'am. Whatever we can do if it is General Toy, or if we need to have other people there. If you want me to fly in, it is no problem. We would love to be able to meet with the stakeholders.

Ms. KAPTUR. Thank you very much. I have a couple of other questions, if I could here. Do you, General Semonite, do you have any relationships on the Great Lakes related to energy production?

General SEMONITE. So I probably need to get back with you on the details. There are a lot of areas where we might have a dam where we have a lock, let's say, and we allow a private vendor go in and put a small hydro in one of those. A good example, on Lake Erie, I know we have one of those.

That way we are able to save the taxpayers money because we take some of the electricity that that vendor uses, and we run our piece, and we do not have to pay O&M to some other power vendor. And therefore, he is able to do O&M for the lock and dam. This is something that is probably 20 or 30 years old.

But there are probably a lot more of those that are out there, but wherever we have been able to find ways of bringing in private entities, we have certainly done that. Of course, we do the same thing for recreation. I know your question is really on energy, but if you want I will have General Toy to lay out the information for the whole Great Lakes region and figure out where are we, and then if you think we should be doing something more than we are doing within our authorities, I am more than willing to look at those opportunities.

Ms. KAPTUR. All right. Well, you know, we call our committee Energy and Water, and I am very jealous, really, of other parts of the country when I see what is going on and some of the challenges we face. But with new energy technologies and so forth I do not know how the Corps really thinks about that, and I would be very benefited by a briefing on that and examples from our region, and perhaps a few examples from others.

They are very different systems, but with some of the technologies and facilities that you manage it might be very interesting to look at the energy piece, even though albeit it very small, in the Great Lakes. But nonetheless, it would be interesting to see your history there.

General SEMONITE. This goes back to a question the Chairman asked earlier about P3, and I do not know if everybody was here, but we need to have policy on this. We have a lot of people that walk in, private companies, and say we would like to be able to tack something on the back side of your dam because we are able to make money on the use of the water.

Well, that is great, but, on the other hand, I need to make sure that the interests of the Federal Government are taken care of as well. So there cannot be any free lunch. We must be able to figure out how to share that risk. And if there is a way, without damaging the capabilities of the project, that we can continue to be able to get some degree of private funding if that would then bring down the O&M budget.

We are looking at a lot of these things now. It does go back to the fact that we must have some good policy on exactly how do we take the P3 piece and work that, even at a much smaller level.

Ms. KAPTUR. All right. Do you have any relationships with the Saint Lawrence Seaway Development Corporation either related to the lock operations or energy production?

General SEMONITE. I know that our Commanders have relationships. I think they are actually on the Commission, so they continue to look at water flow, ecosystem restoration, both our Buffalo district, as well as General Toy and his role there as the Lakes and Rivers Division Commander.

I am not sure of the formality of exactly what that gives them with respect to authorities, but I know that we have a very close relationship with the Commission.

Ms. KAPTUR. All right. I would be very interested in a briefing perhaps with our Great Lakes members to hear a little bit more about what that is, how that works.

General SEMONITE. Yes, and maybe the best thing we can do is if there is ever a time where you have either the Governors together, or the stakeholders together that we fly in with a team and lay out what we are doing in ecosystem. What we are doing on energy.

We are systems people. We want to look at everything because it all works together, and whatever we do for navigation has impacts back to the ecosystem. The more that we can talk about all the variables that are in these systems, then everybody does not take a parochial viewpoint as to the one thing that they care about.

They must understand there must be plusses and minuses across the entire system.

Ms. KAPTUR. All right. My final question relates to the Soo Lock and we wrote a letter to the Corps expressing our concerns about how you were conducting the economic reevaluation of the Soo Lock. Could you comment on the methodology that is being used in the reevaluation, and if that reevaluation will be finished within the 2-year time schedule?

General SEMONITE. It will be done within the time period. We are working funding issues right now. We want to make sure that it gets the money it continues to need to be able to finish. There is just a small amount of money there.

As far as the exact methodology, it includes consideration of a conveyer system consistent with approaches taken on other navigation lock projects throughout the Corps. We are looking at least cost, technically feasible alternatives. Again, this is another thing that is a relatively complex brief, but if you want to, we can certainly schedule some opportunity to lay out exactly what that methodology is.

And, again, we want to be informed. If there is something that we should be doing that we are not, we want to make sure that we are listening to the bright ideas of where, other people need us to go. I think we have been very transparent, but that is a relatively regional area, and I just do not have the expertise at this level to answer your question.

Ms. KAPTUR. All right. I know that Congressman Joyce and I co-chair the Great Lakes task force, and Congressman Huizenga is the representative from the House on the International Joint Commission now, and all of us have a deep interest in the Soo Lock and its future.

General SEMONITE. I will get you a factsheet right away. I have my factsheets here that I can walk you through. It is relatively detailed, so we can give you something in a couple days, and then if you think you want a lot more, we will come and walk through exactly where we are going to go on this.

Ms. KAPTUR. All right. Thank you. Thank you very much. Thank you, gentlemen.

Ms. SIMPSON. Mr. Aguilar.

Mr. AGUILAR. Thank you, Mr. Chairman. It is my understanding that the Army Corps has played a role historically in past Department of Homeland Security-related border infrastructure projects along the Southern border of the United States assisting with technical expertise, testing oversight, and contracting out certain assignments. Could you give us a run through of those past efforts, what you anticipate your role will be in fiscal year 2018?

General SEMONITE. Congressman, you are right. We have worked very closely with the Customs and Border Patrol not only in the United States, but where they have gone to other countries and tried to help. We have built border stations in the country of Georgia, for instance.

What we have done recently is mainly repair work on what we call "the fence." There were some smaller portions, both personnel fences and vehicle fences, that were put in by us back in 2006. Some of those need maintenance or need additional work. Some of those were not completed in their entirety.

Right now we are working for the Customs and Border Patrol to go back into existing areas and mainly replace or finish the type of construction that was done back in 2006 to 2009. Again, we work for Customs and Border Patrol.

I do have seven large laboratories that are very good when it comes to hydraulics, when it comes to things like tunnel detection, when it comes to geospatial information. We have been asked by Customs and Border to partner and to be able to use the technology in those laboratories as they look at what the options are on a future construction of the potential wall. So right now we are offering our services to Customs and Border mainly in a design and technical advice type realm.

Mr. AGUILAR. What do you anticipate for fiscal year 2018 that support to Customs and Border Patrol being?

General SEMONITE. I think right now they have asked us to do about \$11 million in '17. I do not have the '18 number. I am sure that is in the budget. I just did not pull that for this hearing. We can certainly tell you that, but it is strictly a reimbursable basis.

The money would go to Customs and Border, and then they would contract us to do—

Mr. AGUILAR. You are a contractor for services?

General SEMONITE. Yes, sir.

Mr. AGUILAR. In providing that, if you are asked to flex up or directed to provide additional support it would come through that same similar type of line item, through CBP, appropriated and authorized through CBP, and then you would then contract that piece out? Whether it is the labs or whether it is, you know, physical construction for the repair portions?

General SEMONITE. Correct. If it is done in-house, we do not contract it. We would task our guys and then reimburse them. But what you are saying is correct. We would then acquire those services either with an independent contractor or with our own in-house staff.

Mr. AGUILAR. Okay. Well, I think that we will probably dig a little bit deeper on this discussion and ask you additional questions as we move forward.

General SEMONITE. And, Congressman, as we move forward we would provide whatever you want. I would just ask that when we do that, that we continue to be able to have the Customs and Border team there. We are very committed to be able to work underneath their direction and not to get out ahead of them.

Mr. AGUILAR. Sure. I appreciate it. Thanks, General. Thanks, Mr. Chairman.

Mr. SIMPSON. Thank you. And I thank all of you for being here today and for your testimony. As the ranking member said, this is the Energy and Water Committee, and obviously water is a very important aspect of the bill that we put together. And we have over the years been very cognizant, I think, as a Committee and really as a Congress on a bipartisan basis of sometimes the insufficiency of the request from either the Obama administration or from this administration and stuff.

And, you know, we have got a WRDA target that is about \$375 million or something like that, a million above what the request was for, and this Committee has worked very hard to make sure

that we give adequate funding to the important work that you do. And it is not because you all have sterling personalities, although you do. It is because of the important work you do and the recognition by members of Congress on both sides of the aisle that infrastructure is very important. So we want to work with you to try to devise a budget that is best for the Nation and the work that you do.

So I thank you all for being here today and we look forward to working with you.

Hearing is adjourned.

[Questions and answers submitted for the record follow:]

QUESTIONS FOR THE RECORD
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT
HOUSE COMMITTEE ON APPROPRIATIONS

**Hearing on the 2018 Budget Request for the U.S. Army Corps of Engineers
(Civil Works)
May 24, 2017**

DAM SAFETY

Subcommittee. The Administration and the Subcommittee have both recognized our most critical dam safety projects as being very high priorities for funding. In past hearings, the Corps has projected that funding requirements for dam safety needs would continue to grow, as our infrastructure continues to age, as we continue to refine our understanding of risks, and as design standards continue to evolve.

In general, what are the current projections for future funding requirements for the Corps?

Mr. Lamont. The Army Corps of Engineers (Corps) dam safety program addresses dam safety, seepage control, and static stability correction concerns at the 714 dams and appurtenant structures that the Corps owns and operates. The Corps evaluates the potential concerns at all of its dams, applies interim risk reduction measures where needed, and selects those dams that warrant further analysis. Based on its evaluation of the risk and consequences, the Corps then identifies which dams require construction of a more permanent structural measure to reduce the risk and consequences of a failure to a tolerable level.

Through this process, the Corps selects the work that the Budget will fund. Generally, once the Corps undertakes construction of a project, the Budget funds the work at the maximum rate that the Corps says that it can use funds efficiently and effectively, after taking into account any unobligated carry over balances, which is the capability funding level. The Fiscal Year (FY) 2018 Budget funds such work on seven projects.

Our overall approach is one of risk-informed decisions. This approach has significantly reduced and avoided costs. As the condition of each dam can vary over time, and will in part depend on the investments made over time in the structure, it is difficult to estimate which projects the Corps will undertake in the future, the order in which it will undertake them, or the cost of that work. However, in 2010 the Corps estimated that modifications to address the concerns that we are now tracking at our dams, and the concerns that may develop in the future, could cost around \$26 billion over 50 years. Since then, we have revised this estimate downward – to around \$24 billion in 2014; and to around \$20 billion in 2017.

The overflow of the Oroville Dam in California (requiring use of the spillway, which was also damaged) almost resulted in a major catastrophe with a loss of life and property.

Subcommittee. What assurance can you give the Committee that similar circumstances will not result with dams owned or operated by the Corps?

Mr. Lamont. There is always some residual risk that a structure will fail. The dam safety program enables the Corps to manage and reduce such risks at its dams.

The Corps utilizes a fully risk informed program that looks at potential failure modes, the likelihood that they could lead to breach of dams, and the consequences associated with a breach. As such, we remain vigilant to this kind of incident by employing regular and periodic reassessments of our dams that focus our investments on the most critical findings with the greatest risk. Following the Oroville Dam incident, we assisted the State of California in assessing the damage and determining the best courses of action for the state. We have used the lessons from Oroville to develop technical findings and improvements that we are implementing within our Dam Safety Program and sharing with our state and Federal partners.

Subcommittee. Mr. Lamont, for many years, the Corps testified that its budget request included capability level funding for all DSAC-I dams, with “capability” defined as the amount that could be obligated within the fiscal year. Last year, however, there was some confusion when the Administration changed its definition of “capability” but did not inform the Committee of that change.

For clarity, does the fiscal year 2018 budget request include the maximum funding levels that can be obligated within the fiscal year for all DSAC-I dams? If not, why not?

Mr. Lamont. The fiscal year 2018 budget funds the DSAC-I work at Corps dams that is ready for construction at the maximum level that the Corps can use efficiently and effectively, after taking into account any unobligated carry over balances, which is the capability funding level.

WIIN ACT IMPLEMENTATION

Subcommittee. The WIIN Act, signed into law in December 2016, included numerous authorizations for the Corps.

Could you please update us on the status of implementation of these authorities? Do you have a list of items that will require additional funding to implement? If so, could you please provide that to the Committee?

Mr. Lamont. The Corps has made significant progress in addressing the provisions of the Water Resources Development Act of 2016, which is Title I of the WIIN Act. We have issued implementation guidance for many of its provisions, and are in the process of preparing such guidance for other provisions. Once completed, we post this guidance on the Corps website. Nearly all of the provisions are authorizations for the Corps.

SELECTION OF FISCAL YEAR 2017 NEW STARTS

Subcommittee. Mr. Lamont, can you please explain how the new studies and projects directed in the fiscal year 2017 Act were selected? Are all of these new starts supported in the fiscal year 2018 budget request?

Mr. Lamont. The Boston Harbor, Massachusetts navigation project has a competitive benefit-to-cost ratio and continues to be supported in the FY 2018 Budget. It was selected on the basis of its economic justification. The Ohio River Shoreline, Paducah, Kentucky flood risk management project was selected due to its economic justification relative to other projects and because it could be fully funded.

With regard to the Charleston Harbor, South Carolina, Tampa Harbor, Big Bend, Florida and Jacksonville Harbor, Florida projects, the non-Federal sponsors at each of those ports has voluntarily demonstrated a substantial commitment to non-Federal investment via pending or in place advanced funds agreements. The non-Federal sponsor of the Tampa Harbor, Big Bend project has said that it will cover any remaining costs beyond those funded in the FY 2017 work plan. The Charleston Harbor, South Carolina, and Jacksonville Harbor, Florida projects did not meet the criteria for inclusion in the FY 2018 Budget.

Subcommittee. If there are some that aren't supported, can you please explain the reasoning for starting projects that don't meet budget criteria?

Mr. Lamont. We do not expect there to be any out-year Federal funding requirements for the Ohio River Shoreline, Paducah, Kentucky or the Tampa Harbor, Big Bend, Florida projects. The non-Federal sponsors for both the Charleston Harbor and Jacksonville Harbor projects have advanced funds agreements either pending or in place, which will allow them to fund these projects. The agreements do not commit the Federal Government to providing Federal funding in the future.

Subcommittee. Were there any projects not selected that did meet budget criteria?

Mr. Lamont. Yes.

Subcommittee. If you did not start as many projects or studies as directed in the Act, can you please tell us why?

Mr. Lamont. This only applied to new start studies and, in that case, priority was given to completing on-going studies, rather than to initiating new ones.

STATUS OF EMERGENCY FUNDING

Subcommittee. In December 2016, just over \$1 billion was appropriated to the Corps to repair projects across the country damaged by floods and other storms, such as Hurricane Matthew. The legislation required monthly obligation reports be delivered to the Committee, beginning no later than 60 days after enactment. To date, the Committee has not received a single report.

Mr. Lamont, why have we not received any information to date? When can we expect to receive the first report?

Mr. Lamont. The data are currently under review. I anticipate sending a report forward following this review of the data.

Subcommittee. General Semonite, can you please describe the status of work to be accomplished with this funding?

Mr. Lamont. The Corps is using these funds to address the impacts at eligible Corps and non-Corps projects of several storms, which occurred over a three-year period. The following table provides a status of funds:

Account	Enacted Total	As of 30 April 2017			
		Net Allotments	# of Projects that received an Allotment of Funds	Net Obligations	# of Projects with Obligations
Flood Control and Coastal Emergencies	\$419,891,000	\$82,501,285	64	\$27,438,035	14
Operations and Maintenance	\$259,574,000	\$112,812,082	72	\$35,112,565	32
Construction	\$54,827,000	\$3,235,000	6	\$1,219,295	4
Mississippi Rivers and Tributaries	\$290,708,000	\$42,340,821	10	\$1,087,895	6
Grand Total	\$1,025,000,000	\$240,889,188	152	\$64,857,790	56

HAMILTON CITY, CALIFORNIA, PROJECT

Subcommittee. Please give an update on the Hamilton City, California, project, including funding and schedule details relative to completing the project. Also, please detail any changes in the schedule or funding requirements that occurred in the past 18 months.

Mr. Lamont. The Hamilton City project is scheduled to complete in FY 2022. The scheduled completion date has not changed in the past 18 months. The FY 2017 Work Plan and FY 2018 Budget amounts provide sufficient funding for both levee work and revegetation work to maintain the project schedule. The Corps of Engineers reported to Congress in FY 2017 that the capability to use the budgeted amount was zero due to the fact that the revegetation contract was initially funded based on the assumption that the Corps would use a single multi-year contract, which it would award in FY 2016. Instead, the Corps will now incrementally award service contracts over time, as needed. Lack of additional funding in FY 2017 did not result in a change to the overall project cost or impact the scheduled completion time frame. The total project cost has increased by \$847,000 due to updated estimates for construction features and management.

Subcommittee. Will the fiscal year 2018 budget proposal of \$8,325,000 complete the project on the initial schedule?

Mr. Lamont. Yes.

CONGRESSMAN DAVID JOYCE

ASHTABULA HARBOR PROJECT

Mr. Joyce. In the FY17 Omnibus, the funding level for the Ashtabula Harbor in Ohio was \$2,315,000, which matched the President's FY17 Budget Request. The Harbor is integral to the steel manufacturing industry, and has served as an important ore and coal port for over a century. In the recently-released FY18 Budget Request, there doesn't appear to be a line item for the Ashtabula Harbor.

Was the project cut? If so, what does this mean for the maintenance of the Port of Ashtabula and for the surrounding community?

Mr. Lamont. No. Dredging performed in 2017 is expected to meet the navigation needs of the harbor through 2019.

CONNEAUT HARBOR PROJECT

Mr. Joyce. The USACE released its final Work Plan for 2017 on May 25th. According to the Work Plan, Conneaut Harbor was to receive \$3,000,000 for repair and construction of the East Breakwater End section. The President's FY18 Budget Request only included \$2,800,000 for Conneaut Harbor. Also, funding for Fairport Harbor was reduced to \$1,150,000 from \$1,700,000. The President's FY18 Budget Request included \$2,800,000 for Conneaut Harbor, in my district, which is different from the \$3,000,000 that was included in the Work Plan for 2017.

Can you please elaborate on what this difference in funding means for the work being done for repair and construction of the East Breakwater End Section, as opposed to having a steady pot of money for this project? Moreover, the funding for dredging of the Fairport Harbor was also reduced, from \$1,700,000 to \$1,150,000.

Mr. Lamont. The FY 2017 Work Plan provides \$3 million for engineering and design and construction of the East Breakwater End Section Repair and allows the Corps to repair the most significantly damaged area of the breakwater. The FY 2018 Budget includes \$2.8 million for Conneaut Harbor, including \$1.15 million for further repairs on the breakwater and \$1.65 million for harbor dredging. Conneaut Harbor is dredged every 2-3 years and the budgeted amount meets the harbor's dredging requirements.

With regard to Fairport Harbor, the Corps will use the FY 2017 funds to dredge the harbor, and expects that this will meet navigation needs through FY 2019. The Corps would use the \$1.150 million provided in the FY 2018 Budget to address other maintenance needs, including obstruction removal.

Mr. Joyce. What is the impact on dredging and maintenance of Fairport Harbor, based on this reduction in funding?

Mr. Lamont. None. Dredging that will be performed in 2017 is expected to meet the navigation needs of the harbor through 2019.

CONGRESSMAN DAN NEWHOUSE**REVIEW OF McNARY SHORELINE ACQUISITION IN WASHINGTON STATE**

Mr. Newhouse. The National Defense Authorization Act (NDAA) for FY2017 included language directing the Secretary of the Army to provide a report to the congressional defense committees by March 1, 2017, on the process by which the U.S. Army Corps of Engineers (Corps) acquired certain properties, specifically the McNary Shoreline, along the Columbia River in Central Washington State. The report was to include the specific legal documentation detailing when, how, and by what process the McNary Shoreline (as described in paragraph 2 of section 501(i) of the Water Resources Development Act of 1996 (P.L. 104-303; 110 Stat. 3752)) was acquired by the Corps in the mid-1900's.

I understand the Army Corps of Engineers' review of how the McNary Shoreline in Central Washington State was acquired by the federal government has been finished and is awaiting final approval from the Office of Management and Budget. As the final report has not yet been submitted to Congress, can you discuss the process the Corps' Walla Walla District undertook to complete the report?

Mr. Lamont. The Walla Walla District used geographic information system data (GIS) to determine which land parcels fell within the areas described in the Water Resources Development Act of 1996 (WRDA 96). Original hardcopy files of maps were retrieved and scanned into a digital format and reviewed for clarity and completeness. Using the real estate electronic database and GIS data, the District constructed maps and spreadsheets connecting the parcels with the lands identified in WRDA 96 for transfer. A report was then drafted explaining both the acquisition process and the affiliated documentation.

Mr. Newhouse. Did the report find that any parcels lacked adequate and appropriate documentation showing federal ownership of the land? If so, how many parcels were identified and what is the reason for the missing or incomplete documentation?

Mr. Lamont. No parcels were identified as lacking adequate and appropriate documentation showing federal ownership.

Mr. Newhouse. Did the review discover that any parcels along the McNary Shoreline had been acquired improperly or without adequate payment made to the original landowner?

Mr. Lamont. No. The review did not locate any parcels acquired improperly, or without adequate payment.

Mr. Newhouse. The FY2017 NDAA included a deadline of March 1, 2017, for the final report to be submitted to both the House and Senate Armed Services Committees. Can you discuss what factors lead to this deadline being missed? Additionally, when do you expect that this report will be finalized and provided to Congress?

Mr. Lamont. The McNary Shoreline Report was transmitted to Congress on June 8, 2017. The Army apologizes for the delay in transmitting the report.

COLUMBIA RIVER FEDERAL POWER SYSTEM – CAPITAL
PROJECTS

Mr. Newhouse. Earlier this year, a district court ordered the U.S. Army Corps of Engineers (Corps) to develop a process and schedule for sharing information on planned capital projects at the four Lower Snake River dams, located in Washington State, in case plaintiffs wanted to file to stop these projects while the NEPA review of operations of the Columbia River Federal Power System is ongoing.

Has the Corps developed this process and has the court approved it? If so, please briefly describe what will be required of the Corps.

Mr. Lamont. In January 2017 plaintiffs filed motions for injunction requesting that the court order the U.S. Army Corps of Engineers (Corps) to cease funding specific capital projects at the four Lower Snake River Dams pending completion of the NEPA and EIS process.

In its April 2017 ruling, the District Court of Oregon concluded that spending hundreds, tens, or even millions of dollars on the four Lower Snake River Dams during the NEPA remand period is likely to cause irreparable harm by creating a significant risk of bias in the NEPA process. Per the order, the Corps has developed a notification process and this process has been approved by the Court. In addition, the Court also ruled that specific projects (turbine replacements designed to improve fish passage) could proceed based on the balance of harms and public interest. However, it ordered the Corps and the National Wildlife Foundation (NWF) to develop a process and schedule for providing NWF with information regarding other planned projects at each Lower Snake River Dam during the NEPA remand period.

The approved “Notification Process” applies until such time that a Record of Decision is signed on or before September 24, 2021 as ordered by the Court. In accordance with this process, the Corps will provide information to NWF related to Capital Hydropower Improvement Projects, Columbia River Fish Mitigation (CRFM) Capital Projects, and other non-power Capital Projects (primarily Navigation) at the four Lower Snake River Dams that require an expenditure of more than \$1 million. The Corps must also provide notification as to expansions of certain capital projects of more than \$1 million to the total estimated cost of the project. NWF has 60 days from receiving information on capital projects from the Corps to file a motion for injunction should they have an issue.

As required by the Notification Process, the Corps provided information about thirteen Capital Hydropower Improvement Projects and one expansion of total estimated project cost on a CRFM Capital Project on June 8, 2017.

Mr. Newhouse. Is this capital spending at the lower Snake Dams is necessary for safe and reliable operation of the facilities for authorized purposes?

Mr. Lamont. Capital spending at the four Lower Snake River Dams will enable the Corps to maintain and operate them in a safe and efficient manner.

Mr. Newhouse. Would funding these activities bias the agency review of the potential for removal of these dams in the NEPA process, as the plaintiffs allege? What impacts could this decision have on safety, as well as important capital investments and infrastructure upgrades that may be needed at the four Lower Snake River Dams?

Mr. Lamont. No, the Corps' continued efforts to ensure the safe and efficient operation of the dams does not limit its discretion to evaluate a range of alternatives or reach a final decision based on the NEPA process, including options such as breaching one or more of the dams. The Corps recognizes that in any change that may be proposed for an existing water resources project there are always investments previously undertaken. Corps regulations (Engineering Regulation (ER) 1105-2-100, section 2-4) dictate that the evaluation of alternatives will not include past costs (or benefits). The Corps considers any expenditures, including capital, at any of its dam and reservoir projects that occur prior to an evaluation as "sunk" costs and therefore these expenditures would not be relevant to a recommendation on whether the dam and reservoir projects should be breached or not. Rather, in evaluating alternatives for the Columbia River System Operations Environmental Impact Study, the Corps, along with the Bonneville Power Administration, and the Bureau of Reclamation, will be evaluating future benefits and costs.

The degree of impact to safety, important capital investments, and infrastructure upgrades may vary depending on the specific capital project that may be enjoined by the Court. In addition, the Corps has prioritized these capital investments and asset management based on sophisticated asset management analysis for reliability and safety, followed by the development and planning of these projects. In many cases, significant investments of financial and staffing resources have already been made.

COLUMBIA RIVER TREATY

Mr. Newhouse. The FY2018 Budget Request includes a new line item called “Columbia River Treaty 2024 Implementation” funded at \$9.5 million. Can you please describe what the Corps plans to do with this funding? How did the Corps fund Treaty activities previously and why did you decide to establish a new, separate line item?

Mr. Lamont. These efforts were initially funded in FY 2017 under the Surveillance of Northern Boundaries Waters, Oregon line item within the Operation and Maintenance account to prepare planning documentation and analysis defining the rights and obligations of the United States under the Columbia River Treaty with respect to power production and flood risk management. A new line item was created in the Investigations account in the FY 2018 Budget to distinguish this effort, which we expect to last for several years, and is more closely aligned with the purposes of our Investigations appropriation than with those of the one for Operation and Maintenance. The FY 2018 budgeted funds will be used to prepare preliminary studies necessary to support Treaty planning.

CONGRESSMAN PETE AGUILAR**LOS ANGELES RIVER**

Mr. Aguilar. Now that the Upper Los Angeles River restoration project has been authorized, what's the Corps' plan for seeking appropriations for the project?

Mr. Lamont. FY 2016 and FY 2017 funding was provided to initiate and continue preconstruction engineering and design. However, a design agreement has not yet been executed with the non-Federal sponsor. Therefore, the current focus is on executing the design agreement and utilizing previously appropriated funds to initiate design.

Mr. Aguilar. The County of Los Angeles recently announced plans to review and revise its 1996 Master Plan for the entire LA River. Is the Corps contributing to that effort?

Mr. Lamont. The Corps is informally contributing to the County's update of 1996 Master Plan through participation in the on-going series of public workshops hosted by Los Angeles County Public Works.

Mr. Aguilar. The State of California has organized a Lower Los Angeles River Working Group on restoration downstream from the City of Los Angeles, has the Corps followed or engaged with that Working Group?

Mr. Lamont. Yes, the Corps participates in the Implementation Committee of the Los Angeles River Working Group in an advisory capacity on matters relating to Corps facilities and requirements.

PROTECTING LIFE AND PROPERTY

Mr. Aguilar. As it relates to feasibility studies for water resource development, conservation, and flood damage reduction, I believe that projects that focus on protecting life and property should possibly be given priority. Two examples of these types of projects include feasibility studies for the Del Rosa Channel and the Mission-Zanja Channel, both within the LA district of the Corps.

Does the Army Corp have the sufficient resources to complete studies like these in a reasonable amount of time should the funds be appropriated?

Mr. Lamont. Under its SMART planning process, the Corps is able to complete such studies in a reasonable amount of time.

QUESTIONS FOR THE RECORD
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT
HOUSE COMMITTEE ON APPROPRIATIONS

**Hearing on the 2018 Budget Request for the Bureau of Reclamation
May 24, 2017**

FUTURE FUNDING REQUIREMENTS

Subcommittee. The Administration and the Subcommittee have both recognized our most critical dam safety projects as being very high priorities for funding. In past hearings, Reclamation has projected that funding requirements for dam safety needs would continue to grow, as our infrastructure continues to age, as we continue to refine our understanding of risks, and as design standards continue to evolve.

In general, what are the current projections for future funding requirements for Reclamation?

The overflow of the Oroville Dam in California (requiring use of the spillway, which was also damaged) almost resulted in a major catastrophe with a loss of life and property.

Acting Commissioner Mikkelsen. The Bureau of Reclamation has currently identified necessary dam safety risk reduction actions at 15 facilities within our inventory of high and significant hazard potential dams. Reclamation anticipates an additional 8 to 12 dams will require initiation of dam safety risk reduction actions within the next 3 to 4 years. The scope and cost of potential modifications for these facilities has not yet been estimated.

Reclamation currently receives approximately \$88 million in annual appropriations for Dam Safety related activities. Approximately \$66.5 million is utilized for the previously discussed risk reduction activities. The remaining \$21.5 million is utilized for recurring risk management activities including examinations, performance monitoring, technical evaluations, and program management related activities for Reclamation dams as well as oversight and guidance of the Department of Interior Dam Safety Programs. The budget request of \$88.1 million fully supports all anticipated work planned for FY 2018.

WIIN ACT IMPLEMENTATION

Subcommittee. The WIIN Act, signed into law in December 2016, included numerous authorizations for Reclamation.

Could you please update us on the status of implementation of these authorities? Do you have a list of items that will require additional funding to implement? If so, could you please provide that to the Committee?

Acting Commissioner Mikkelsen. The authorities that apply to Reclamation that were included in the Water Infrastructure Improvements for the Nation Act (WIIN), as well as the status of work on each (in italics), include:

Sec. 3301. Prepayment of certain repayment obligations under contracts between the United States and the Weber Basin Water Conservancy District

Reclamation is completing administrative actions in preparation to accept and credit the prepayment from the Weber Basin Water Conservancy District. Concurrently, the Weber Basin Water Conservancy District is in the process of obtaining financing to make the prepayment to the United States.

Subtitle D (Sec. 3401)—Pechanga Water Rights Settlement

A signing ceremony is currently being planned to occur in the next few months. Implementation details are being developed among the Pechanga tribe and the Rancho California Water District, Eastern Municipal Water District, and the Metropolitan Water District of Southern California. Funds for the authorized trust fund are expected to be provided by the BIA.

Sec. 3601. Bureau of Reclamation Dakotas Area Office permit fees for cabins and trailers *The managing partners have implemented the permit fees for cabins and trailers.*

Sec. 3602. Use of trailer homes at Heart Butte Dam and Reservoir (Lake Tschida) *Reclamation is working with the managing partner, Tri-Cities Joint Job Development Authority (JJDA), to revise the trailer permit to incorporate provisions of the Act including trailer anchoring. Reclamation has met with the trailer owners regarding the permit, and they have reviewed the permit. It is anticipated JJDA will finalize the permit within the next month.*

Sec. 3605. San Luis Rey settlement agreement implementation

The Federal court proceedings have been dismissed, so that all lawsuits have been settled. The FERC license has been surrendered by the City of Escondido and Vista Irrigation District. The requirements of Section 104 of the 1988 Settlement Act have been satisfied. This means that delivery of settlement water can proceed as soon as the bill procedures are established. The details of the billing procedures are currently being negotiated with the San Diego County Water Authority, who will be delivering the water provided by the Metropolitan Water District. The San Luis Rey Indian Water Authority, City of Escondido, and Vista Irrigation District will also be included in the billing process. Reclamation will process invoices to the Indian Water Authority in order to pay Metropolitan for delivery of the settlement water.

Sec. 3607. Morongo Band of Mission Indians.

Reclamation is currently assessing what responsibility and role the agency has in regards to the land exchange for the Morongo Band of Mission Indians as outlined in the WIIN Act.

Subtitle G (Sec. 3701)—Blackfoot Water Rights Settlement

The Tribal membership approved the Act in April, 2017. The Federal Negotiating Team is meeting with the Tribe to commence implementation.

Sec. 3801. Reauthorization of Water Desalination Act of 1996

Subtitle J—California Water (Sec. 4001-4006)

Reclamation appreciates and acknowledges the operational flexibility that Congress solidified in the Central Valley Project through passage of the WIIN legislation.

Given the record setting wet hydrology in California this past winter, Reclamation has not had an opportunity to fully test the additional flexibility provided in WIIN. However, Reclamation is prepared to ensure timely and effective implementation of the provisions.

Reclamation will continue to work with Congress and Central Valley Project stakeholders to fulfill operation requirements of the legislation.

It is difficult to determine the impact the WIIN legislation had on Central Valley Project operations and initial allocations so far this year. The legislation outlines a process for documenting operational decisions related to the biological opinions, which provides transparency to stakeholders on the

scientific processes that go into making those decisions and resultant determinations. The impact of these types of improvements to communication are not quantifiable, but can be impactful nonetheless. Since the legislation was enacted, this process has not been fully tested, but it may become a factor in operational decision-making later this year as Delta inflows decrease and South of Delta demands increase. This could require the fishery agencies (National Marine Fisheries Service and U.S. Fish and Wildlife Service) to make determinations based on the biological opinions. These determinations would need to follow the process outlined above.

It is unknown what impact the WIIN legislation could have on South of Delta exports in future years. The operational provisions of the bill are aimed at drought years, when scrutiny on preserving and maximizing the use of water supplies are often at their highest. That said, regardless of year-type, Reclamation and the fishery agencies will work to fulfill the operational requirements of the legislation.

Sec. 4001. Operations and Reviews:

Secretary shall: provide “maximum quantity of water supplies” to CVP UandU SWP; implement pilot project to keep Delta Cross Channel open to “greatest extent practicable”, with data collection requirement; install a salmon deflection barrier with DWR; report to Congress on DCC gates pilot project results; adopt 1:1 IE ratio unless adverse effects are determined in writing; issue permit decisions within 60 days for temporary barriers or operable gates; complete water transfer NEPA and ESA within 45 days; enter joint USDANAS agreement on salt cedar on Colorado River; deadlines for review of proposals to change operations.

This year we have worked to keep the Delta Cross Channel open to the greatest extent possible. There is a need to work to develop an approach for how proposals would be developed and reviewed to change operations, which can allow for adopting a 1:1 Import Export ratio. Implementation effects will need to be revisited on a non-wet year.

Sec. 4002. OMR Flow Requirements:

Document any Old River and Middle River (OMR) less negative than greatest allowed; review and modify method of calculating OMR within 180 days.

This did not occur this year due to operations and hydrology being dominated by historic wet conditions. However, the agencies are working in assessing the OMR method of calculation.

Sec. 4003. Temporary Flexibility for Storm Events:

When capturing peak storm flows, not count such days toward the 5-day and 14-day running averages of tidally filtered OMR flow.

There is a need to work to develop an approach for how proposals would be developed and reviewed to change operations, which can allow for this temporary flexibility for storm events.

Sec. 4004. Consultation on Coordinated Operations:

Water contractors have access to consultation comparable to cooperating agencies. 10-year sunset.

Reclamation is meeting with contractors quarterly, has developed a draft stakeholder engagement plan, and is planning to engage with stakeholders in a formal process for idea generation for alternative development. In addition, Reclamation is planning to meet with the water contractors monthly to discuss policy issues associated with the reinitiation of consultation.

Sec. 4005. Protections:

Requires the CVP to reimburse water to the SWP if the SWP is impacted by state law that is more restrictive than the bi-ops; notification requirements; area-of-origin requirements to document any actions adversely impacting senior water rights holders; specific allocations for Sacramento Valley Contractors.

The authorities under 4005 have generally not required any action since passage of the bill, largely due to that fact that California's hydrologic situation since passage of the bill has provided for operations that did not require the actions identified in most of the pertinent sections. No additional funding has been required as such.

Sec. 4006. New Melones Reservoir:

Report to Congress within 18 months on storage made available by the Draft Plan of Operations.

Reclamation has previously drafted a revised plan of operations that has been presented in various forums and processes, but has not yet been adopted. A temporary plan of operations has been developed internally to bridge the gap between current operations and implementation of the revised plan of operations.

Sec. 4008. Losses Caused by Construction and Operation:

Compensation to marinas and other water-dependent businesses impacted by CALFED reservoirs and right of first refusal to replace; similar directives for

hydropower facilities; compensation costs borne only by “direct beneficiaries” of new facilities.

Replacement and/or mitigation of recreational and hydropower facilities is included in the project descriptions for all new storage projects.

Sec. 4010. Actions to benefit listed species:

Conduct daily smelt monitoring near Station 902 under specified turbidity; deadline to evaluate effects within 1 year; deadline to initiate smelt distribution studies within 90 days of enactment, authorizing \$3 million; requirement to consult with contractors on the studies; coordinate with NOAA and state on conservation fish hatcheries within 2 years; authorizes \$2 million for conveyance to refuges; predator suppression on Stanislaus River; CALFED invasive species program.

Smelt distribution studies are occurring and information is being shared with contractors via existing programs (IEP, CSAMP). Coordination is occurring regarding conservation fish hatcheries.

Sec. 4011. Contract prepayment and conversion.

Reclamation is fully prepared to implement the WIIN legislation provisions for the prepayment of water service contracts. . While the time and resources needed to implement this provision will depend on the number of contractors who choose to prepay their water service contracts, Reclamation does not anticipate needing any additional resources to accomplish this. As of today, Reclamation has not received specific requests to prepay obligations or convert water service contracts pursuant to this authority.

- **MP. Sec. 4012. Savings Language.**

Applicability to bi-ops and successor bi-ops.
MP is uncertain that this is an implementation clause.

- **MP. Sec. 4013. Sunset clauses individual to sections.**

WIIN expires in 5 years except clauses that relate to the Reinitiation of Consultation, which expires in 10 years and clauses related to water storage projects, which are indefinite.

Reclamation-wide:

Sec. 4007. Storage:

Authorization to cost-share federally owned and non-federally owned surface water storage; construction authorized based on feasibility determination, cost-share and existence of federal benefits; written notifications to Congress; specific

conditions for projects based in California; \$335 million authorized; January 1, 2021 deadline for feasibility determinations; CALFED extension through 2019.

Reclamation is actively working to develop a framework and process for determining how Section 4007 funding will be allocated.

4009. Other water Supply Projects:

Desalination act amendments providing blanket construction authority with conditions; requirements to notify Congress of funding; \$30 million authorized for desalination projects until expended. Water recycling amendments providing blanket construction authority with conditions; 60-day deadline to issue guidelines on recycling feasibility studies; 180-day deadlines for reports to Congress on reviews of feasibility studies; requirement to establish competitive grant program; \$50 million authorized for recycling projects until expended; \$100 million increase in SECURE Water Act ceiling conditioned on \$50 million going toward Colorado River drought contingency plan efforts in PL 113235.

Several of the WIIN provisions will require future appropriations:

Sec. 3701. Blackfeet Water Rights Settlement Act. Oversight of this water settlement act is the joint responsibility of the Bureau of Indian Affairs and the Bureau of Reclamation, with the Bureau of Reclamation being given responsibilities to implement those activities which fall within the Blackfeet Water Settlement Implementation Fund.

Sec. 3717. Blackfeet Water Settlement Implementation Fund establishes a nontrust, interest-bearing account in Treasury in the amount of \$246.5 million

Sec. 3718. The authorization of appropriation is to be adjusted annually to reflect changes since April 2010 in the Bureau of Reclamation Construction Cost Trends Index applicable to the types of construction involved.

1. The MR&I System, Irrigation, and Water Storage Account with an amount of \$163.5 million shall be used to carry out sections 3711 and 3712. The amount is made available pursuant to section 3718(a)(2)(A) for St. Mary Land & Irrigation Development (\$4.0 million), Birch Creek Unit Re-Development (\$17.6 million), S. Fork Milk River Irrigation & Storage ((\$17.2 million), Cut Bank Creek Irrigation & Storage (\$48.5 million) and

Completion of Blackfeet Rural Water System to Browning, Blackfoot, and Seville and improvement of separate Babb & Heart Butte systems (\$76.2million).

2. The Blackfeet Irrigation Project Deferred Maintenance and Four Horns Dam Safety Improvements Account in the amount of \$54.9 million shall be used to carry out sections 3710(c) and (d)(2). The amount made available pursuant to section 3718(a)(2)(B) for Blackfeet Irrigation Project (BIP) Deferred Maintenance nonFour Horns (\$23.7million), BIP Deferred Maintenance-Four Horns (\$6.1 million), Four Horns Dam SOD (\$11.1 million) and Four Horns Dam-PCCRC (14.0 million)
3. (3) St. Mary/Milk River Management Activities Fund Shall be used to carry out section 3707(g). The amount made available pursuant to section 3718(a)(2)(C) for the St. Mary Canal Right of Way (\$3.1 million), Swift Current Creek Bank Stabilization (\$20.7 million), Milk River Project (St. Mary Unit) Feasibility and Reauthorization Study as Multi-purpose Project (\$3.8 million) and Ft. Belknap Blackfeet Milk River Dispute (\$.5 million).

Prior to the commencement of any of the aforementioned activities, the Blackfeet Water Settlement Implementation Fund is required to be fully funded prior to January 21, 2025. The President's FY 2018 Budget proposes an initial amount of \$10.0 million to begin the funding of the Implementation Fund. Discussions within the Bureau are on-going as to the best means by which to fulfill the indexing requirement as the Construction Cost Trends indices are used for developing the indexing increments of the remaining features during construction and the bill's language seems to imply that the indexing must be completed and the amounts deposited within Implementation Fund before beginning planning and construction. The agreement to resolve the Ft. Belknap Blackfeet Milk River Dispute (\$.5 million) is, however, required to be completed as a condition of the Act's enforceability requirements.

CONGRESSMAN DAN NEWHOUSE

**BUMPING LAKE – RECREATIONAL RESIDENCE PERMITS – E-11
CLAUSE**

Mr. Newhouse. For the past several years, cabin owners on the shores of Bumping Lake, located in

Washington’s 4th Congressional District, who have gone to renew their “Recreational Residence Special Use Authorization” (SUA) permit have found a new clause in the permit agreement called an “E-11 clause.” The E-11 clause informs cabin owners on Bureau of Reclamation (BOR) land that if at any point BOR decides to undertake a project in the area, such as raising the water level of an existing reservoir, the Bureau has the right to order cabin owners to vacate their premises within 60 days with no compensation or “lot in lieu” offered to the owner. This adverse tenet of permit renewals clearly leaves cabin owners in limbo – and leads to a significant reduction in market value for these cabins. The taking of a cabin without compensation violates the tenets of the SUA permit.

Cabin owners on Bumping Lake have been trying to work with BOR, which owns the land, and the United States Forest Service (USFS), which administers the permits, to find a reasonable solution to this matter. Unfortunately, my constituents have been sent down a rabbit hole of being shuffled back and forth between the two agencies – USFS claims they are not responsible for another agency’s decisions to undertake a project, while BOR states they are not the agency of authority and that it is under USFS jurisdiction to handle permits and leases. Cabin owners are now faced with a choice – sign the new permits with the clause and simply cross their fingers that the lake is not raised, or refuse to sign the permits and risk getting evicted from their cabins.

Acting Commissioner Mikkelsen. In response to questions raised regarding the E-11 clause, found in the Forest Service Handbook 2709.11, and Bumping Lake, Washington.

The E-11 clause is not a new clause and according to the Forest Service Handbook it is mandatory for withdrawn lands within a National Forest when such lands are withdrawn for power or Bureau of Reclamation (Reclamation) Projects. In this case, at Bumping Lake/Reservoir, the Forest Service inadvertently left this clause out when renewing some of the cabin site permits previously. The Forest Service,

in recent years, has apparently been working to correct this oversight. This oversight came to light during discussions between Forest Service and Reclamation staff about plans to conduct geophysical testing at Bumping Lake/Reservoir related to the potential for increasing storage to address the changing dynamics of water supplies, one of a number of options that have and are being examined or acted upon.

The clause does not call for the vacation of cabin sites in a sixty (60) day time frame but rather it allows for a minimum of ninety (90) days, when in the judgement of the Federal Energy Regulatory Commission (FERC) or Reclamation the lands are needed for Project purposes. The United States, therefore, does reserve the right to use the lands of the United States for other purposes. This may be, for example, for the purpose of development of power generation through the authority of either agency, or for the creation of additional storage for project purposes under Reclamation's authority, or both. The clause also includes language to protect the interests of the United States including, "No claim shall be made against the United States or power licensees for or on account of prospective profits or for any injury or damage to properties, improvements, or operations due to such development."

It appears that the E-11 clause should have been and should be used in locations throughout the western United States, where it would apply, to inform Forest Service permit holders of this potential whenever they have a similar circumstance of permitting cabin sites adjacent to a Reclamation Project facility. The Pacific Northwest Region of Reclamation does not have information readily available related to locations with similar interfaces where a Reclamation project has a facility and the Forest Service has permitted cabin sites within this region.

Reclamation and Forest Service staff had discussions related to Bumping Lake Reservoir regarding decisions that could create a change to the authorized project. Elements within the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended, and 49 CFR Part 24 may be applicable however, due to the nature of the properties and rights involved any application is anticipated to be limited.

Mr. Newhouse. Can you please explain whether the USFS or BOR has primary jurisdiction over these matters? If both Agencies have jurisdiction, can you explain how the BOR and USFS coordinate on these decisions, and provide details on the process for cabin owners to resolve this matter?

From our understanding, these new E-11 clauses are not only affecting cabin owners on Bumping Lake, but could potentially affect cabin or recreation tracts nationally that fall on BOR land. It is my understanding the USFS intends to add this language to all permits that have a nexus to the BOR. The National Forest Homeowners Association has asked the USFS how many cabins are impacted nationwide but have yet to receive an answer.

Acting Commissioner Mikkelsen. The Forest Service and Reclamation have overlapping jurisdiction for the activities being carried out at Bumping Lake/Reservoir authorized by Congress for each agency. The Forest Service has jurisdiction related to the location having National Forest Status and Reclamation has jurisdiction related to the location through the development of facilities for the Yakima Project.

The Forest Service and Reclamation work cooperatively to the greatest degree possible to address the needs and mandates of the agencies. There has been a long standing process of staff meeting to cooperate and coordinate activities. There is also a long standing management agreement between the two agencies for the “day to day” activities on the ground at this and other locations. Generally speaking land management operations are handled by the Forest Service subject to the needs of the Reclamation Project.

With the inclusion of the E-11 clause in the Forest Service’s permit documents Reclamation recommends that resolution should remain under Forest Service purview. The Forest Service creates and adopts the requirements related to management of the cabin permitting process, Reclamation would not want to solely interpret paths to possible resolution.

Mr. Newhouse. Is BOR able to provide information on how many tracts and/or cabins could be affected nationally by the E-11 clause?

Acting Commissioner Mikkelsen. As the Forest Service is the agency permitting cabin locations, they are a better source for definitive numbers where they have or have not applied the E-11 clause from a national perspective.

TUESDAY, JUNE 20, 2017.

DEPARTMENT OF ENERGY

WITNESS

HON. RICK PERRY, SECRETARY, DEPARTMENT OF ENERGY

Mr. SIMPSON. The hearing will come to order.

It is my great pleasure to welcome Secretary Perry to this first meeting with the Energy and Water Subcommittee.

Secretary Perry, congratulations on your selection as the 14th Secretary of Energy, and thank you for your continued service to our country.

We have a lot to discuss today, so I will keep my remarks rather brief.

This budget request reflects the importance of the Department of Energy's national security responsibilities. The budget request proposes a strong increase, \$994 million, for the nuclear weapons activities, and we need to ensure the effective nuclear deterrence now and for our future. This program and other defense activities for this bill are and will remain a high priority for this committee.

I am also pleased that this budget request proposes appropriate funding for Yucca Mountain. The previous administration made the costly, and I believe wrong, decision to abandon the Yucca licensing application, changing courses on this program, and ignoring the law.

The President's budget proposal proposes a \$3.5 billion decrease for energy programs, reflecting the Administrations's decisions to focus resources on early stage research and development. That is a substantial reduction, a reduction this committee must carefully review in order to understand the impacts to the important programs and activities within this bill.

Like the President, we want to eliminate waste and duplication, and ensure the best use of each and every taxpayer dollar. This hearing is an important part of our oversight process.

I appreciate you being here today and hope that we can work together to move forward on a budget that will ensure our energy independence and keep consumer prices affordable.

Please ensure that the hearing record, questions for the record, and any supporting information requested by the subcommittee are delivered in final form to us no later than 4 weeks from the time that you receive them. Members who have additional questions for the record will have until close of business on Thursday to provide them to the subcommittee's office.

With that, I will turn to my ranking member, Ms. Kaptur, for her opening statement.

Ms. KAPTUR. Thank you, Mr. Chairman.

I don't know if I can be as brief, but I want to welcome the new Secretary, someone who has experience as an appropriator himself, and also a Governor, former Governor, from a very important energy State. You have a lot of experience and we need it all.

Thank you, Mr. Chairman, for yielding the time, and Secretary Perry for joining us today in your very first hearing before this committee, which you will come to like. Congratulations on your confirmation.

The budget request for the Department of Energy, while providing healthy increases of 9 percent to defense accounts, unfortunately slashes the nondefense energy accounts by more than one-third, of which science is cut by 17 percent.

To speak to the energy and science accounts for a moment, initial estimates are that this budget request, if enacted, would result in the loss of approximately 7,000 highly skilled technical experts in job positions at the Department's world class National Labs. This is a big worry, this is a big class worry.

Given that the labs have a multiplier effect on jobs in their communities, somewhere in the range of two to three, the total job loss would be in the range of 14,000 to 21,000 jobs. In addition, initial estimates are that the reductions to just the energy efficiency and renewable energy and science accounts, the sector inventing our future and of diversified energy production in this country, will result in some \$2 billion less in Federal support to universities and other research institutions essential to nurturing America's future scientific expertise. This is another world class worry.

The United States remains, despite recent efforts to reduce funding, a leader in innovation. But this budget, I fear, cedes that leadership to China and nations in the energy and basic science sectors. China has already monetized the solar panel industry, and I could talk to you for hours about that, appropriating American innovation and cornering the market in manufacturing for the industry with a lot of intellectual property theft going on at the basis of that. While this budget proposes to cut funding for clean energy, China is prepared to spend \$360 billion by 2020 on clean energy, while creating 13 million jobs and dislocating millions more of ours. This is anything but an America First policy.

This budget request also moves the Department's focus to early stage research, terminating all later stage research, which frankly I can't understand, along with any deployment-related activities. While we have struggled with the appropriate split between early and late stage R&D, along with which deployment activities to support, my fear is that this approach will result in a cornucopia of good ideas residing at the labs in a form still insufficiently mature for private industry to take over. We must have attention to this segment of the budget. We have been, for years, talking about what we can do to accelerate the development of technology originating in our labs; this budget would be a step back.

Let me end with this: Turning to the Office of Energy Efficiency and Renewable Energy, I would like to read from a letter written to our subcommittee, which I would like to associate myself with. The letter is right here. It says: We are the entire group of Senate confirmed Republican and Democratic Assistant Secretaries of Energy who led the DOE Office of Energy Efficiency and Renewable

Energy between 1989 and 2017. We are particularly concerned about the administration's recent proposal to cut the EERE budget by 69 percent from fiscal year 2017 enacted levels.

While we have not always agreed on the relative emphasis of various elements of the EERE budget, we are unified that cuts of this magnitude in the proposed fiscal year 2018 budget will do serious harm to this office's critical work and America's energy future. EERE supported research development and demonstration and energy efficiency, transportation, renewable energy, clean energy, manufacturing, and electric grid modernization are critical to encouraging U.S. innovation, creating good paying jobs, cutting pollution, and ensuring American global competitiveness.

Other important EERE programs with similar benefits focus on setting efficiency standards for appliances and equipment, helping States deliver energy efficiency improvements, leading the Federal Government's efforts to reduce its own \$23 billion of annual energy bills, and cutting energy use in low-income homes.

Mr. Chairman, I would ask permission to enter the entirety of this letter into the record.

And with that, I will close my remarks.

Mr. SIMPSON. Without objection.

[The information follows:]

June 8, 2017

The Honorable Mike Simpson
Chairman, Subcommittee on Energy
and Water Development,
and Related Agencies
U.S. House of Representatives
Committee on Appropriations
2362-B Rayburn House Office Building
Washington, DC 20515

The Honorable Marcy Kaptur
Ranking Member, Subcommittee
on Energy and Water Development,
and Related Agencies
U.S. House of Representatives
Committee on Appropriations
2362-B Rayburn House Office Building
Washington, DC 20515

The Honorable Lamar Alexander
Chairman, Subcommittee on Energy and
Water Development
U.S. Senate Committee on Appropriations
184 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Dianne Feinstein
Ranking Member, Subcommittee on
Energy and Water Development
U.S. Senate Committee on Appropriations
188 Dirksen Senate Office Building
Washington, DC 20510

Re: Fiscal Year 2018 Office of Energy Efficiency and Renewable Energy Budget

Dear Chairman Simpson, Ranking Member Kaptur, Chairman Alexander, and Ranking Member Feinstein:

The U.S. Department of Energy is the single largest funder of clean energy innovation in the United States, and our nation will be hindered in the global energy market without a strategic and well-funded DOE research portfolio, including basic science, energy efficiency, renewable energy, nuclear energy, fossil energy, and electricity reliability.

We are the entire group of Senate-confirmed Republican and Democratic Assistant Secretaries of Energy who led the DOE Office of Energy Efficiency and Renewable Energy (EERE) between 1989 and 2017. We are particularly concerned about the Administration's recent proposal to cut the EERE budget by 69% from FY2017 enacted levels. While we have not always agreed on the relative emphasis of various elements of the EERE budget we are unified that cuts of this magnitude in the proposed FY18 budget will do serious harm to this office's critical work and America's energy future.

EERE-supported research, development, and demonstration in energy efficiency, transportation, renewable energy, clean energy manufacturing and electric grid modernization are critical to encouraging U.S. innovation, creating good-paying jobs,

cutting pollution, and ensuring American global competitiveness. Other important EERE programs, with similar benefits, focus on setting efficiency standards for appliances and equipment, helping states deliver energy efficiency improvements, leading the federal government's efforts to reduce its own \$23 billion annual energy bill, and cutting energy use in low-income homes.

This is a particularly inauspicious time to cut the EERE budget. World-wide investment in clean energy now measures in the hundreds of billions of dollars annually. Governments across the globe—and companies large and small—want a piece of this massive economic pie representing tens of trillions of dollars over the next three decades and millions of jobs. China, in particular, has made it a high priority to lead the globe in the clean energy industry and is reorganizing its energy R&D and deployment efforts in a broad array of clean energy technologies, many of them first developed in the U.S. at taxpayer expense. It is telling that China intends to spend more than \$360 billion on renewables through 2020 and create 13 million jobs.¹ We ignore China's resolve—and success to date—at our peril.

U.S. energy security, a key focus of Congress and the administration, requires a reliable and resilient electricity system. Fundamental performance characteristics of the grid are changing due to increasing use of variable supplies, electronic converters for motor drives, lights, and other equipment, and grid communications and control with the shift from analog to digital systems. These changes have the potential to improve grid economics and performance, but also require greater agility to optimize operations, reduce response time to system failures, and confront new vulnerabilities such as cybersecurity. R&D to develop the capabilities needed in a modernized grid is critical, yet the electric utility sector invests just 0.2 percent of sales in R&D. R&D by EERE and DOE's Office of Electricity Delivery and Energy Reliability (with a proposed 48% cut) is pivotal in meeting these grid modernization challenges.

Finally, federal appliance and equipment efficiency standards, set by EERE since 1987, are the little engine that could when it comes to stimulating massive low-cost energy savings. DOE estimates that existing efficiency standards will, on a cumulative basis, save consumers nearly \$2 trillion on their utility bills between 1987 and 2030. While not without occasional controversy, the standards have long enjoyed bipartisan support. Standards for many types of residential, commercial, and industrial equipment are required to be regularly updated in order to capture the impact of technology advances and push these advances into the market. Thus, a refrigerator in 1973 used about 1900 kWh of electricity per year but federal R&D and standards have helped drop that electricity use to about 400 kWh per year, saving a typical household roughly \$150 per year.

As six Republican Senators wrote earlier this month, referencing EERE and other DOE offices, "We cannot lose the technological advantages we have gained through research

¹ Reuters, January 5, 2017 <http://www.reuters.com/article/us-china-energy-renewables-idUSKBN14P06P>

and development. Governing is about setting priorities and the federal debt is not about Congress overspending on science and energy research each year.” We share this view and we urge you to set the FY18 EERE budget at a level that will ensure the continued effectiveness of this critical federal program.

We would be honored to meet with you and share our views on the EERE budget and, more broadly, how to improve the productivity of the entire DOE energy RD&D portfolio in a bipartisan effort to secure America’s energy future.

Sincerely,

Dan W. Reicher, EERE, 1997-2001
DOE Chief of Staff, 1996-1997
DOE Assistant Secretary for Policy (Acting)
1995-1996
(President Bill Clinton)

David Danielson, EERE, 2012-2016
Program Director, ARPA-e, 2009-2012
(President Barack Obama)

Cathy Zoi, EERE, 2009-2011
DOE Under Secretary (Acting), 2010-2011
(President Barack Obama)

Alexander “Andy” Karsner, EERE, 2006-2008
(President George W. Bush)

David Garman, EERE, 2001-2005
DOE Under Secretary, 2006-2007
(President George W. Bush)

Christine A. Ervin, EERE, 1993-1997
(President Bill Clinton)

Mike Davis, EERE, 1989-1992
(President George H.W. Bush)

cc:

Chairman and Ranking Member, U.S. House of Representatives Committee on Appropriations
Chairman and Ranking Member, U.S. Senate Committee on Appropriations
U.S. Senate Majority Leader and Democratic Leader
Speaker of the U.S. House of Representatives and Democratic Leader

Ms. KAPTUR. Thank you once again, Mr. Secretary, for being here with us today, and we look forward to your testimony.

Thank you, Mr. Chairman, for the time.

Mr. SIMPSON. Thank you. We are also glad to have the chairman of the full committee and the ranking member of the full committee with us today.

Mr. Frelinghuysen.

The CHAIRMAN. Mr. Secretary, good afternoon. Mr. Chairman, thank you for the time. I also welcome Secretary Perry to the Appropriations Committee. We look forward to your testimony in hearing your frank and candid views on many issues.

Today's hearing is an important part of the oversight duties of the committee. After all, the power of the purse lies in this building. It is the constitutional duty of Congress to make spending decisions on behalf of the people we represent.

As you referenced in your testimony, Mr. Secretary, you must annually certify to the President the American nuclear weapons stockpile remains safe, secure, and reliable. I think there is no more important responsibility. I think you know that.

These are nuclear systems that are part of our national defense, and they are essential to meeting our commitments to our allies and showing resolve to our adversaries. The committee has always provided vigorous support to the nuclear weapons stockpile. I am pleased to see that the administration recognized that with this budget request. And may I also say that I am a strong believer in nuclear power as being one of the solutions to our vast energy needs, and the fact that you recognize that yourself I do hope is true.

Your proposal of the Department also takes great strides to deliver our exascale computing system. This is an area where the United States has been losing ground to China and others. I agree with you, we must take back American primacy in computing science. The United States has correctly invested heavily in scientific research. This work has produced dramatic scientific breakthroughs and innovation, and in the process, created high quality jobs for Americans. We know you have a lot of difficult decisions to make.

I do have some concerns about cuts to the fusion program and to certain aspects of nuclear energy. As you may know, the committee has repeatedly endorsed moving forward in the area of fusion energy. The proposed decreases, which are pretty dramatic, will inevitably delay some of the progress we are making in this exciting field, including in my home State of New Jersey, at the Princeton Plasma Physics Labs.

I look forward to hearing more about these proposed cuts, and like the Chairman and other members, it should come as no surprise, we are very supportive of the work we need to do at Yucca Mountain. It's huge, billions of dollars of investments there. We need to get it open and use it as a proper depository for the future.

Again, thank you, Mr. Secretary.

Thank you, Mr. Chairman.

Mr. SIMPSON. Thank you, Mr. Chairman.

Mrs. Lowey.

Mrs. LOWEY. Thank you, Mr. Chairman and Ranking Member Kaptur, for holding this hearing. And I would like to join my colleagues in welcoming you, Secretary Kerry, before—Perry, Secretary Perry, before the committee.

The Department of Energy has a critical role in America's national security and its economic prosperity. Its focus on research, development, deployment of clean energy, and efficient technologies makes the Department a leader in scientific innovation, job creation, and the battle against climate change.

The President's fiscal year 2018 budget requests \$28 billion in discretionary spending, a reduction of \$2.6 billion from the fiscal year 2017 enacted level. On its surface, this funding level may not sound as drastic as the cuts proposed for other agencies, but increases 11.2 percent the National Nuclear Security Administration, 9.3 percent for atomic energy defense activities, which means the energy and science programs would be decimated with a 30 percent cut.

While you no longer propose to eliminate the Department of Energy, your budget request would do grievous harm to American families by abandoning scientific innovation and ignoring the pressing threat of climate change. Carbon emissions are creating holes in our ozone layer and contributed to changing and often dangerous weather patterns around the world. Climate change has manifested as catastrophic events that threaten our national security and the livelihoods of American families.

We are at a pivotal moment in world history, as there is still time to protect our planet from the disastrous impacts of climate change. Yet your budget proposes to reduce energy efficiency and renewable energy by a staggering \$1.43 billion, or 69.3 percent.

In addition, the National Academies of Sciences, Engineering, and Medicine just released a study finding that ARPA-E has successfully advanced American innovation, and yet your budget would terminate the program. These two offices contribute to important scientific research, reduce our dependence on foreign oil, and create 21st century clean energy jobs.

There are more than 678,000 jobs in renewable energy in this country, and that number could be much higher if the Department of Energy continues to invest in energy research. Unfortunately, your budget is filled with false choices and by reducing investments in clean energy jobs. Just another broken promise by the Trump administration.

The Department of Energy should be looking forward, paving the way to create new, clean, renewable energy technologies, to create American jobs, foster American energy and dependence, not cede the innovation frontier to other nations, with China leading the charge to undermine American leadership.

I do hope Congress will work together. My friends on both sides of the aisle, I hope, will reject the Trump administration's misguided budget proposal in favor of a spending bill that works for all Americans.

Thank you, Mr. Chairman.

Mr. SIMPSON. Thank you.

Again, Mr. Secretary, thank you for being here today. We welcome you. And let me say on a personal note, thank you for getting

out. I know you have been active in the first few months in getting out and seeing the sites and the laboratories and what the DOE does. And thanks for coming to Idaho and Oak Ridge and other places. It is very nice to have a very active Secretary that is going to get out and investigate what this incredible Department does.

So the time is yours.

Secretary PERRY. Mr. Chairman, thank you very much, and to all the Members. Ranking Member Kaptur, Mrs. Lowey, thank you for your remarks. And it is—I was just sitting here thinking as you all were speaking that this is the first time I have ever been on this side of the table, so I think I may like this side better.

With that said, let me just share with you what an honor it is for me to be sitting here on this side to discuss President Trump's fiscal year 2018 budget request. I hope you know what a great privilege it is for me to serve this country one more time as the 14th Energy Secretary. And as you rightfully point out, I was a former legislative appropriator and a Governor, and I am very respectful of the budget writing process. I know the importance of the work that you are undertaking.

And, Mrs. Lowey, again, I look forward to working with you and the members of this committee and the rest of our friends here on the Hill to finalize a budget that we can all be proud of and that serves the taxpayers well.

In my three and a half months as Secretary of Energy, I have seen the firsthand impact of the Department's leadership, both domestically and internationally. I have traveled around the country to many of the National Labs, some based in your districts, and met with the brilliant minds that are driving their missions. And I look forward to visiting every one of them.

These labs are truly national treasures. They are the future of innovation in this country. I have been in awe at the diverse scope of the Department's mission, this consequential work that we are charged with overtaking, overseeing. And I have also traveled overseas representing the United States both in Rome at the G7 and China a couple of weeks ago for the clean energy mission innovation ministerials.

I had the opportunity to visit Japan on that trip to China and met with their leaders and their stakeholders about the future of our energy partnership. And on a pretty somber note, I toured the site of the Fukushima disaster and recognized what a monumental task they have before them.

Interesting in my trip, and coincidentally I guess you could say, that trip to China began on the day that President Trump announced that he would officially withdraw the United States from the Paris Agreement. I delivered his message to the world that, even though the United States was no longer a part of the Paris Agreement, we are still the leader in clean energy technology and we are committed to that mission.

The Department of Energy does many things, many things well. And America has been remind—I should say it has remained on the forefront of technology for over 40 years because of the amazing men and women that work both at our headquarters and at these National Labs and men and women who are stationed with the De-

partment of Energy overseas. They wake up every day knowing that they will make a real difference in people's lives.

I told them on my first day that the greatest job I ever had was being the Governor of Texas. But after working here, I have come to realize that being the Secretary of Energy is now officially the coolest job I ever had. Under my leadership, our experts at DOE are going to continue to work for the benefit of every American and our allies alike.

As Secretary of Energy, I am also a member of the National Security Council, and this council obviously is supported by the DOE and its mission to keep our Nation safe. President Trump's fiscal year 2018 budget request for the Department of Energy provides \$28 billion to advance our key missions and focuses on important investments, including ensuring the safety and effectiveness of our nuclear weapons arsenal, protecting our energy infrastructure from cyber attacks and other threats, achieving exascale. That is so important, focusing the amazing network of our National Laboratories on early stage research and development.

And my goals are straightforward: Advance our Nation's critical energy and scientific R&D missions, strengthen our nuclear security, fulfill our environmental management commitments.

Mr. Chairman, I have just painted a rather rosy picture, a bright picture. And while there is a lot of good news to report, there are other hard conversations that we need to have. As you are well aware, there are approximately 120 sites in 39 States that are storing spent nuclear fuel or high-level waste. Every member on that dais has waste in your State. We have a moral and national security obligation to come up with a long-term solution, finding the safest repositories available.

Listen, I understand this is a politically sensitive topic for some, but we can no longer kick the can down the road. As a former legislative appropriator, as an agency head, as the Governor, I understand following the rule of law is important. I have been instructed to move forward towards that goal. The President's budget requests \$120.7 million to resume licensing activities for the Yucca Mountain nuclear waste repository and to initiate a robust interim storage program.

Now, in addition to that challenge, Congress has spent \$5 billion, taxpayer dollars on the MOX project that is way over budget with no end in sight. The Army Corps of Engineers estimated a cost of \$17.2 billion and a completion date of 2048. The money appropriated for this project is money that could be used towards other priorities, like national security or cleanup at other sites. There is a better, there is a cheaper, there is a proven way to dispose of plutonium. In fact, we are already doing it.

I look forward to having an ongoing dialogue with many of you about these tough but important issues in the days and the months to come. This budget proposal makes some difficult choices, but it is paramount that we execute our fiduciary responsibility to the American taxpayer.

The President's proposal prioritizes the core mission of the Department by consolidating duplications within our agency in order to respect the American taxpayer. He deserves credit for beginning

this discussion about how we most wisely spend our scarce Federal resources.

As for me, this isn't my first rodeo. During my 14 years as Governor, I managed some tight budget circumstances. And I will suggest successfully, Alison, and I will do the same as the Secretary of Energy. Faced with limited resources, Texas became a shining example of energy growth, economic growth, higher educational standards, and important improvements to our environment. And we did it by all working together, Democrats, Republicans, folks that didn't want to be associated with either political party for that matter, but they loved their State. And just like you in this room, we love this country and we will find the solutions together, because we will set clear goals. We will manage the best and the brightest to achieve those goals and we will spend those scarce resources wisely.

So with your help, I believe we can attain many positive outcomes at the Department of Energy on behalf of the American people.

I thank you again for the opportunity to be in front of you, and I will attempt to answer your questions as well as I can.

[The information follows:]

Testimony of Secretary Rick Perry
U.S. Department of Energy
Before the
U.S. House Committee on Appropriations
Energy and Water Development Subcommittee
June 20, 2017

Chairman Simpson, Ranking Member Kaptur, and Members of the Subcommittee, it is an honor to appear before you today to discuss the President's FY 2018 Budget Request for the Department of Energy ("the Department" or "DOE").

As you know, I was confirmed by the United States Senate on March 2, 2017. It is a privilege and an honor to serve as the 14th Secretary of Energy and fulfill this important role critical to our nation's energy and scientific pursuits along with assuring our nuclear readiness.

As a former legislative appropriator and Governor, I'm keenly aware of the budget writing process and only wish I had been confirmed by the Senate earlier so I could be a full participant in crafting this proposal.

The President's proposal focuses our priorities and reigns in spending. There is much the Department does well and stays within budget, and unfortunately there are places we need to be better stewards of our financial resources. This budget proposal makes some difficult choices. I look forward to explaining our priorities and working with you to continue the important mission of the Department of Energy.

In short, the President's FY 2018 \$28 billion Budget Request for the Department of Energy ("Budget") advances our key missions through significant investments to modernize our nuclear weapons arsenal, protect our energy infrastructure from cyber and other attacks, achieve exascale computing, and address our moral obligations regarding nuclear waste management and the Nation's nuclear legacy.

The Department's world-leading science and technology enterprise also generates the innovations to fulfill our mission. Through our 17 national laboratories, we engage in cutting-edge research that expands the frontiers of scientific knowledge

and generates new technologies to address our greatest challenges. While most of this is in the energy field, the DOE also does work to support the health sector with research and recently launched a program with Veterans Affairs to use our computing ability to assist our nation's veterans.

The Budget focuses the intellectual prowess of our scientists and engineers on the development of technologies that the ingenuity and capital of America's entrepreneurs and businesses can convert into commercial applications and products that improve the lives and security of all Americans.

Restoring the Nuclear Security Enterprise

The Budget fulfills the President's vision of rebuilding and restoring our Nation's security through robust investments in the Department's nuclear security mission. The Budget provides \$13.9 billion for the National Nuclear Security Administration, \$1 billion or 8 percent above the FY 2017 Enacted level.

As a participant on the National Security Council, the Department has a unique role in our Nation's security. I undertake these responsibilities with the utmost gravity.

One of my key duties as Secretary of Energy is to annually certify to the President that the American nuclear weapons stockpile remains safe, secure, and reliable, without the need for underground explosive nuclear testing. The Budget includes \$10.2 billion for Weapons Activities to maintain and enhance the safety, security, and effectiveness of the U.S. nuclear weapons stockpile. This \$996 million increase over FY 2017 supports modernizing our nuclear weapons enterprise and meets Department of Defense requirements in accordance with the President's Memorandum on Rebuilding the Armed Forces.

The Budget supports our ongoing Life Extension Programs (LEP) and Major Alterations, which includes \$4.0 billion for Directed Stockpile work, a \$669 million increase. Funding for the W76-1 warhead LEP directly supports the Navy and will keep the LEP on schedule and on budget to complete production in FY 2019. An increase of \$172 million, or 28 percent, for the B61-12 LEP will keep us on schedule delivering the First Production Unit (FPU) in FY 2020 to consolidate

four variants of the B61 gravity bomb and improve the safety and security of the oldest weapon system in our nuclear arsenal.

The Budget also supports the Air Force's Long-Range Stand-Off program through an increase of \$179 million or 81 percent from FY 2017 Enacted for the W80-4 LEP, to deliver the first production unit in FY 2025 of the cruise missile warhead. We also increase funding by \$51 million or 18 percent for the W88 Alteration 370, to provide the scheduled first production unit in FY 2020.

The Budget for Weapons Activities also increases investments to modernize our nuclear infrastructure. For example, we include \$663 million, an \$88 million increase from FY 2017, for construction of the Uranium Processing Facility needed to replace aging facilities at the Y-12 National Security Complex, as well as \$98 million, up \$83 million from FY 2017 Enacted, to accelerate the replacement of old and unfit buildings at the Albuquerque Complex.

The Weapons Activities Budget request also includes \$161 million, a \$66 million increase, for NNSA collaboration with the Office of Science on the development of capable exascale computer systems, which I address below.

Moving on to NNSA's Naval Reactors program, the Department has the ongoing responsibility to provide militarily effective nuclear propulsion plants for Navy vessels and to ensure their safe, reliable and long-lived operation. The Budget provides \$1.5 billion to support the safe and reliable operation of the Navy's nuclear-powered fleet and continuation of the *Columbia*-class submarine program, refueling of the Land-Based Prototype reactor, and the Spent Fuel Handling Recapitalization Project.

The Budget also includes \$1.8 billion for the Defense Nuclear Nonproliferation (DNN) program to reduce global threats from nuclear weapons. This critical national security program prevents the spread of nuclear and radiological materials, advances technologies that detect nuclear and radiological proliferation worldwide, and eliminates or secures inventories of surplus materials and infrastructure usable for nuclear weapons.

The Budget proposes to terminate the Mixed Oxide Fuel Fabrication Facility project, providing \$270 million for use toward an orderly and safe closure of the

project and \$9 million to develop the pre-conceptual design for the dilute and dispose approach to plutonium disposition. This is an example of a significant cost and schedule overrun that should have set off alarms earlier in the project and should have been canceled.

We will, in an orderly and responsible manner, begin to wind down the project. My staff, in coordination with other stakeholders, is already reviewing alternative, enduring missions that could potentially utilize existing infrastructure and expertise.

The Budget also provides \$277 million for Nuclear Counterterrorism and Incident Response, \$5 million above FY 2017 Enacted, to work domestically and around the world to improve our ability to respond to radiological or nuclear incidents, in conjunction with other agencies in a broader U.S. Government effort.

Finally, the Budget for NNSA includes \$419 million for the federal workforce at the NNSA. This \$31 million increase is essential to ensuring our world-class workforce of dedicated men and women can effectively oversee NNSA's critical national security missions.

Securing against Cyber Threats

Among the most critical missions at the Department is to develop science and technology that will assure Americans of a resilient electric grid and energy infrastructure. Protecting these assets means it has to be resilient and hardened to defend against the evolving threat of cyber and other attacks. Consumers need to trust when they flip the switch, their lights will come on. Unfortunately, cyberattacks pose an ever-increasing threat to the Nation's networks, data, facilities, and infrastructure.

As utilities and independent power producers and operators have integrated advanced digital technologies to automate and control physical functions in their energy systems to improve performance, sophisticated cyber threats have increased. Nation-states, criminals, and terrorists conduct sophisticated probes of energy systems that can be used to exploit cyber vulnerabilities that disrupt or destroy energy systems.

To ensure robust cybersecurity programs across the energy sector, the Budget provides funding in multiple programs. In the Office of Nuclear Energy, we add a focus in the \$20 million Light Water Reactor Sustainability program to research new technologies to address nuclear power plant cybersecurity, and we provide \$17 million for cybersecurity at the Idaho National Laboratory (INL). In the Office of Fossil Energy, we provide \$8 million for our sensors and controls research program seeking early-stage breakthroughs to help secure power plants against cyber-attacks.

Finally, the Budget includes \$42 million for energy delivery system cybersecurity in Electricity Delivery and Energy Reliability, and a renewed focus to take steps to make a difference within two years in the cybersecurity of our Nation's power grid. Our budget funds early stage activities that improve cybersecurity and resilience of the grid in order to harden and evolve critical grid infrastructure. We focus on early stage R&D at national laboratories to develop the next generation control systems and components, devices and systems with engineered-in cybersecurity features; and we fund a new activity to develop a continuous monitoring capability that will significantly increase our awareness and ability to prevent and respond to these types of events.

We also cannot ignore the risks to the Department's own science, technology, and nuclear security infrastructure. Across the Department's programs and sites, we are taking major steps to safeguard our assets against cyber threats. The Budget includes robust funding to secure our own networks. For example, the Budget increases funding for the Chief Information Officer by \$17 million from FY 2017 to modernize infrastructure and improve cybersecurity across the internal DOE IT enterprise. We also increase funding for cybersecurity in the National Nuclear Security Administration to \$150 million to step up security for our nuclear security networks. In the Environmental Management program, we consolidated \$43 million for cybersecurity into a new budget to ensure the security at our nine major cleanup sites.

Cybersecurity is one of my key goals at the Department, and the Budget will help us take concrete steps to harden our systems and our infrastructure.

Exascale Computing

Turning to the Department's role in science and technology, the United States has long led the way in computing, dating back to invention of the first computers and continuing with world-leading machines at our national laboratories. Our leadership in developing and building the world's fastest computers has faced increasingly fierce global competition in the last decade. Maintaining the Nation's global primacy in high-performance computing is more critical than ever to ensure our national security, our continuing role as a science and innovation leader, and our economic prosperity.

The Budget includes \$508 million to accelerate development of an exascale computing system, including \$347 million in the Office of Science (Science) and \$161 million in NNSA. This unprecedented investment, which is \$249 million—or 96 percent—above the FY 2017 level, reflects the Department's intention to deliver an exascale machine in 2021 and a second machine with a different architecture by 2022. To get there, the Science/NNSA partnership will focus on hardware and software technologies needed to produce an exascale system, and the critical DOE applications needed to use such a platform.

By accelerating our progress towards exascale computing, we will take back American primacy in computing science and technology. This world-leading exascale program will bolster our national security by supporting the nuclear stockpile, while also supporting the next generation of scientific breakthroughs not possible with today's computing systems.

Addressing the Obligation of Nuclear Waste and Legacy Management

The President's FY 2018 Budget Request for the Department deals with the issue of nuclear waste disposal and supports accelerating clean-up of our Cold War legacy.

Addressing the Imperative of Nuclear Waste Management

For too many years, the prior Administration has literally kicked the can down the road on nuclear waste.

The Budget Request takes significant steps forward for the country in other critical areas. First, recognizing that we must move ahead in fulfilling the Federal Government's responsibility to dispose of the Nation's nuclear waste, the Budget includes \$120 million, including \$30 million in defense funds, to resume licensing for the nuclear waste repository at Yucca Mountain and initiate a robust interim storage program.

The Budget devotes \$110 million to restart Nuclear Regulatory Commission (NRC) licensing activities for the nuclear waste repository at Yucca Mountain, including funding for management, site operations and maintenance, as well as technical, scientific, legal and other support.

In addition, the Budget includes \$10 million to initiate a robust interim storage program that complements the nuclear waste repository by developing a capability for earlier acceptance of spent nuclear fuel to accelerate removal from sites in 39 states across the country. An interim storage capability also adds flexibility to the system that will move materials from sites across the country to its ultimate disposition.

By restarting the long-stalled licensing process for Yucca Mountain and committing to establishing interim storage capability for near-term acceptance of spent nuclear fuel, our Budget will accelerate fulfillment of the Federal Government's obligations to address nuclear waste, enhance national security, and reduce future burdens on American taxpayers. This also will increase public confidence in nuclear safety and security, thus helping nuclear energy to remain a significant contributor to the country's energy needs for generations to come.

Fulfilling Legacy Cleanup Responsibilities

The Budget also includes \$6.5 billion for Environmental Management (EM), \$89 million above the FY 2017 Enacted level, to address its responsibilities for the cleanup and disposition of excess facilities, radioactive waste, spent nuclear fuel, and other materials resulting from five decades of nuclear weapons development and production and Government-sponsored nuclear energy research.

To date, EM has completed cleanup activities at 91 sites in 30 states and Puerto Rico, and is responsible for cleaning up the remaining 16 sites in 11 states—some of the most challenging sites in the cleanup portfolio.

New in the Budget is \$225 million to address specific high-risk contaminated excess facilities at the Y-12 National Security Complex and the Lawrence Livermore National Laboratory.

The Budget includes \$1.5 billion, \$4 million above FY 2017, for the Office of River Protection at the Hanford Site, for continued work at the Hanford Tank Farms and to make progress on the Waste Treatment and Immobilization Plant. This budget will continue progress toward important cleanup required by the Consent Decree and Tri-Party Agreement to include a milestone to complete hot commissioning of the Low Activity Waste Facility by December 31, 2023. The Budget also includes \$800 million to continue cleanup activities at Richland, including continued K-Area decontamination and decommissioning remediation and the K-West Basin sludge removal project.

For Savannah River, the Budget provides \$1.4 billion, \$214 million above FY 2017, to support activities at the site including the Liquid Tank Waste Management Program, continued construction and commissioning to achieve startup of the Salt Waste Processing Facility in 2018, continued construction of the Saltstone Disposal Unit #7, and support for facilities that receive and store nuclear materials.

The Waste Isolation Pilot Plant (WIPP) is essential for the disposition of transuranic defense-generated waste across the DOE complex, and the Budget provides \$323 million to safely continue waste emplacement at WIPP. The Budget Request will continue WIPP operations, including waste emplacements, shipments, and maintaining enhancements and improvements, and progress on capital asset projects, including \$46 million for the Safety Significant Confinement Ventilation System and \$19.6 million for the Exhaust Shaft. These steps will increase airflow in the WIPP underground for simultaneous mining and waste emplacement operations.

The Budget includes \$359 million, \$30.9 million below FY 2017 enacted level, to continue major clean-up projects at the Idaho site, such as the Integrated Waste

Treatment Unit, and to process, characterize, and package transuranic waste for disposal at offsite facilities. It provides \$390 million for Oak Ridge, \$108 million below FY 2017, to continue deactivation and demolition of remaining facilities at the East Tennessee Technology Park, continue preparation of Building 2026 to support processing of the remaining U-233 material at the Oak Ridge National Laboratory, and support site preparation activities for the Outfall 200 Mercury Treatment Facility at the Y-12 National Security Complex.

For Portsmouth, the Budget includes \$418 million, \$36 million above FY 2017, to continue progress on the deactivation and decommissioning project at the Portsmouth Gaseous Diffusion Plant, safe operation of the Depleted Uranium Hexafluoride Conversion Facility, and continue design and construction activities at the On-Site Waste Disposal facility. And at Paducah, the Budget includes \$270 million to continue ongoing environmental cleanup and depleted uranium hexafluoride (DUF6) conversion facility operations at the Paducah site. In addition, the FY 2018 Budget Request supports activities to continue the environmental remediation and further stabilize the gaseous diffusion plant.

Together, these investments for Environmental Management will make significant progress in fulfilling our cleanup responsibilities while also starting to address our high-risk excess facilities at NNSA sites.

Refocusing Priorities on Core Missions

The Budget refocuses the Department's energy and science programs on early-stage research and development at our national laboratories to advance American primacy in scientific and energy research in an efficient and cost-effective manner. The Budget funds \$6.4 billion in early-stage R&D while reducing later-stage research, development, demonstration, and deployment programs by \$3.1 billion from the FY 2017 Enacted levels.

As part of transitioning later-stage R&D, demonstration, and deployment responsibilities to the private sector and the States, the Budget terminates five Energy Innovation Hubs and five Clean Energy Manufacturing Institutes, which together constitute an annual taxpayer burden of over \$187 million. The Budget eliminates the Supercritical Transformational Electric Power demonstration

program and SuperTruck II, together saving \$44 million annually, and terminates deployment activities like Weatherization and the State Energy Program in the Office of Energy Efficiency and Renewable Energy, saving a total of \$265 million.

Also in line with Administration priorities, the Budget terminates the Advanced Research Projects Agency—Energy, known as ARPA-E, and the Department’s Loan Programs, while maintaining necessary federal staff to oversee existing awards and loans. We also close the Office of Energy Policy and Systems Analysis, to avoid duplicative efforts already accomplished by the program offices. Termination of these three programs will save over \$300 million in FY 2018 alone while significantly reducing financial risk to the taxpayer moving forward.

Focus on Innovation

The FY 2018 Budget focuses its investments on the basic, early-stage R&D conducted by the scientists and engineers at our 17 national laboratories who are constantly on the path to developing the next great innovations that can transform society, and bring forth a new era of prosperity for the American people. The Budget provides \$6.4 billion, \$4.5 billion in the Office of Science and \$1.9 billion in energy research and development programs, with a renewed focus on cutting-edge innovation and transitioning those breakthroughs to the private marketplace.

The Budget consolidates programs focused on bringing technologies to the market in the Office of Technology Transitions. Through concerted effort and coordination with our labs, this will reduce costs to the taxpayer while at the same time providing a robust technology transfer program to transfer breakthroughs from the national laboratories to the private sector.

Nuclear Energy

The Budget provides \$703 million for Nuclear Energy, \$313 million below the FY 2017 level, to continue innovating new and improved ways to generate nuclear power. The budget refocuses funding on early-stage research and development, such as the Nuclear Energy Enabling Technologies program, that enables innovation driven by the private sector. While the Budget ends the Consortium for Advanced Simulation of Light Water Reactors (CASL), it increases funds for Nuclear Energy Advanced Modeling and Simulation (NEAMS) by \$7 million to

integrate VERA, the virtual reactor developed by CASL, and RELAP-7, a safety analysis and simulation tool developed at the INL, into the existing NEAMS program.

From 2012 through 2017, the Department spent \$390 million on the Small Modular Reactors (SMR) Licensing Technical Support program. With NuScale Power submitting its application to the Nuclear Regulatory Commission and the completion of planned activities in FY 2017, the Department closes the SMR Licensing Technical Support program having achieved its goal to commercialize SMR technology. Given the ongoing promise of SMR technology, the FY 2018 Budget includes \$20 million for early-stage R&D supporting advanced SMR designs.

Finally, the Budget for Nuclear Energy also supports robust safeguards and security funding of \$133 million—a \$4 million increase—for protection of our nuclear energy infrastructure and robust infrastructure investments at INL facilities.

Fossil Energy Research and Development

The Fossil Energy Research and Development program advances transformative science and innovative technologies which enable the reliable, efficient, affordable, and environmentally sound use of fossil fuels. Fossil energy sources currently constitute over 80% of the country's total energy use and are critical for the nation's security, economic prosperity, and growth. The FY 2018 Budget focuses \$280 million on cutting-edge fossil energy research and development to further our energy security, advance strong domestic energy production, and support America's coal industry through innovative clean coal technologies.

In FY 2018, we invest \$30 million in a new initiative to repower coal-fired plants through research on advanced technologies and systems that improve the reliability and efficiency of existing coal units and incorporate new, advanced technology components and systems. We also will support research on coal combustion to help support potential U.S. coal exports, as well as research on carbon utilization efforts to develop materials and chemicals for new business opportunities, in support of a strong American energy sector and vibrant coal industry.

As part of the Department's effort to operate more efficiently, the Budget proposes the initial stages of footprint consolidation for the National Energy Technology Laboratory. In a phased approach, we propose to consolidate NETL's Albany, Oregon site into the NETL's Eastern sites and initiate a Mission Alignment study in FY 2017 to evaluate alternatives for the consolidation of NETL's eastern sites.

Energy Efficiency and Renewable Energy

The Energy Efficiency and Renewable Energy budget funds \$636 million to support research at our national laboratories to drive energy innovations in renewable energy, next-generation transportation, and energy efficiency.

The FY 2018 investments support development of battery technologies and advanced combustion engines, and new science and technology for developing biofuels. The Budget funds research into the underpinnings of future generations of solar photovoltaic technology, into the design and manufacturing of low-specific power rotors for tall wind applications, and on wind energy grid integration and infrastructure challenges.

The Budget also funds early-stage R&D for advanced manufacturing processes and materials technologies. These efforts, combined with the research that leverages the unique high-performance computing assets in the national laboratories, we can drive the breakthroughs that will promote economic growth and manufacturing jobs in the United States.

Electricity Delivery and Energy Reliability

All power generation, regardless of the fuel, relies on the power grid to deliver electricity to our homes and businesses across the nation. The Budget provides \$120 million for Electricity Delivery and Energy Reliability to support research and development at the national laboratories to develop technologies that strengthen, transform, and improve energy infrastructure so that consumers have access to reliable, secure, and clean sources of energy.

In addition to the cybersecurity program described earlier, the Budget funds foundational research to ensure the reliability and resiliency of the U.S. electric grid, to support modernization of the distribution of electric power, and to advance

the state of the science and technology underpinning grid energy storage, transformers, and other grid components.

World-Leading Science Research

The Department of Energy is the Nation's largest Federal supporter of basic research in the physical sciences, and the President's FY 2018 Budget provides \$4.5 billion for the Office of Science to continue and strengthen American leadership in scientific inquiry. By focusing funding on early-stage research, this Budget will ensure that the Department's National Laboratories continue to be the backbone of American science leadership by supporting cutting-edge basic research, and by building and operating the world's most advanced scientific user facilities—which will be used by over 27,000 researchers in FY 2018.

We provide \$722 million for Advanced Scientific Computing Research, an increase of \$75 million above FY 2017. This funding will continue supporting our world-class high-performance computers that make possible cutting-edge basic research, while devoting \$347 million in the Office of Science to reflect the Department's intention to accelerate our achievement of exascale computing by 2021. This focused effort will drive the innovations necessary for computing at exascale speeds, resulting in computing systems at unprecedented speeds at Argonne National Laboratory in 2021 and Oak Ridge National Laboratory in 2022.

The Budget also provides \$1.6 billion for Basic Energy Sciences, supporting core research activities and the Energy Frontier Research Centers. We will continue construction of the Linac Coherence Light Source-II at SLAC National Accelerator Laboratory and operations of the light sources across the DOE science complex, supporting research across the Nation and ensuring our continued world leadership in light sources and the science they make possible.

The Budget also provides \$673 million for High Energy Physics, including \$54.9 million for construction of the Long Baseline Neutrino Facility and Deep Underground Neutrino Experiment, \$5 million above FY 2017. By supporting the highest priority activities and projects identified by the U.S. high energy physics community, this program will continue cutting-edge pursuit to understand how the universe works at its most fundamental level.

The Budget for the Office of Science provides \$310 million for Fusion Energy Sciences, including \$247 million for domestic research and fusion facilities and \$63 million for the ITER project. For Nuclear Physics, the budget provides \$503 million to discover, explore, and understand nuclear matter, including \$80 million for continued construction of the Facility for Rare Isotope Beams and operations of facilities, including the newly-upgraded Continuous Electron Beam Accelerator Facility. For Biological and Environmental Research the Budget includes \$349 million to support foundational genomic sciences, including the Bioenergy Research Centers and to focus on increasing the sensitivity and reducing the uncertainty of earth and environmental systems predictions.

Strategic Petroleum Reserve

In addition to our nuclear security responsibilities, the Department of Energy, in conjunction with other federal agencies, is responsible for ensuring the Nation's energy security. The Strategic Petroleum Reserve (SPR), one component of that effort, protects the U.S. economy from disruptions in critical petroleum supplies and meets the U.S. obligations under the International Energy Program. The Budget includes \$180 million, \$43 million below FY 2017 Enacted, to support the Reserve's operational readiness and drawdown capabilities.

Looking forward, the President's Budget proposes to sell approximately 270 million barrels of SPR crude oil by 2027, roughly half of the remaining SPR inventory after all sales currently authorized by law are completed, resulting in estimated receipts of \$1 billion by FY 2019 and \$17 billion through 2027. The SPR program will conduct a comprehensive analysis to determine the sites to be decommissioned as the SPR footprint is reduced from four to two sites. The Budget continues the sale of SPR oil for the Energy Security and Infrastructure Modernization Fund authorized by the Bipartisan Budget Act of 2015 to support an effective modernization program for the SPR, but at half the previous funding level because of the anticipated closure of two SPR storage sites.

Finally, as the Northeast Gasoline Supply Reserve (NGSR) is operationally ineffective and not cost-efficient as a regional product reserve, the President's Budget proposes to liquidate the NGSR and sell its one million barrels of refined petroleum product in FY 2018, resulting in an estimated \$69 million in receipts.

Power Marketing Administrations

The Budget includes \$82 million for the Power Marketing Administrations, the same as FY 2016 Enacted. The Budget also proposes the sale of the transmission assets of the Western Area Power Administration (WAPA), the Bonneville Power Administration (BPA), and the Southwestern Power Administration (SWPA). The Budget also proposes to repeal the \$3.25 billion emergency borrowing authority for WAPA authorized by the American Recovery and Reinvestment Act of 2009.

Conclusion

In conclusion, I reaffirm my commitment to ensure that the Department of Energy, through its National Laboratories, will continue to support the world's best enterprise of scientists and engineers who create innovations to drive American prosperity, security and competitiveness for the next generation. The President's FY 2018 Budget Request for the Department of Energy positions us to take up that challenge while continuing to ensure our national security.

In my opening I mentioned my time as Governor of the State of Texas. Over my 14-year tenure, I proposed seven budgets. Some had spending increases. Others had deep spending cuts to deal with economic downturns and uncertainties. Every one of them directed the spending of billions of dollars of our taxpayer's dollars.

As we move forward over the coming weeks and months, I look forward to working with you and your colleagues in the United States Senate. I am committed to ensuring DOE is run efficiently, effectively, and we accomplish our mission driven goals.

Thank you, and I look forward to answering your questions.

Mr. SIMPSON. Thank you, Mr. Secretary.

My first question was going to be to ask you about your vision for the Department of Energy, but I think you pretty much described that in your opening statement.

Secretary PERRY. Thank you.

Mr. SIMPSON. So I will forego that question and get into some specifics. I was glad to see that you put money into, as I said in my opening statement, into Yucca Mountain. That is something that this committee has put money into for the last several years, and it always gets dropped in conference between the confrontation, I guess is the best word, between the House and the Senate on this issue. I noticed you also put money in for interim storage.

First of all, despite the current law, the previous administration shut down the activities at Yucca Mountain. And can you briefly discuss your plans to move forward with Yucca and what you can do now to get things going while we await the additional funds from Congress? And tied with that is, what do you plan to do on interim storage when the current law and the thing that keeps us from moving there—and you mentioned how you always want to follow the law—but the law says licensing conditions for interim storage. Any license issued by the commission for a monitored or achievable storage facility under this section shall provide that, one, construction of such facility may not begin until the commission has issued a license for the construction of the repository under section 115(d), on and on—

Secretary PERRY. Yes, sir.

Mr. SIMPSON [continuing]. At Yucca Mountain.

Secretary PERRY. Yes, sir. Thank you. I am not sure there is an issue that is any more politically sensitive. I mean, you all have been dealing with this for years. But I think it is important for us to step back and look at the kind of the global aspect of—and I think it is so important for the Members of Congress to be substantially a part of this solution, because it is your citizens that have the most to lose if we continue to leave this waste in your districts. And in sites that are—Mr. Aguilar and I were just talking, over in the Inland Empire you are right next to a nuclear facility.

When I was at Fukushima and we were talking about both the construction and the geology, if you will, the geography as well, and having those spent fuel rods in those cooling ponds in a region of the world that is inside that ring of fire, as they call it, and the potential to have a geologic event, and we could have a repeat of what happened at Fukushima to some degree. I mean, we have a moral obligation, as I said in my remarks, to remove this from as many of these sites as we can and put it in the safest repository.

I went to Yucca. The first trip I took as the Secretary was to go to Nevada, to see that facility, to talk to the men and women that have been working on it for, in some cases, decades, and recognize that that is the proper place for long-term storage.

So for us to do our duty, to follow the law, to put a plan into place, I think it is very important, Mr. Chairman. And the funding of NRC is important, because their licensing process, you know—from my perspective, this is a—this is a dual track. We need to be doing what we are doing, stand up the office, move towards having an orderly transition back to following the law, while the NRC is

following their licensing. You can kind of help me on this one, but their funding is not in our—

Ms. DOONE. Correct.

Secretary PERRY. They have their own funding, and so they will be over here asking you for that.

Mr. SIMPSON. Yeah.

Secretary PERRY. But anyway.

Mr. SIMPSON. Let me ask you, is there anything you can do? I would like to believe this budget will become the law of the land by October 1. I am not sure that is the reality, and we may end up in CRs and all sorts of things like that. We hope not, it is not our goal. Is there anything we can do between now and when this 2018 budget becomes law to help stand up the office and start moving forward on Yucca?

Secretary PERRY. We have some funds available to do that. And I am comfortable that that is our goal, to stand the office up, to clearly send the message that, that is the direction.

You asked another question, Mr. Chairman, if I can briefly, you asked, rather, about interim storage. And I happen to be one of those that think that you can do and we should do both interim storage as we are working towards standing Yucca Mountain back up and getting it operational and following the law.

The interim side of this, again, and I know we are going to talk about MOX later, but WIPP in New Mexico, a waste control specialist in the western side of Texas; those are both places—and I happen to think out at the Nevada test site—and again, I am not wanting to, stir something up here just for the sake of stirring something up, but if we are truly looking for the proper places to intermily store some waste, that test site has the potential to do that as well.

And so there are a number of ways to deal with this. And I think it is so important to have the discussion with the Members of Congress so that they can share with their constituents why this is so important, that we move as much of this waste, whether it is transuranic waste or whether it is high-level waste, out of their districts to appropriate either interim, or in the case of Yucca Mountain, permanent storage sites.

Mr. SIMPSON. I appreciate that. And I happen to be one that agrees with both interim and Yucca Mountain, that we need both of them. If we opened Yucca Mountain tomorrow, it would be filled if we put everything in there.

Secretary PERRY. Yes, sir.

Mr. SIMPSON. So we have got to have interim storage. It would require to move forward with constructing an interim storage facility to changing the law. So we need to be working on that. So I know the Senate, Lamar and some others in the Senate, are working on some language. But anyway, we will work with you on that.

Members, I am going to try to keep the questions to the 5-minute rule, especially through the first round, because we do have many members here today.

So, Marcy.

Ms. KAPTUR. Thank you.

Mr. Secretary, I come from the industrial heartland, Ohio. Ohio, Pennsylvania, Michigan, Indiana carried for the President. And so

my question really concerns the proposed cuts in advanced manufacturing, which bite very hard in our region.

In my district alone, I represent the Ford EcoBoost engine manufacturing facility at Brook Park; the largest truck facility for Ford at Avon. This is their heavy truck facility, the 750s and so forth; General Motors premier transmissions facility globally at Toledo; the entire—the largest Fiat-Chrysler manufacturing platform at Toledo for the Wrangler and Cherokee and so forth; and of course, major steel industries like ArcelorMittal, Republic, and U.S. Steel, which are undergoing enormous pressure because of dumping.

I wanted to be direct—we can all get acquainted here. And obviously, you are from Texas, I am from Ohio. But your budget—the President's budget makes a 68 percent cut to this advanced manufacturing office at DOE. And I would really ask you, as we move forward with this budget, to work with us on this. Because when I spoke to one of the CEOs, and I am not going to tell you which one, for all North American operation, I said, what can I do to help you bring jobs back to this region? And his answer was, energy, energy. Find me a way to cut my costs in energy by one-third. By one-third.

So we need—this is a tiny office compared to some of the other ones. But I just wanted to ask you where should I direct industries in my district if the energy audits and other support services that DOE currently offers, which are not sufficient, where are we supposed to send them?

Secretary PERRY. Ms. Kaptur, thank you. If there is one thing I have been a proponent of, and that is creating jobs and how to do it in States, and we—while I was a Governor, we were able to lure manufacturing jobs to the State of Texas, Toyota. As a matter of fact, every Toyota pickup truck—you know, there are lots of good brands of pickup trucks to drive. I am not picking them out. I mean, they were just a company that we were able to recruit and come to the State of Texas.

And so I live and breathe competition every day. So I completely and totally respect what you have just said. With that, I would like to remind people that I am very—I am fairly versed in the budgeting process, and I know how this works. Again, it is the first time I have sat on this side of the table, but I know that the flexibility that you all can give to an agency head will be very, very helpful.

So being able to prioritize where we focus our efforts, where we—being able to reduce duplication, being able to find places to save dollars, at the same time being able to deliver the product that the citizens want. Your constituents, I think they want to be able to know that there is an agency that, number one, is going to be responsive to their request, if it happens to be with energy efficiency or if it happens to be with—you know, is there a better way to deliver to your truck manufacturers some technology, innovation, partnerships? That is what we are going to be working on. Is it going to be in the structure that the previous administration or the previous administration from before them?

Ms. KAPTUR. Mr. Secretary, we invite you to the automotive heartland.

Secretary PERRY. Yes, ma'am, I will be there.

Ms. KAPTUR. We will have the CEOs all there.

Secretary PERRY. I want you to know—

Ms. KAPTUR. My time is running out, and I have to get in my second question, but I appreciate your openness.

Secretary PERRY. Yes, ma'am.

Ms. KAPTUR. I appreciate your openness and your support of private sector manufacturing.

My second question, you know, you come from down the southwest. It was just 122 degrees in Arizona. And up where I live, we are up against the Canadian border. And as a representative from what is called the cold weather State, I am especially fond of the weatherization program which your budget zeros out. Here is another area where I think you need our help. And that particular program has weatherized over 7 million homes and saved an average of \$283 a year, which doesn't sound like a lot of money in Washington to the average consumer, but in my area, that is big savings. And the Mulvaney budget completely eliminates this program.

So we hope that, as we move forward, that we will be able to resume the activities that we believe are very important for home weatherization in these older parts of the United States that are leaking energy. And we know that with good conservation we can save 40 percent of the energy we use, so it makes sense. I am sure as Governor you managed those programs.

Secretary PERRY. Ms. Kaptur, I—that is a statutory program. And the funding for weatherization has been cleared through our review process, and the 2017 budget and those are going forward.

Ms. KAPTUR. Thank you.

Secretary PERRY. And these are words that are going to make their way through the regular financial assistance system to get to the States. But I will assure you that I will work with you. We will come. And again, you are going to hear me say this a number of times here today, but I know—this is the first step in a long process. And I was a Governor long enough to know that Governor's budgets don't always come back to you the way that they start. And I think that is probably a fair statement.

Ms. KAPTUR. Thank you. Thank you very much, Mr. Secretary.

Secretary PERRY. Yes, ma'am.

Ms. KAPTUR. Thank you, Mr. Chairman.

Mr. SIMPSON. Mr. Calvert.

Mr. CALVERT. Thank you, Mr. Chairman.

I heard—the Secretary mention Toyota. Obviously, I have fond memories of Toyota. They used to be in California.

Secretary PERRY. It is doing really well, by the way.

Mr. CALVERT. Yeah, I know.

On the topic of Interim storage. I used to represent San Clemente, CA. Darrell Issa represents the area now. He has a bill on interim storage, H.R. 474. Obviously, this is a concern in California that he has mentioned to you. A concern to me and all Californians is getting that material out of California into a safe interim storage facility. At the same time, the Chairman mentioned we are going to do what we can in congress to resolve the Yucca Mountain licensing issue that has been festering here for a number of years.

If you put together a program for—for interim storage as called for in your Budget request, I hope there are some facilities that are on the top of the priority list. I think California would be right up there, because of as you mentioned, the ring of fire and the earthquake zone. San Clemente is right there; Camp Pendleton is right there in the middle of that region. So I hope you would take a look at the possibility that some sites would receive priority for interim storage.

Secretary PERRY. Well, obviously, Mr. Calvert, we would rely upon a lot of the expertise there at the DOE from the standpoint of, you know, which is going to move first. And obviously, I would suggest you all may have a bit of a say in that as well. I know that Senator Feinstein has the same concerns that you do, and a supporter of moving that waste with the greatest expedition that we can.

So again, you know, how you prioritize which of those you would move first, I will try to work with the experts on that. But I think what is more important is that we agree that it has to be moved first. I mean, I think that is—

The other issue is hydrogen fuel cells. Secretary, a number of States have imposed zero emission vehicle standards on the industry. And as you may know, the fuel cell vehicle technology option is there. The State of California has been pushing that pretty hard. They are very bullish on hydrogen. Currently the technology is such that hydrogen fuel cell refueling areas, which could refuel about the same time as conventional gasoline engines, are feasible.

Your budget has cut more than 50 percent for fuel cell activities, even though your Department has been pushing for fuel cell technology in the past. How do you feel about hydrogen as a potential fuel? And will your Department be working with industry to ensure a successful rollout of the hydrogen industry?

Secretary PERRY. Yes, sir. Mr. Calvert, I am—and the message that will come out of DOE is we are pretty much all of the above. Hydrogen being one of the all off the aboves. And I think working with our National Labs, working with our universities, working with the private sector—I am a big public-private partnership proponent, supporter. My 14 years as being the Governor, one of the reasons we were successful is that we, you know—inside that State, we removed the regulatory burdens. We tried to put tax structures into place. We worked towards having that skilled workforce so that those private-public partnerships could flourish.

And you will see us pushing a lot of our innovation, hydrogen fuel cells being one of those, to the private sector to try to commercialize those technologies. We think that is—Ms. Kaptur asked the question earlier—or she didn't ask the question, she made the statement earlier about the reductions in late—in our late modeling of our projects. And the fact is that is where those need to be pushed out to the private sector.

The early stage basic research, that is our core responsibility. That is what the DOE was set up for back in the late 1970s to do and going forward, and we will continue to. You know, I think we do need to have a conversation about late stage development and what is the appropriate amount of dollars that we spend. How do we coordinate that? How do we find the private sector partners to

come in and then commercialize that and make it work? I would suggest we are probably—I mean, again, without having the experts here whispering in my ear that here is exactly where we are, my instinct is that hydrogen fuel cell technology is getting close to that point to being able to push it out to the private sector, to see if it is going to be able to stand on its own from the standpoint of a commercialized technology. If it does, it is another opportunity for us to create jobs. It is another opportunity for us to show the world our commitment to the environment. It is another opportunity for America to lead on this climate issue.

Mr. CALVERT. Thank you.

Thank you, Mr. Chairman.

Mr. SIMPSON. Mrs. Lowey.

Mrs. LOWEY. Thank you, Mr. Chairman. And thank you again, Mr. Secretary.

I just want to say I appreciate your comments regarding interim storage sites, because as we know, Yucca Mountain is so controversial. And even if it is built, it is still a year away from being functional. And in my district, we have the Indian Point Energy Center, which is scheduled to cease operations in 2021. And as I am sure you know, without a central repository or interim storage sites for the waste, the spent fuel rods are stored in dry casts onsite at decommissioned plants. And this is key because we are all talking about creating jobs and economic development. And these sites just cannot be redeveloped into productive properties because of the storage there.

Secretary PERRY. Yes, ma'am.

Mrs. LOWEY. So I just want to mention that I appreciate that. You are supportive, and I hope we can move forward.

I wanted to ask you a question about our Nation's electric grid, because you and I know it must be upgraded to address reliability and security issues. And given the fact that the grid is arguably the most complex and critical infrastructure in our Nation, upgrading it will be a monumental challenge.

How would your budget request address this issue? Have we anything to show for our recent efforts? What are the most pressing issues we should be addressing? And what kind of public-private partnership is the Department involved in to accelerate efforts for the grid of the 21st century? I must say, as you know, I am a New Yorker, and I often think about, oh my, what would happen if this grid goes down? So I appreciate your response.

Secretary PERRY. Mrs. Lowey, I think you are very prescient in having this issue at your forefront. And you are absolutely correct, the chaotic event, if we were to lose one or two of our grids in the northeastern part of the United States and a massive amount of people without electricity, without the ability to communicate, without our hospitals being able to operate, I mean, the stunning impact that it could have on our country, I am not sure that most Americans really understand the potential.

And one of the core responsibilities at the Department of Energy, by an executive order that was signed by President Trump, with the Department of Homeland Security, being able to have a cybersecurity study to make sure that this country is as protected as it

can be from individuals who would do harm to our citizens through compromising our electrical grid.

There is—at this particular point in time, I want to bifurcate just a bit and talk about, there is a grid study going on now at the DOE to look at all of our ability to deliver electricity in a sound and a thoughtful and a stable way. And that is ongoing. We should be having that available at the end of the month. And that is a question about do we have the base load, or all of our different forms? Where does nuclear come into this? Where does our renewables play? What role does carbon capture, utilization, sequestration of coal plants have to play in the base load? And then are we going to be able to have a secure electrical grid, not just in the case of protecting it against nation states or bad actors out there that are digitally trying to penetrate into that. We have seen what happened to Saudi Arabia with Aramco. We saw what happened to Ukraine as there were some bad actors that attacked their power.

And so DOE is committed to that. When I was at Los Alamos, when I was at Oak Ridge and INL, you have a test grid at the chairman's lab. There is a lab, Mrs. Lowey, that is in place, that is an operational grid, where we literally can come in and break things and know how to patch them up or to keep those types of attacks from occurring.

With that said, I have concerns—that is a priority, Mrs. Kaptur. I mean, grid security is a priority of the Department of Energy. It is one of the reasons that we have asked—well, that I will ask at the appropriate time on the funding side to make sure that that part of our responsibility is appropriately funded and making it as efficient and as effective as we can. Because you are absolutely correct, if we don't get that right, it can be devastating for our citizens.

Mrs. LOWEY. Thank you, Secretary Perry.

Thank you, Mr. Chairman.

Mr. SIMPSON. Mr. Fleischmann.

Mr. FLEISCHMANN. Thank you, Mr. Chairman.

Welcome, Mr. Secretary.

Secretary PERRY. Thank you, sir.

Mr. FLEISCHMANN. And thank you very much for stepping up and assuming this wonderful position as Secretary to the Department of Energy. And I thank you for all of your past service and current service, sir.

As part of my representation of the people in the third district of Tennessee, I represent the great City of Oak Ridge. It is the birthplace of the Manhattan Project. We have Oak Ridge National Lab, Y-12 National Security Complex. We are building the uranium processing facility. We have a large EM mission. Literally, the city of Oak Ridge touches the Department of Energy in many ways.

I also want to thank you for your visit. We had a great visit, and I appreciate you addressing all of the different issues we have there.

If I may, sir, I have a few questions. Several years ago, the Department of Energy consolidated the management of the Y-12 plant in Oak Ridge with Pantex in your great State of Texas. From what I understand, that effort is now reaping benefits through effi-

cient execution of the mission for the Nation and has saved several hundred millions of dollars. It took a lot of foresight on the part of DOE to conceive of this contract. And while it has not always been easy, we are clearly seeing the benefits that we were promised.

Do you envision those cost savings continued? Are you pleased with what you are seeing on the efficient delivery of the mission at Pantex and Y-12, sir?

Secretary PERRY. Yes, sir. There is a number of examples. All too often, we talk about the challenges that we face. We talk about, you know—we discuss or spend enough money in a particular line item and what have you. There—as I have become more and more familiar with the DOE's history and with their budgeting process, there are multiple examples of where we have been successful in what either you all or together we have come up with ways to be more efficient.

I will take a little bit of a detour here, but the nonproliferation side. I mean, we are now—I think there are 40 countries in Eastern Europe that no longer have highly enriched uranium because of the work that DOE has done, and so we are able to reduce the spending there. So there are a lot of successes. That is not to say we don't have these challenges, as you all are very good about pointing out. But the point is this is one of those, thank you for pointing out a success that, you know, all too often, government doesn't get patted on the back and say well done.

Mr. FLEISCHMANN. Thank you, sir.

The uranium processing facility is a one-of-a-kind project that you recently visited at the Y-12 Security Complex. According to NNSA reports, it is close to the next phase. During the construction, UPF will require a sharp funding increase. Is the Department still prepared to build UPF at \$6.5 billion by 2025? If so, how do you plan to handle the top funding years, sir?

Secretary PERRY. Yes, sir. The NNSA remains committed to completing the UPF and ceasing the EU programmatic operations in that old building 9212 by, I think, no later than 2025, and at a cost of \$6.5 billion. The commitment is contingent on predictable and stable appropriations, as requested in the budget. So it is—you don't hear this very often, but it appears on budget and on time.

Mr. FLEISCHMANN. Yes, sir. Thank you.

Mr. Secretary, I am concerned that vital DOE missions to support the national security and economic security of our country are targeted for deep cuts or elimination in the budget proposal. It is important to note that national security and economic security often overlap in today's world. Few program examples that are funded through EERE and could not be duplicated by the private sector are dark net research project to protect utility customers and especially the electric grid from cyber attacks; the manufacturing demonstration facility, which you saw firsthand recently, that is helping U.S. manufacturers solve difficult problems and, as a result, flourish and add more jobs; the critical materials hub targeting the scarcity of rare metals that could pose at risk to technology.

How does the Department plan to support critical projects within programs that are targeted for cuts, sir?

Secretary PERRY. Again, Mr. Fleischmann, this is a straight down the middle of the plate, this is about prioritization. This is about picking and choosing those projects out there and making sure that they are funded. And again, we may have a healthy discussion about your priorities versus my priorities versus, you know, President Trump's priorities.

From my perspective, this is right down the line of which—the way we get back to our core responsibilities at the Department of Energy. We fund those core responsibilities. We may not get every program that you and the members of the committee want to be funded at the level you want to be funded. But I am comfortable that with the right leadership, that we have a budget in totality that we can address the needs of this country, that we continue to be cutting edge technology.

You know, we haven't even talked about exascale computing yet. I know it will come up here in part of the conversation, but there is a great example; we are probably going to ask you for more resources there.

Today, we just found out, the United States is not number one in super computing. As matter of fact, we are not even number two. We are not even third. The Swiss passed us up today.

Ms. Kaptur, I am not happy about the Swiss passing us up. That is like—well, I won't even get into a State to State. I will just get into trouble if I do that comparison.

But the point is our future and our ability to be able to be competitive in the economic field, as well as the national security field, deals with this innovation. And our funding those innovations, our funding of those projects is important, but doing it in a way that is responsible and efficient.

Mr. FLEISCHMANN. Thank you, Mr. Secretary. I appreciate your responses.

Mr. Chairman, I yield back.

Mr. SIMPSON. Mr. Aguilar.

Mr. AGUILAR. Thank you, Mr. Chairman.

Thank you, Ranking Member.

Congratulations and thank you for being here, Mr. Secretary.

I appreciate you mentioning California. I am going to keep my first question specific to NNSA. I won't talk to you about California and our GDP growth of 2.9 percent last year versus Texas at 0.4—

Secretary PERRY. I am not Governor anymore.

Mr. AGUILAR. I am not going to quiz you on those, or in 2015 when it was 3 to 1.5 percent.

I will ask you, following up with what Mr. Fleischmann talked about with NNSA—and I know Ranking Member Kaptur mentioned it too—the budget that was submitted shows a significant increase in fiscal year 2018. There are significant reductions in other parts of DOE's budget, including the science accounts that were highlighted. But my question here is: Many of the labs that are funded through the science accounts also support the nuclear mission. Will this shift in funding out of science and into weapons activities undermine the nuclear enterprise and nonproliferation goals in the long run?

Secretary PERRY. The short answer is no. But you need to hear more than just no. And the point is that, again, I ask you humbly to allow me to show you I know how to manage. And I am not asking that just in the dark. I mean, I have got a 14-year record of being able to manage a rather large entity. And it wasn't all blue skies and smooth sailing. We had massive turndowns in the early 2000s in my home State of Texas. We had, I mean, a huge, 15, 20 percent, budget shortfall in totality. And so knowing how to move those parts of the puzzle around—that is not to say that everything is going to be whole cloth. But it is to say that I am going to work with you, sir, to find the resources to consolidate, to be able to show you that we are working in really good faith to meet the requirements, to meet the desires of the Members of this Congress—or this committee and of Congress and the general public and to be responsive to the taxpayers. So I am comfortable we can do this in a way that does meet our nonproliferation requirements, that does meet this lifetime extension program effort that we need from our national security standpoint and to continue to have the innovation and technology that can drive our economy.

Mr. AGUILAR. Thank you, sir.

My second question: You talked about, in your response to Mrs. Lowey, about cyber attacks and with respect to the grid and outages seen in Ukraine, you highlighted, in 2015. In recent days, we have seen reports of hackers reportedly aligned with the Russian Government developing cyber weapons, dubbed Crash Override and Industroyer, which could potentially disrupt the U.S. grid. Our modern, internet-based, internet-connected economy depends on a stable, efficient electrical grid for its productivity. With growing reports of cyber intrusions, many likely sponsored by foreign governments seeking ways to damage the ability of our grid to function, why has the DOE chosen to reduce funding for the cybersecurity and energy delivery systems, that line item, by 32 percent from previously enacted levels of 2016 and 2017? How would this affect the DOE's ongoing cybersecurity efforts in the energy sector?

And before you answer, you mentioned current labs and exercises being done throughout the country. Those labs and those exercises are being done based on fiscal year 2016 and fiscal year 2017 investments. Why shouldn't we make similar investments in fiscal year 2018 if this is a priority?

Secretary PERRY. Yes, sir.

Number one, it is a priority. And the President's executive order clearly made it a priority. Here is what I would ask you and the committee members to keep in mind, that just because there is a line item that says—and has a particular name in it and a particular direction, that we somehow or another are just going to back away from that effort. We are not. When I sit here before you and commit to you that we are going to put into place the resources in both the dollars and the staff that is required to make America as secure from a cyber attack standpoint as we can, that is what we will do. Does that mean we are going to have to, move dollars around in a budget and prioritize? Yes. That is exactly what it means.

And, again, I know that this budget is the first step in the process. But I shared in my opening remarks that the life extension

programs over at NNSA with our weapons system, that exascale computing, that cybersecurity, those are three of—not all of, but three of—the most important responsibilities that the Department of Energy has. And we are going to work with the private sector. We have got three of our labs that are part of what is called CyberCorps. And they are working on the cybersecurity issue now. We are in the process of talking to private sector entities that have deep tentacles into the cyber world. So my hope is that we are going to be able to leverage some private sector funding with our funding to find the solutions to these challenges on cybersecurity that confront us.

Mr. AGUILAR. A lot of questions and more follow up, but I am out of time. Thank you so much. I appreciate it, Secretary.

Mr. SIMPSON. Thank you.

Ms. Herrera Beutler.

Ms. HERRERA BEUTLER. Thank you, Mr. Chair.

Mr. Secretary, it is a pleasure to have you with us. I have a couple of questions. I am going to attempt to get through them and then throw it open to you—

Secretary PERRY. Yes, ma'am.

Ms. HERRERA BEUTLER [continuing]. And request your comments, if that is possible. And they are a little divergent, but I want to get them all in.

The first one is regarding Hanford and the nuclear site. My district is downstream of Hanford. So, for me and my constituents, the cleanup effort is vital to protecting the Columbia River and southwest Washington communities from the millions of gallons of nuclear waste currently stored in underground tanks at Hanford. And, as you know, last month, thousands of Hanford workers had to take cover after a Cold War-era tunnel used to store contaminated, radioactive materials collapsed, which led to mass evacuations and serious concerns about contamination. Thankfully, no radiation was detected. But this kind of scare highlights how important it is that we get this work done.

And I would like to underscore this is a Federal Government responsibility. We talk a lot about taxpayer dollars. It does cost money to get this taken care of. But this wasn't something this community did on its own. This was a Federal Government's war-time effort. So it is our responsibility to take care of this and take care of it well.

I know that you have received an invitation to come out to Hanford. I am sure my colleague will reiterate that. We invite you to come. It is important. And I wanted to just ask for your commitment to maximize the Federal Government's role in cleaning up this site in a safe, effective manner. And let me move on really quickly, and then we can come back.

The Bonneville Power Administration. The proposed budget calls for divesting the transmission assets of Bonneville Power Administration. And I will tell you I love how the President is focusing on infrastructure and getting America working again. It is music to my ears. This is an area where I believe—that I would submit for your consideration that BPA is self-financed and has made in excess of \$32 billion in payments to the Treasury by selling power. And a quick \$4.9 billion sounds like a lot. But that credit from the

divestiture of those assets I think would be a poor tradeoff. Much of my district is rural and sparsely populated, but they receive reliable power because of the Bonneville Power Administration infrastructure. And the ratepayers of our region are the ones that pay for that. And so I wanted to ask if you had taken a position on BPA's divestiture of the transition assets.

And, finally, there are reductions—and I agree with you, Mr. Secretary, every area of this budget should be combed, this budget and across the Federal Government, because we should be finding waste or inefficiencies. And I applaud the President for looking at that. One area where I want to submit for your reconsideration would be with regard to hydropower. You know, there are reductions in the budget for the Department's water power program. And in southwest Washington producing clean, reliable, efficient hydropower has been a staple of our energy supply since the early 1940's. And to cut the Federal investment in hydropower is concerning for our region, in part because it is such a good—I mean, to replace the Bonneville Power Administration, what they generate would take about 16 coal-fired plants. And here we have this amazing renewable energy source. And on a global scale, China plans to invest \$360 billion in renewable power generation by 2020, including \$73 billion for hydropower alone. I just feel like they are gobbling up assets in this area, and they want to eat our lunch and pop the sack. And we need to take this back, especially when we are talking about a renewable, load-bearing source of energy.

So that is a lot to throw at you. But I wanted to get all three of those in because they are so important to my neck of the woods. And I thank you for your time.

Secretary PERRY. Yes, ma'am.

Let me address the first one, and that is Hanford. This is one of those classic examples of the Federal Government working with the State government working with the local government. I mean, the agreement that has been signed there, particularly working with Governor Inslee, and going forward, not only do I look forward to coming out to your district to tour Richland and the Hanford site and to get a really good, hands-on look, I have been briefed relatively extensively about the project out there, about the progress that is being made. You know, I hope to be out there before the summer is up. But then in September—I think it is in September, this fall, at least, you know, you are going to celebrate a pretty big milestone in the above-grade demolition of the old plutonium finishing plant. That is going to be completed out there. So, you know, retrieving and packaging that highly radioactive sludge that is stored in the basin along the river on the central plateau, for instance, I mean, they are making some good progress. I mean, none of us like to have to deal with when, you know, Murphy and Murphy's law comes into place and something happens and you have to deal with it, that kind of came out of left field, with the tunnel collapsing. But, again, I think we got to see the real professional harmed, and no one was—you know, there was no individual harmed by that activity. So our continued focus on the cleanup, which is the Federal Government's responsibility, obviously coordinating with the local State government and doing it in a way that

is appropriate, that remediation is going to take some time. But this country is committed to it. We will continue to do that.

The second thing you asked about, which was the power agencies, I will be brief on this one. That is an interesting idea that has been discussed many times before, and I look forward to the continuing discussion and debate. So you make some very strong arguments about what they are doing, how they function.

And just on hydro in general, just let me say, we will work with you, and the agency will be very open to your ideas and your directives relative to—I agree with you that we need to be looking at all-of-the-above energy approach and not taking anything—you know, unless it is just a straight-up economic issue, if it just won't work, it won't work—but not for any political reasons do we need to be removing any sources of energy. We are going to need them all to be competitive.

And there are good points you make about the Chinese and what they are doing and what they appear to be committed to. So we have got our challenges out there. And I think taking a source of energy, particularly good, clean, low-emission, no-emission energy, off of the playing field is not wise for a lot of reasons.

Ms. HERRERA BEUTLER. Thank you.

With that, I yield back.

Mr. SIMPSON. Mr. Newhouse.

Mr. NEWHOUSE. Thank you, Mr. Chairman.

Secretary Perry, welcome to the Appropriations Subcommittee. My colleague from her district downstream mentioned Hanford. And I am proud to say that my congressional district is home to Hanford as well as the Pacific Northwest National Laboratory, as well as many other companies that work very closely with the Department of Energy.

We only have a few minutes here, but I want to make sure and just reiterate that you are cordially invited to come and visit. It sounds like you have plans to do so this fall perhaps. As a followup to my earlier invitation, just let me say I will work with you in your schedule to make that happen and look forward to doing that.

A couple of things I wanted to touch on, and there are several more that we will submit for the record as well. As you know, there are approximately 56 million gallons of waste held in temporary underground storage tanks at Hanford, and adequate funding is certainly going to be needed to continue to design and construct the waste treatment plant. The request provides \$8 million for WTP commissioning, although additional funding will also be needed as commissioning and startup begins.

What do you envision WT's funding needs will be, particularly over the next 5 years, in order to meet the court-mandated timeline for its full operation by 2026?

Secretary PERRY. Mr. Newhouse, my instinct here, is that looking 5 years down the road—or, for that matter, looking 9 years down the road—is always a tricky thing in this business. But I would suggest to you that the funding levels that we see currently are most likely the minimum that would be required to reach the goals that they are looking for.

Mr. NEWHOUSE. I certainly appreciate your underscoring the Federal Government's legal and moral obligation here, and then that answer helps as well.

As I said, also, the Pacific Northwest National Laboratory is in my district, and I am very proud to be able to say that. It is a powerhouse of innovation in addressing pressing national challenges. So, as you can understand, I am very concerned about the impact of the President's proposed budget as it relates to the PNNL. If enacted, the budget cuts of approximately \$200 million, let me just tell you what that means in human terms: That would be a loss of about 1,000 jobs.

So let me just ask, as you talked about earlier in your opening comments, what is your vision for ensuring the Department's strong, vibrant science and energy programs, and with those cuts, how does the administration plan to maintain our position as a world leader in scientific research?

Secretary PERRY. Yes, sir. Mr. Newhouse, as I said in my opening remarks, the commitment to science, to innovation, to technology, that is a major priority, obviously, and will continue to be. I might just add that I made mention of three laboratories that we are working on that that will be tasked—already are tasked, but will be prioritized as we go forward on the issue of cybersecurity. PNNL is one of those.

So your concern about your constituents, your concern about the observation that there could be massive loss at a lab, I don't necessarily agree with that reflection. And the reason I don't agree with that reflection is because it doesn't take into account our being able to manage, our being able to use year-end expended balances. It doesn't take into account—I think it is a very cold look, if you will, and I don't want to belabor that word. But I think it is just a very sterile look at: Here is what the budget says, here is going to be the result.

You know, my intention—you know, there is not any of these labs that are going to be shut down, obviously. These labs are going to be continuing to be the future of this country from the standpoint of innovation and technology. I am comfortable that we will manage these labs in a way that continues to keep the employment levels at the level to deliver the innovation and the technology that this country is going to need. So I fully respect your concern and, rightfully so, as an elected citizen to represent your constituents. But I hope I can give you some good comfort that, from a management standpoint, we are going to do everything we can to make sure that we keep our labs functioning at the level of which I think the American citizens need and deserve.

Mr. NEWHOUSE. I appreciate that commitment on your part and look forward to working with you—

Secretary PERRY. Yes, sir.

Mr. NEWHOUSE [continuing]. To make sure those don't equal the drastic numbers of loss of human resource.

Secretary PERRY. Yes, sir.

Mr. NEWHOUSE. So I appreciate that.

Secretary PERRY. Yes, sir.

Mr. NEWHOUSE. Thank you, again, for being here, and look forward to your visit in September.

With that, Mr. Chairman, I yield back.

Mr. SIMPSON. Mr. Joyce.

Mr. JOYCE. Thank you, Mr. Chairman.

Good afternoon, Secretary Perry.

Secretary PERRY. Yes, sir.

Mr. JOYCE. Just before, you brought up the study you initiated in April to explore the critical issues central to protecting the long-term reliability of the electric grid. I understand the study will examine the evolution of wholesale electricity markets, adequate compensation for onsite fuel supply, and other factors that contribute to grid resiliency, and the effect of the continued regulatory burdens on base load power plants.

I think the more we know here, the better. So I am glad to hear your Department is conducting this study. The safety and security of our communities depend on the resiliency of the electric grid. As you said in your April memo about this new study, we must provide American families and business with an electric power system that is technologically advanced, resilient, reliable, and second to none.

In my district, the Perry Nuclear Plant has played a critical role in the economy of eastern Lake County for decades. The 1,284-megawatt power plant employs more than 700 workers and, in 2016 alone, contributed \$14 million in State and local taxes to support local schools, police and fire departments, and other vital public services. The Perry plant is one of the largest plants of its type in the U.S. and produces enough electricity to power more than 1 million homes daily.

Mr. Secretary, what potential problems or challenges would our Nation face should our base load power plants, particularly our nuclear plants, be shut down?

Secretary PERRY. Mr. Joyce, not just our nuclear plants, but I think any plants that are able to run that base load, we need to give appropriate oversight and concern about from the standpoint of keeping them operating.

And I think it is 122 degrees somewhere in Arizona today. I know, yesterday, it was 117 degrees in Las Vegas. We may get a test this summer from the standpoint of our reliability. I hope that is not the case. I hope we don't see, brownouts in your home State, Mr. Calvert, or, for that matter, in my home State. But it is the preparation that we do today. It is the—not picking winners and losers from a political standpoint, but looking at, how do we make America's energy reliable, affordable, and sustainable? We know that requires a base load capability that can run 24/7.

You know, and with that said, we are all of the above. You know, nobody expanded wind energy more than we did in the State of Texas while I was Governor. We became the number one wind-energy-producing State in the Nation. As a matter of fact, we produce more wind than all but five other countries. So I understand about having that diverse portfolio.

But base load, if we are going to continue to reach out to companies and say—yesterday, I was with Secretary Ross, and we had a foreign direct investment conference. And we are talking to individuals from around the globe about coming to the United States and investing in our country and all the different opportunities

that were there. If we cannot guarantee them that when they build a \$1.8 billion facility here, that the power is not going to be available 24/7, then we are not going to be successful in that. So, not only is this about, as Mr. Fleischmann said, our national security, it is also about our economic security—and not shying away from and not trying to pick winners and losers. Just let the facts fall where they may, that if you are in the coal side of things, you are in the natural gas side of things, if you are in the nuclear side of things, you are in the hydro side of things, you are in the wind side of things, you are in the solar, or whatever other renewable that we would be looking at, we are going to need all of these. But it is really important, from my perspective, that we don't shy away from and talk about how important base load and that guaranteed base load is if we are going to be successful economically in this country.

Mr. JOYCE. And for what it is worth, Mr. Secretary, as Ms. Kaptur pointed out, we live in sort of a cold area of the country up there in Cleveland where we get the snow that comes down through Canada. And so, while we now require the air conditioning that you point out, we will also require a lot of heat. We have been darn close to brownouts because of the shutting down of the coal plants. And the ability to produce energy and have a grid that can maintain it and hold all that is produced from wind and the other ways we got it is very critical, as you well know, to the United States. So I applaud your efforts in taking this challenge forward.

I have exceeded my time, and so I can't yield any back to you, Mr. Chairman. Thank you.

Mr. SIMPSON. Mr. Fortenberry.

Mr. FORTENBERRY. Thank you, Mr. Chairman.

Mr. Secretary, good afternoon. Thanks for appearing before us. I am sorry I didn't have the benefit of your earlier testimony. I got here as quickly as I could.

I understand, though, that you made some very firm comments about MOX. I have a number of items here. I would like to go through them—

Mr. PERRY. Yes, sir.

Mr. FORTENBERRY [continuing]. And perhaps you could respond one at a time.

I applaud that. And this is not meant to be an indictment of anybody's past judgment as to how we were going to deal with spent fuel and in agreement with the Russians. But, nonetheless, year after year, we have sat on this committee and committed millions of dollars each year to something called cold storage. Well, that is a cold decision. It is not getting us anywhere. It is a waste of money where there are significant other priorities. And, as you said, some sort of orderly process to wind this down, perhaps some appropriate transfer of the facility to another use, in fairness to the people of that State, is absolutely necessary.

Now, there is an issue in trying to secure the proper location in New Mexico. There is a residue of some type of complicated commitment to the Russians. That is a dynamic here that I would suggest perhaps we can go into another time. That is one consideration.

The second, though, is related to the last comment. Is there any remnant of scientific cooperation between the Department and the Russians continuing? This is a legacy program that goes back to Nunn-Lugar, where the opportunity presented itself to try to secure dangerous loose nuclear materials. It is a proxy, potentially, for other—if it is even possible—reestablishment of some working relationship with that country. That is difficult to say in this moment. I get that. It is my understanding this is all but dead. I would like to hear if there is any remnant of cooperation going.

Third, the International Atomic Energy Agency, its mission is developing in a very important, critical way. It is moving from just standard for nuclear security to a verification mission, which I think is absolutely essential. Now, like the Iran agreement or not—I didn't vote for it. Many people voted for it. Some voted against it. Many of us voted against it. Nonetheless, they are playing a critical role right now in assuring verification. And if we could ever break the impasse with North Korea, I would anticipate the IAEA would play a critical role as well. I think a continuing emphasis in investment in that important multilateral institution is not only in our own national security interests, it is in the absolute interest of international stability. If we are going to try to be a leader in non-proliferation, I think this is a gateway to doing so.

I will stop there. And I have a few others, if we have time.

Secretary PERRY. Let me just quickly address the issue of MOX. And in my opening remarks, I made comments about that it is—and, again, I am like you. I have been here for coming on 5 months, and previous decisions, previous Congresses, previous Secretaries of Energy, I don't want to cast any aspersion on them at all. I have got a job to do. And we have analyzed this. And I cannot in good faith say that going forward with that program is wise in a number of ways, the least of which is not from a financial standpoint and from the fiduciary responsibility that we have.

Dilute and dispose is a process that is proven, and it is substantially cheaper. Again, you know, I have had pretty lengthy conversations with Senator Graham, and will continue to, and the delegation from South Carolina. There are some, you know, possible legacy programs where the people of South Carolina won't feel like that, you know, here you have—you know: Thank you, Federal Government. You have strung us along here for these many years, and you are going to jerk this out from under us.

But the more important part of this is that we do have a process that works. I think WIPP has already taken five of those deliveries. And so you asked if we have had any conversation with the Russians. And they announced in, I think, October of last year and then they reiterated in May of this year that they were suspending the PMDA and based on a number of strategic issues unrelated to the disposition of plutonium. But they basically have—from my perspective, they walked away from the deal. And so any useful discussions at this particular point in time, I think, are—

Mr. FORTENBERRY. It is over.

Secretary PERRY [continuing]. Useful—excuse me, useless.

Mr. FORTENBERRY. There is no conversation going on?

Secretary PERRY. That is correct. And the—

Mr. FORTENBERRY. IAEA.

Secretary PERRY. Oh. Well, I can tell you I agree with your comments. I think that, you know, a relationship with them, continual engagement with the IAEA, for a lot of different issues, not the least of which is JCPOA, and—

Mr. FORTENBERRY. If I could make one suggestion, Mr. Secretary, even though the door with the Russians is locked, and, again, in this climate, and this—or it is shut, let me put it that way.

Secretary PERRY. I think that is a better descriptive term. It is just—it may not be. There may be a crack. Who knows.

Mr. FORTENBERRY. Yeah. Because once we get through the current political turmoil and tensions, again, the cooperation, potentially, on loose nuclear materials, and the whole architecture of nonproliferation is going to depend, obviously, on other key international players, including the Chinese. And residues of cooperation on spent material can serve, I think, as a proxy to potentially rebuilding relationships in addition to being important in and of itself.

Secretary PERRY. Yes, sir. And I am not sure you were in when I made a statement about one of the successes that we have had at the DOE is in our nonproliferation. I think there is some—is it 30 countries? Forty. There are 40 countries that have had that highly enriched uranium removed. And so we have got some good stories to tell out there about the nonproliferation side of what we have been conducting.

Mr. FORTENBERRY. Hopefully we will continue to project significant leadership in this area. There is a Nuclear Security Working Group here in Congress, just for your information. We look forward to—

Secretary PERRY. Yes, sir.

Mr. FORTENBERRY [continuing]. Potential dialogue with you on creative policies that continue to show leadership in this area.

Secretary PERRY. Consider it done.

Mr. FORTENBERRY. Thank you.

Mr. SIMPSON. Thank you, Mr. Fortenberry.

And thank you for bringing up MOX. I knew you probably would. Now let me tell you the other side of the story.

The past administration has proposed shutting down MOX and going to dilute and dispose. We have asked for the last couple of years for the Department to give us a rebaselining of MOX. They failed to do so. So we have a hard time comparing what the costs are. And I can tell you that when they did the cost estimates—this is a statement more than it is a question.

Secretary PERRY. Yes, sir.

Mr. SIMPSON. When they did the cost estimates and they said dilute and dispose is going to cost X much versus something else, I can tell you that is not an accurate comparison, because there is a lot of things that they left out of the cost of dilute and dispose, such as transportation, such as keeping WIPP open and the long-term storage at WIPP, and so forth. My concern has been—and I am not advocating for MOX. I am not advocating for dilute and dispose. I want to do things in the most economical way possible.

One, we do have a treaty with Russia. Russia did not walk away from the treaty. They asked to go to a fast reactor rather than the MOX facility in Russia, and we agreed. If we are going to walk

away from the treaty with Russia, then let's declare it and just walk away from it. But let's not try to go around it. We have got to do one of the two. We have got to talk to the Russians at some point in time.

Secondly, have we got the okay of the State of South Carolina?

Thirdly, do we know that it can go into WIPP? While they have put small quantities of the same type of material in WIPP so far, that was authorized at the beginning. I don't know that all of the material that MOX is supposed to take care of can fit in WIPP without additional land withdrawals. If so, have we talked to the State of New Mexico? Are they okay with this? How about the two Senators from New Mexico? Are they okay? The one thing I do not want to have happen, as has happened so often with agreements with the Department of Energy and when they have moved down these paths, because these are long-term things, that 10 years from now, the chairman of this committee will be sitting here going: Well, we shut down MOX, and we got racquetball courts there, and they are real pretty—because that is how we can repurpose that building, make beautiful racquetball courts; I don't know what else you would do with it—but we shut down MOX. The State of New Mexico is holding us hostage. The State of South Carolina is fining us. And the State of New Mexico says: Well, we will do a land withdrawal, and we will go along with that okay, but we want every road in New Mexico paved.

I don't want to be held hostage to that. And before we walk away from something that we are in the middle of, we ought to have the plan to move forward and be sure that we can do it. Otherwise, we will be sitting here in 10 years with our fingers in the air wondering what the heck we are doing and where we are going to go next. It is not that I am opposed to dilute and dispose. But I think you have got to have an honest cost comparison. And I do believe that you have to do an honest—I talked to some people at the MOX facility: 70 percent complete. Talked to some DOE people: 10 percent complete.

Now, wait a minute, somebody is wrong here.

Secretary PERRY. Yes, sir.

Mr. SIMPSON. So we need an honest assessment of what this is going to be. And I think to—we talk about cost overruns. I mean, I look at this budget. Frankly, and we are asking for—what is it? Let me see if I can pull it up real quick.

Oh, it is in your phone.

Yeah. Last year, we required you to, when you do your budget, to give us a 5-year budget plan for NNSA. I suspect that will be coming. Last year, the 5-year budget plan that puts out what the budget request is going to be for the next 5 years, 1 year later, this year, is \$225 million above what it was last year. Cost overrun, I guess you could call it that. I don't know. But we will be looking forward for a cost estimate for the 5 year for the NNSA, in the near future, when you provide that to the committee.

The second thing I would like to talk about for just a second is nuclear energy in general. I do have some concerns with the budget because it is going to be difficult to be supportive of the license renewals that are going to be necessary for the current reactor fleet while also providing support for the next generation of nuclear re-

actors under the current budget. You talked about the need for the base load, and nuclear energy is obviously one of the things that provides an environmentally friendly, no-hydrocarbon-emission base load that is absolutely essential, I think, for the future.

What is your strategy for ensuring that our research infrastructure provides adequate support for our current nuclear technologies while also enhancing the technological advances for the future reactor fleet? And along that same line, I was glad to see you put \$10 million in here for developing the technical capabilities that would be needed for developing a fast reactor. I really think we need a fast reactor in this country. If we had a fast reactor, we wouldn't be talking about dilute and dispose or MOX.

Secretary PERRY. Yes, sir.

Mr. SIMPSON. You know? So, anyway.

Secretary PERRY. I think your focus on nuclear energy from the standpoint of small modular reactors may be the next gen, if you will, the next generation, that can take us to where—I am not sure—well, yes, I am. I am sure you cannot go forward with these massive, big nuclear energy power plants that cost, you know, \$6-plus billion. That is not feasible. We see the problems that we have with it now.

I think for America to be stable in the nuclear, civil nuclear side of things—and the civil nuclear side of things goes to our ability to have our national security both—not only in the form of a steady form of energy, but also the technology that is driven in the civil nuclear side is also—will be driving our weapons technology, as well, and vice versa. And, I mean, one of my great concerns about what is happening and Westinghouse and the challenges that we have there, knowing that the Chinese and the Russians are more than happy to step in, around the world, and take on the mantle of, “We will build your nuclear plants for you,” because, you know, America doesn't have the ability to do that. You know, two plants down in the southern part of the United States, they couldn't finish those. So, you know: Trust us; we will be there for you.

That is a really bad message, and it is a really bad advent if that is where we end up. And my goal is that is not where we end up, that we, obviously, find the solutions for the Westinghouse issue in the short term and the long term, and we transition in this country to small modular reactors. That is being developed out in your part of the world. And, you know, we got—and, again, we are at the point, I think, Ms. Kaptur, when we talk about—we have been investing in NS on the basic research side, and Mr. Gates and NuScale, they are at the point of being able to move this to the commercialization side of it. And I think if we are successful and we continue to support the small modular reactor, that it can be a game changer in the nuclear side of things and bring America back to a preeminent role as leaders in the technology and innovation and nuclear energy.

Mr. SIMPSON. Thank you, Mr. Secretary.

And I didn't mean to sound so vehement on MOX. I am just saying that there is always—everybody always looks at it as just a cost issue—

Secretary PERRY. Yes sir.

Mr. SIMPSON [continuing]. And there is more to it.

Secretary PERRY. I don't disagree.

Mr. SIMPSON. And every year in conference between the House and the Senate, this becomes an issue between us. And I have always said: Hey, I am willing to go there, but you got to answer these questions for me, and you got to show me that you got an agreement with the State of New Mexico, and you got to show me that South Carolina is going to be okay with this. And you got to show me that you at least talked to the Russians; if not talked to them, then decided that we are going to walk away.

Secretary PERRY. I don't want to get in trouble.

Mr. SIMPSON. One of those two. I know what you mean. So I appreciate that.

Ms. Kaptur.

Ms. KAPTUR. Thank you, Mr. Chairman.

Mr. Secretary, thank you for your time today. I was glad to hear you talk about the issue of civil nuclear power production. I come from a State where this is a big issue. Congressman Joyce and I understand it well. And I really believe that the sort of current solution, which is let these sick fish fall on the States, isn't working. And someone has to think about the defense industrial base of this country and the component supply chain relative to that. And I would hope, as you think about this sector—and I have encouraged the industry to think about some of the workouts that we have had in other troubled sectors, including the automotive sector. I am concerned about what I see happening out there, and I don't really see a workable solution yet. And I am concerned about it, and I represent a region heavily impacted by it. It provides opportunity. But I don't see the leadership that I think is necessary to really help us to stabilize this industry.

Maybe I am wrong. Maybe I just haven't talked to the right people. But I have talked to a lot of people. So I think your leadership might be vital.

In terms of the discussions up here on base load power, we agree that investments in energy storage are critical. In terms of the study that will evaluate future technologies, such as distributed—will distributed energy and storage be a part of that study for the base load power work that is being done?

Secretary PERRY. Yes. I mean, the short answer is yes and, this goes back to what we happen to think, and I have for some time, well before I took this current position I am in, that storage is kind of the Holy Grail. And if we figure out how to store energy, at that particular point in time, it gives us such a broad, but, again, we don't yet, and there is still research going on. There is still Jell-O being thrown at the wall, so to speak. But, you know, we support that.

Ms. KAPTUR. Thank you. I may be the only member of this panel that is concerned about the Strategic Petroleum Reserve. But I do want to make a comment about it. And I don't want us to be a country that is penny-wise and pound-foolish. We have been at war 16 years now, and one of my objectives in serving on this subcommittee is to make sure that we aren't just 100 percent energy independent here at home, but 125 percent. Okay? So that is my goal.

The Strategic Petroleum Reserve has played a role. We know that every time gasoline goes over \$4 a gallon in this country, we go into deep recession; my part of America gets really walloped hard. And so I become very uncomfortable with proposals to sell off the majority of crude oil. A, we are at war. B, we have real enemies. And we can't anticipate what will happen in the future. So I just wanted to say that I have a concern about this particular proposal in your budget. You are on the National Security Council. You can raise a lot of questions there. But I am very uncomfortable with this. So I just wanted to express that opinion. You don't have to answer any questions.

I think it is a mistake. And it is certainly a mistake to sell it at low prices. But when you are at war, I think that you can't anticipate what is going to happen out there.

Secretary PERRY. Ms. Kaptur, not as much to answer, I am very familiar with that facility because part of it is in Texas and part of it is in Louisiana. There are four of them and I think the idea of being able to consolidate down to two rather than four, there is some sensibilities about that because of the cost to upkeep.

But here is another—this is coming back to you and the committee more as a question about what do you all think about. If we consider pipelines to be a form of storage, if you will, if there is crude oil in a pipeline, then I consider that to be again, this is not apples and oranges but if your point is we need to have this access to our crude that we have control of. The world has changed in the last 10 years, and America's ability to go retrieve these molecules, these hydrocarbon molecules, from places that we never thought we could get them prior to 10 years ago because of hydraulic fracturing and directional drilling. And so, and, again, I think the Dakota Access pipeline, full, is like 5 million barrels. If we are building more pipelines in this country so that we have better transportation and we have connectivity and we have the ability to deliver product to different places and economic development comes because of that and what have you, then maybe that does soften a little bit your concern about, you know, reducing some of the supply.

I am not asking, you know, for an answer here. I am just saying, should we think about that as an opportunity? My role is to look at ways that we can consolidate that we can save some money. This may be one of them. Just a statement.

Ms. KAPTUR. Thank you.

Secretary PERRY. Yes, ma'am.

Ms. KAPTUR. Thank you very much. I think we need more review on that one. And I appreciate your openness.

Let me ask the Department, in terms of how you will respond to congressional inquiries as Secretary, is there a policy that you have been given or guidance that would prohibit you or delay responses if, for instance, I were to send a letter over to the Department of Energy, versus our chairman, someone who is on a subcommittee or a full committee? So is there any guidance that has been given that you must adhere to that we might not be aware of?

Secretary PERRY. My history as a chief executive, being the Governor of the State of Texas, is when a member of the legislature asked me for something, I got it to them on a timely basis. I have

no reason to think that, quite frankly, any reason, if you send a letter asking for information to the Department of Energy, and you didn't get a response, I hope what you will do is call me first, and then we will go find out who didn't write you back in a timely way.

Ms. KAPTUR. Okay. But there is no policy or guidance prohibiting or delaying responses to Democratic Members of Congress?

Secretary PERRY. You know, I used to be a Democrat.

Ms. KAPTUR. We will invite you back at the right moment.

Secretary PERRY. I was going to tell you: There is still time for you, ma'am.

In all seriousness, not at all. If you find that the agency is not responsive, seriously, a phone call to me is all that will be required.

Ms. KAPTUR. Thank you.

Thank you, Mr. Chairman.

Mr. SIMPSON. Mr. Calvert.

Mr. CALVERT. Thank you, Mr. Chairman.

You mentioned the small module reactors. As a Nation, we have spent a considerable amount of resources into research on fusion. I know that the results from that have been less than spectacular. But, as you know, you were in France recently, we have a Project ITER, international thermonuclear reactor, that we have put a lot of resources into—and along with a number of other nations. I just bring this up hoping at some point in the future we can resolve this issue of fusion—which, you know, from President Eisenhower on, we have been looking to resolve.

On the issue of computer capability. I would assume, and I would hope, that the Department of Energy works closely with NSA and the Department of Defense on what they are doing to develop computer technologies and I hope there are no redundancies in research that is being conducted as far as that is concerned.

Secretary PERRY. Mr. Calvert, I wanted to turn over here because I want to give you some numbers that I think are really important about exascale. And you are absolutely correct. And it is not just about, you know, wanting to wear the crown of having the fastest computer with the most capacity. What our national labs and the partnerships that we see out there, and I will give you one example of something that I would suggest every one of you is supportive of, and that is our veterans. The national labs are partnering with private sector and with other agencies of government, because of this massive computing capability that we have and our ability to keep up, whether it is on the NNSA side with our weapons, or the VA who came to us last year, well before I got there. My support of veterans is known. When I found out that we had the potential here—it is called the Million Veteran Project. We are asking 1 million veterans to give blood and volunteer their medical records so that we can do DNA testing. VA is running that program using DOE computing capability so that we are going to be able to tell a million veterans: Such as a young female military veteran, who has a DNA marker for breast cancer or for cervical cancer, or a young man who has the potential in his DNA marker for prostate cancer and how they could prepare for that. I mean, this is really life-changing and a quantum leap forward from a medical standpoint, from my perspective. And DOE's computing capability is a quality of life issue for our citizens. And then you take

it over into the scientific side, there is this issue of fusion that you talked about. And, you know, again, that is kind of a Holy Grail on the side of energy, as well that we have been pursuing for a long time. But our supercomputing capability may be what allows us to crack that. And so our investment in that is really important. We are requesting \$508 million. That is \$249 million over fiscal year 2017 to accelerate the delivery of an exascale computer by 2021. That is going to Argonne. And then by 2022, there is a second machine going to Oak Ridge. And it is totally different architecture. I mean, that is kind of the fascinating thing, is so you have got exascale, which is going to Oregon; then you got the next gen, which is going to Oak Ridge. That will, again, put the United States in its rightful place, from my perspective, as being the most technically advanced supercomputing Nation on the globe.

Mr. CALVERT. Thank you, Mr. Chairman.

Mr. SIMPSON. Mr. Fleischmann—or, Mr. Aguilar. Sorry.

Mr. AGUILAR. No problem. No problem. Happens all the time, Mr. Chairman.

Mr. SIMPSON. You are so far down there.

Mr. AGUILAR. It is like a 5-9 caucus he and I occupy. Don't worry. Yeah.

VOICE. You guys look alike, right?

Mr. AGUILAR. I appreciate it.

Thank you, Mr. Secretary.

I wanted to get specific on something I saw in an appendix to NNSA. A recently released GAO report raised some concern about cost estimates associated with our nuclear modernization programs and said they might be understated. I will use the B61 life extension program, B61-12, as an example. One cost estimate produced by NNSA Office of Cost Estimating and Program Evaluation points out that it could cost \$2.6 billion more than previous estimates to complete this program. But the original baseline from NNSA's fiscal year 2017 Stockpile Stewardship and Management Program Plan was just released in March of 2016.

So here is my question: The discrepancy between these, in such a small window of time, do you feel that program cost estimates provided by the Office of Cost Estimating and Program Evaluation show that it is improving the program and it needs to change or expand? As a followup, what are some of the implications to the variety that we see in the cost estimating?

Secretary PERRY. Mr. Aguilar, let me get back with you on that—

Mr. AGUILAR. Sure. We can put something into the record and ask—

Secretary PERRY. I want to give you an answer, but I can't because I am not privy to the discrepancies there.

Mr. AGUILAR. Sure. And we will put it into the record—

Secretary PERRY. Yes, sir, please.

Mr. AGUILAR [continuing]. And ask your staff to get back to us. Sticking with nonproliferation, the fiscal year 2018 budget shows a reduction in these programs, as we have highlighted. Will these reductions continue in future budgets? The chairman alluded to a multiyear outlook that the agency will provide. Does this say any-

thing about U.S. policy towards nuclear nonproliferation? And is NNSA—do you feel this sets us down the right path?

Secretary PERRY. Here is one of the things, and I mentioned this earlier, that because of our successes that we had with some of the nonproliferation programs and I think the backing out of those, and what I am talking about are 40 countries and the eastern European countries that have had successful reductions of that highly enriched, and materials removed from them, that there is some reductions in the nonproliferation budget because we have been successful.

Now with that said, I am not telling you that going forward we are going to continue to have reductions. What I will tell you is that the agency is as committed to nonproliferation as its ever been. We will manage the dollars and we will manage the programs and, obviously, working with the Members in Congress, in a way that is acceptable to you and to our partners in this.

Mr. AGUILAR. I appreciate it. Thank you.

Continue down to the electrical grid that we have discussed about. As we have talked, the electric power system is vital and efficient to our economy and the capabilities of our system. The smart grid improvements are widely considered essential. DOE has changed the smart grid research and development program to the resilient distributions system program and decreased its budget by 71 percent, compared to fiscal year 2016, enacted, and 80 percent from fiscal year 2017, enacted.

Given those considerations, can you talk about the rationale for the proposed reduction under this category, the smart grid category?

Secretary PERRY. Yes, sir. Obviously, managing the agency, and again, I go back to I hope that the committee will have some flexibility when it comes to being able to move dollars around line item to line item. I am a big supporter of smart grid. We did some major projects in the State of Texas.

You know, I think one of the things that we do need to do is, not necessarily from just a straight up funding standpoint, but best practices go back to the States and have the Governors and the legislators aware of the programs that are out there to be able to let them manage their grids in particularly smart meters and those types of technologies that we can get out into their hands.

So to answer your question about are we going to be able to address the smart grid, you know, the smart meters, the different innovations and technologies, I feel comfortable that we will. And again, this being the first step in this budgetary process, I feel comfortable.

Mr. AGUILAR. I appreciate your answer. And this is the second time you have mentioned, you know, the flexibility. And I want to let you know and convey that I trust your management ability, but I do feel, you know, there are rules within the committee, and that is between the ranking member and the chairman and your agency, on how money gets moved around based on those priorities.

Secretary PERRY. Yes, sir.

Mr. AGUILAR. That is why we take this budget process so seriously.

Secretary PERRY. Yes, sir.

Mr. AGUILAR. That is why we dig in and we want to get this right, because we want to give the guidance to your agency so you don't have to come and ask for movement. But that is your prerogative and we trust that leadership. So thank you so much. I appreciate the time.

Secretary PERRY. I look forward to working with you, sir.

Mr. SIMPSON. Mr. Fleischmann.

Mr. FLEISCHMANN. Thank you, Mr. Chairman.

Mr. Secretary, I would like to thank you for a very positive, insightful, and thoughtful hearing today. And my colleagues on both sides of the aisle, I think we did an outstanding job. And we have touched on the depths and the breadth of all the different things that the Department of Energy touches, so I want to thank everybody for that.

An important issue I promoted, Mr. Secretary, for years is a closer working relationship to alleviate some of the Department of Energy's unintended consequences on local communities, especially sites that are close to population areas. Land transfers, aging infrastructure, like the Oak Ridge water plant, and environmental challenges require a closer partnership between DOE and its host communities. I would like to see the Department do more.

Mr. Secretary, will you and your staff work with me to encourage innovative solutions and more effective partnerships between the Department offices under you and our local community, sir?

Secretary PERRY. Yes, sir. And, you know, having visited with Oak Ridge and both spent the night there and driven through the community and recognizing how it is not unlike what I think I am going to see when I go to Richland. These are communities that are symbiotic. The city of Oak Ridge and the Y-12 facility, the uranium processing facility, exist because of each other. And I think having a respect, both ways, is really important. And you have my commitment that not only am I going to be open to your suggestions, but the Mayor of Oak Ridge, the Governor of Tennessee, and the Congressman that represent that area, to manage the challenges, but to also recognize the extraordinary potential that is there for those communities as well as to coordinate with them and not be making decisions unilaterally. There is a great opportunity and I am very open to let's talk.

Mr. FLEISCHMANN. Mr. Secretary, thank you so much. And it is mutual. You will find that not only from me, from our Senators, and also from our local communities and elected leaders. Thank you, sir.

Mr. Chairman, I will yield back.

Mr. SIMPSON. Mr. Newhouse.

Mr. NEWHOUSE. Thank you, Mr. Chairman.

Mr. Secretary, I appreciate the extra time here so we can really drill down into some deep parts of the Department's responsibilities.

I wanted to talk a little bit about the building technologies office, which as you probably know, has saved many Americans, over time, billions in energy costs. It certainly has been able to bring together a collaboration between, in my State, the University of Washington, WSU, as well as the Pacific Northwest National Lab-

oratory in helping connect campuses to test energy savings technologies.

So could you talk a little bit and explain how these programs are going to be able to continue under the current budget proposal in order to see the benefits in both private and public sectors?

Secretary PERRY. Yes, sir. And I will be pretty brief and straight to the point here. You know, these funding opportunity announcements that will continue to come out of the agency and working with the local universities, and the private sector, you know, are we going to have a reduction of the total number of dollars? Yes. But I think that is where it gets down to us working together and prioritizing what are the real core missions of the Department of Energy, and are these projects, you know, worthy to go forward?

And I did that, Mr. Newhouse. As the Governor of Texas, we had a number of programs, both with emerging technology, in particular, where we had basically a private sector review board that looked at the projects, made the decisions about, you know, whether or not they should go forward and did they meet the standards that we put in place. I know we have a group not unlike that. I may want to fine tune it. I may want to, you know, ask for the input of the committee here as we go forward as we do that. But we will continue to be looking.

I think the core mission of the Department of Energy is to promote innovation and technology. I understand the NNSA's role and what they have to do, but those National Labs, and working in concert with our universities and the private sector out there, they have the potential to continue to really make a difference in people's lives. Does that mean we are going to get every one of these projects right? Does it mean that every one of these is going to, you know, commercialize into some great next big thing? No. But I think it is our responsibility and I think it is our duty to continue to look for the ways to promote innovation, technology. And, you know, that is my philosophy.

I am historically used to doing it and, you know, not every project is going to get funded. I understand that. And I look forward to folks coming forward with their best ideas and their best ideas about how to fund these projects, and then we will collectively make a decision about what direction we will go.

Mr. NEWHOUSE. I appreciate that.

I also had one question too on payments in lieu of taxes, the PILT program that has been in place for many decades. I believe it is significantly reduced or even eliminated at least four counties surrounding Hanford reservation. Could you talk about your philosophy there and perhaps the rationale behind that?

Secretary PERRY. Well, since I didn't completely write all of this budget, sir, I will, in that particular area, if you will allow me the flexibility one more time to get back to you and give you an appropriate answer, rather than just taking a wing at it here.

Mr. NEWHOUSE. Okay. We will have a lot of time to talk when we are touring the Hanford site.

Secretary PERRY. Yes, sir. That we will. Yes, sir.

Mr. NEWHOUSE. All right. Thank you, Mr. Secretary.

Mr. Chairman.

Mr. SIMPSON. Mr. Joyce.

Mr. JOYCE. Thank you, Mr. Chairman.

Mr. Secretary, I am troubled that the United States no longer has any capacity to enrich uranium, and the current plan is not to restore this capacity for 21 years. Do you agree that uranium enrichment is vital for our national security, and that restoring enrichment capacity in the near term is in the national interest?

Secretary PERRY. As a general rule, yes, sir, I do. I think that, from a national security standpoint, that having the ability to do that is in our national security interest.

With that said, I think we have a fairly robust stockpile at this particular point in time. But if we are to go forward with these life extension programs and, for that matter, on the civil nuclear side, we are going to have to have a conversation here in the Halls of Congress about when and if and how that does go forward.

Mr. JOYCE. Well, if, in fact, you were going to have that conversation, there are certainly some fellow Buckeyes in southern Ohio, from the Piketon plant, who would love to have that conversation with you, as well as Ms. Kaptur and Mr. Ryan, who are also on appropriations.

Secretary PERRY. Yes, sir.

Mr. JOYCE. Thank you. I yield my time back.

Mr. SIMPSON. Mr. Fortenberry.

Mr. FORTENBERRY. Thank you, Mr. Chairman.

Mr. Secretary, I just want to turn very briefly back to MOX. What I don't want to see—please, I am just lowering your temperature—what I don't want to see is what the chairman alluded to, another conference committee this year that says, oh, well, we just couldn't make a decision and let's put another \$300 million more into it, when we have got all kinds of other places to park that kind of money for important national values and objectives.

So to the chairman's point, we don't want to waste money; the projection of the project is very tenuous. Yet the deeper answers just seem to be allusive, will New Mexico take it. Is there a dormant agreement with the Russians which will be complicated by this? Is the fast reactor a more medium-termed decision that could unwind some of the complexities of this?

Why don't we just make a commitment quickly to get some answers to these things so we have a true cost comparison versus treading water, throwing more hundreds of millions of dollars at it, with an ever increasingly remote possibility this thing will ever get built. I think that is just the best thing to do.

Secretary PERRY. Yes, sir. And to direct answer that, that is what we are attempting to do. I mean, we are—

Mr. FORTENBERRY. Okay. We have got about 90 days.

Secretary PERRY. Right, I understand that. And I have had multiple meetings. I have been on the job now since the 2nd day of March. And MOX is—I know more about MOX than I ever thought I would and ever wanted to know, to tell you the truth.

Mr. FORTENBERRY. Well, I feel the same way. I am just going down line items, what is this?

Secretary PERRY. That is beside the point. You are absolutely correct that we as a country need to get the answers. We need to know how much this is going to cost with some amount of certainty.

And, Mr. Chairman, you are right. I mean, it is stunning the difference in the numbers that you can get. You know, the Corps of Engineers has their estimates. And, you know, I want to sit down with the contractor, and you know, Senator Graham shares with us this is what the contractor has said that they can get this done for. And then we have letters that basically do not agree with that. So—

Mr. FORTENBERRY. Well, you can imagine our frustration—

Secretary PERRY. Yes, sir. We need to get some people in a room and figure this out.

Mr. FORTENBERRY. Okay. The second point. Back to nonproliferation. We have also had this conversation last year. This is a hallmark, I think, of smart, prudent public policy to have an accent mark on the—again, an architecture for nonproliferation. If one of these things goes off in the world, it doesn't matter the healthcare debate, it doesn't matter the budget. Just one. And the purpose of a nuclear weapon is to prevent nuclear war. And so yet nuclear weapons are back. China's increasing, Russia's increasing, we know the situation in North Korea. And other areas of the world, actually, over the last 25 years, thankfully, have pulled back from the precipices, leaving us with spent nuclear material, leaving us with dangerous material out there. And a number of these programs have been very successful in pulling that back, which again is related to mitigating a terrorist threat. But it all gets combined, I think, into creating a culture in which this is a decided priority, and we project that on the international stage.

So in that regard, please, let us think creatively with you. I completely agree with the last administration's emphasis on nuclear security summits. I think those were successful. They began to get more and more multilateral buy-in to the issue of securing material, but it also creates, again, the gateway of the raising of consciousness internationally as to just how dangerous of a situation we are entering into with international stability and more and more weaponization and the technology readily coming out of the bottle.

Secretary PERRY. Yes, sir.

Mr. FORTENBERRY. So if there is one thing that you can do as Secretary to pull us back from this precipices, we will do whatever we can to creatively think with you. I think that is the most valuable thing we could do together.

Secretary PERRY. Yes, sir. Consider us being a partner.

Mr. FORTENBERRY. Thank you, sir.

Mr. SIMPSON. Thank you.

That was a good idea. If you have a MOX summit, I will be there, because we have been debating this for so long and we need to make some final decisions. But I would point out that we don't save \$340 million by not funding MOX. There is still \$270 million in there for cold storage, so—and put it in cold standby or whatever. So it is a perplexing problem. And Mr. Alexander, Chairman Alexander and I have spent a lot of time debating and arguing and so forth. I understand where he is coming from, he understands where I am coming from, but we need to make some decisions.

Secretary PERRY. Yes, sir.

Mr. SIMPSON. We need to make some decisions on that. We need to make some decisions on a few other things that are perplexing within the complex.

And I want to tell you that when you decide to go to Hanford, I would be happy to go with you. That is a great place to go. I know a great restaurant. We can have some good times. You know, everybody—when we think about Hanford, we always think about the cleanup, and it is huge cleanup issues up there. But we forget about PNNL. PNNL is a great laboratory. It does some great work. So I was glad to see that Mr. Newhouse brought that up.

But thank you for being here today. We look forward to working with you as we go through and address some of our concerns and some of your concerns within this budget, that we will get a budget that you can work with and do the job that you have been hired to do. We appreciate it. Thank you.

Secretary PERRY. Thank you, Mr. Chairman. Thank you, members.

Mr. SIMPSON. The meeting is adjourned.

[Questions and answers submitted for the record follow:]

QUESTIONS FOR THE RECORD
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT
HOUSE COMMITTEE ON APPROPRIATIONS

**Hearing on the 2018 Budget Request for the Department of Energy
June 20, 2017**

DOE MANAGEMENT

Subcommittee. Almost all the proposed reductions to the applied energy accounts are explained as a result of shifting to early stage research and development activities.

In this context, does the Department have a standing definition of what early stage research and development is and can you describe it for us?

Secretary Perry. The FY 2018 Budget Request funds \$6.4 billion in early-stage R&D while reducing later-stage research, development, demonstration, and deployment programs by \$3.1 billion from the FY 2017 enacted levels. Of this amount, the Request provides \$1.9 billion in energy R&D programs, with a renewed focus on cutting-edge innovation and transitioning those breakthroughs to the private marketplace.

The FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. This shift allows the private sector to fund later-stage research, development, and commercialization of energy technologies.

Through these investments and by refocusing the Department's energy and science programs on early-stage R&D at our national laboratories, the President's FY 2018 Budget will advance American primacy in scientific and energy research in an efficient and cost-effective manner.

Subcommittee. How did you approach this issue in developing the budget request?

Secretary Perry. The FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. This shift allows the private sector to fund later-stage research, development, and commercialization of energy technologies.

In the area of applied R&D, the Department also supports energy R&D programs—supported by \$1.9 billion in the President's FY 2018 Budget—

with a renewed focus on cutting-edge innovation and transitioning those breakthroughs to the private marketplace.

For example, the FY 2018 Budget focuses Energy Efficiency and Renewable Energy (EERE) resources on early-stage R&D, where the Federal role is strongest, and reflects an increased reliance on the private sector to fund later-stage research, development, and commercialization of energy technologies. The Budget emphasizes energy technologies best positioned to support American energy independence and domestic job-growth in the near to mid-term. The Budget maintains America's leadership in transformative science and emerging energy technologies in sustainable transportation, renewable power, and energy efficiency.

Subcommittee. Every two years at the start of a new Congress, the Government Accountability Office (GAO) calls attention to agencies and program areas that are high risk due to their vulnerabilities to fraud, waste, abuse, and mismanagement, or are most in need of transformation. This year, the GAO added a new risk area for the U.S. Government's Environmental Liabilities. GAO estimated that of the government-wide liability of \$447 billion, \$372 billion is the responsibility of the Department of Energy and 50 percent of that resides at two cleanup sites: the Hanford Site in Washington and the Savannah River Site in South Carolina. GAO also reported that despite the billions spent, DOE's environmental liability has roughly doubled from \$176 billion in 1997 to \$372 billion in 2016 and that DOE's cleanup decisions are sometimes not appropriately tailored to the risks presented.

What can be done to stem the growth in costs to the federal government to clean up DOE sites?

Secretary Perry. The Department is actively working to develop a range of initiatives to stem the growth of costs associated with environmental cleanup.

Subcommittee. Is there anything the Department can do to improve the management of its cleanup programs?

Secretary Perry. The Department continues to work to develop initiatives on improving the management of its cleanup programs.

Subcommittee. In March of 2016, Dr. Monica Regalbuto, the Assistant Secretary for Environmental Management (EM) testified before this Committee that once negotiations were finished with the contractor (which should be very, very soon), they would come back and provide the baseline information on the Waste Treatment Plant project. She also testified that the cost would go up “a lot”. The EM budget request that we received last week still shows the old cost information on the project and states that the cost and schedule estimates are still “TBD”. No new information on the re-baseline was reported. It is our understanding that DOE concluded negotiations and set a baseline on the “direct feed” components of the project sometime around last December.

Can you provide any updated information on the cost and schedule estimates for this project to the Committee?

Secretary Perry. Because of the technical, safety, quality, and management issues, the Administration is reviewing the Waste Treatment and Immobilization Plant project to identify corrective actions that will improve project performance and ensure accountability for taxpayer resources.

Subcommittee. What did the negotiations with the contractor and subsequent re-baseline conclude?

Secretary Perry. Because of the technical, safety, quality, and management issues, the Administration is reviewing the Waste Treatment and Immobilization Plant project to identify corrective actions that will improve project performance and ensure accountability for taxpayer resources.

Subcommittee. The Department’s ability to protect its assets from cyber threats and attacks is of critical importance to ensure it continues to meet its national security and research missions. Having an effective and clear cybersecurity plan is one of the best defenses the Department can implement against these attacks. The Committee understands that the Department developed a cyber strategy in 2015 but has yet to formalize an official implementation plan.

Can you describe your efforts so far, or discuss future efforts, to address cybersecurity concerns?

Secretary Perry. Across the Department's programs and sites, we are taking major steps to safeguard our assets against cyber threats. The Budget includes robust funding to secure our own networks.

For example, the Budget increases funding for the Chief Information Officer by \$17 million from FY 2017 to modernize infrastructure and improve cybersecurity across the internal DOE IT enterprise.

The Department of Energy (DOE) is engaged in cyber-related activities to protect the DOE enterprise and mitigate risk, including government-owned, contractor-operated sites, from a range of cyber threats that can adversely impact mission capabilities.

The FY 2018 Budget request for DOE's Office of the Chief Information Officer will support efforts to:

- Implement network security modernization;
- Collaborate with the Department of Homeland Security to improve security protection for information and information systems/continuous diagnostic management (Continuous Diagnostics and Mitigation); and,
- Introduce new cybersecurity products and services to protect the DOE IT infrastructure.

Also supported by the budget, DOE will organize and clarify risk management goals and provide a consistent approach through which to make risk-based cybersecurity decisions. By providing foundational guidance, strategies, and implementation plans, such as an enterprise Risk Management Approach and Methodology, and working closely with programs and sites, OCIO develops, documents, and deploys fundamental approach(s) to cybersecurity and risk management for use within the DOE enterprise. The Department leverages strategic planning to identify critical cybersecurity gaps, establishing priorities, and determine appropriate actions are necessary to improve the Department's Cyber posture. This a continuous

process across the enterprise and includes execution in discreet operational initiatives.

We also increase funding for cybersecurity in the National Nuclear Security Administration to \$150 million to step up security for our nuclear security networks. In the Environmental Management program, we consolidated \$43 million for cybersecurity into a new budget to ensure the security at our nine major cleanup sites.

Cybersecurity is one of my key goals at the Department, and the Budget will help us take concrete steps to harden our systems and our infrastructure.

Subcommittee. Do you plan on updating the cyber strategy and formalizing a plan across the Department?

Secretary Perry. The Department is currently evaluating the development of an enterprise-wide cyber strategy implementation plan.

NATIONAL SECURITY

Subcommittee. Detailed acquisition reports for the nuclear warhead life extension programs indicate that costs of those programs are growing compared to the initial estimates provided to Congress.

Are the modernization costs increasing and is the Department of Energy doing anything to keep those costs within budget and the programs on schedule?

Secretary Perry. Two major modernization programs – the B61-12 Life Extension Program (LEP) and the W88 Alteration (Alt) 370 (with Conventional High Explosive refresh) Program – were baselined in the last year. Each had increases to program cost, due to the phase of the program. This cost growth was within the cost estimation ranges for the programs, as estimated by the program office, not the Office of Cost Estimating and Program Evaluation, and below the 15 percent congressional reporting requirement. Funding for LEPs in the FY 2018 Request did increase from \$1,340 million in FY 2017 to \$1,744 million in FY 2018 (\$404 million), which includes \$138 million due to adjustment of the baselines for the B61-12 and W88 Alt 370. These programs remain on schedule to produce First Production Units (FPU) in FY 2020.

Early LEP estimates over the next 25 years are based on planning estimates from historical costs, as reflected in the FY 2017 SSMP cost range. These estimates are done in advance of the Feasibility Study and Option Down-Select and Design Definition and Cost Study (Phases 6.2/2A) that establish the specific scope for each LEP, and are subject to change once these studies are complete.

NNSA continues to improve the program management and cost estimating capabilities for LEPs by implementing improved earned value management practices, improved cost estimating capability, and independent evaluation from the NNSA's Cost Estimating and Program Evaluation, established to provide the NNSA Administrator with independent analytics.

Subcommittee. Mr. Secretary, the Department of Energy's Nuclear Energy program has provided support to Ukraine to extend the life of its

aging nuclear reactors and increase the resilience of the country's energy system. This Committee has been highly supportive of those activities.

Do you know the status of these activities and are there any activities in your budget request to support these goals?

Secretary Perry. DOE's Office of Nuclear Energy (NE) has supported Ukraine's energy security efforts through nuclear fuel diversification away from a sole Russian supplier through the now-completed Ukraine Nuclear Fuel Qualification Program (UNFQP). This program resulted in Westinghouse fuel being licensed for use in Ukraine. By the end of 2017, this fuel is planned to be in use in 6 of Ukraine's reactors, located at two of Ukraine's four nuclear power plants. These efforts have broken the Russian nuclear fuel monopoly and should serve as a template for other Eastern European countries that rely exclusively on Russian nuclear fuel.

In fall 2016, NE completed a project to address physical security upgrades at the South Ukraine Nuclear Power Plant. This work included upgrades in video security, alarms, lighting, and access control methods to critical areas. Work was also completed at the beginning of 2017 on developing "Diverse and Flexible Coping" (FLEX) procedures for nuclear power plant operations in the event of a long-term electrical grid failure. This was done to address safety concerns at Ukrainian nuclear facilities

In keeping with its priority on safety, NE will be starting an Outage Optimization Program in the latter half of 2017. This program, funded with DOS funds, will focus on minimizing the outages at nuclear power plants in Ukraine while maintaining a high level of safety. Maintenance outages typically last from 40–60 days and result in a large loss to the total electrical generation. Optimizing the outage schedule by increasing plant availability increases electrical output. If replicated across Ukraine's nuclear power plant fleet, the total increase in generation would be nearly equal to that of an additional nuclear reactor. Unit 2 of the Zaporizhzhya Nuclear Power Plant will be used as a pilot for the Outage Optimization Program. Finally, the FY 2018 President's budget request supports international nuclear energy cooperation that provides expertise and technical assistance to countries with nuclear energy programs, but does not single out Ukraine.

Subcommittee. Will any of the reductions proposed in the budget request impact the Department's ability to carry out this assistance?

Secretary Perry. The Department will be able to effectively carry out its cooperative activities.

Subcommittee. Mr. Secretary, NNSA has struggled to establish domestic production for the medical isotope Moly-99 without the use of highly-enriched uranium, as directed by Congress in the American Medical Isotopes Production Act. Have any of the projects funded by the NNSA's program been successful in providing U.S. supply? If not, do you know when a domestic production source will be achieved?

Secretary Perry. The projects funded by NNSA's molybdenum-99 (Mo-99) program have not yet produced Mo-99 for patient use. NNSA's cooperative agreement partner NorthStar expects to achieve its first domestic production of Mo-99 in early 2018.

Subcommittee. Do you believe the Department has met its Congressional requirements or is there more that could be done to establish a secure domestic supply of this important medical isotope?

Secretary Perry. Our assessment is NNSA's molybdenum-99 (Mo-99) program is on track to meet the AMIPA goal of establishing a reliable, commercial supply of Mo-99 produced without the use of highly enriched uranium (HEU). We expect to see the first commercial, non-HEU-based domestic production of Mo-99 in early 2018 by our cooperative agreement partner, NorthStar, and expect additional domestic production in 2019. Full congressional support of the FY 2018 President's Budget request for this program is critical for our commercial partners' ability to meet AMIPA goals.

Subcommittee. Mr. Secretary, the Department's July 2016 report to Congress, "Conceptual Research and Development Plan for Low-Enriched Uranium Naval Fuel," proposes a budget from fiscal year 2018 to 2021 of \$265 million, of which \$80 million would be spent on HEU (not LEU) fuel R&D.

What is the annual breakdown of R&D spending for HEU vs. LEU during these years under the plan, including in fiscal year 2018 when the proposed budget is \$35 million?

Secretary Perry. To date, all funding for this R&D effort has come from within Naval Reactors own funding lines. When Naval Reactors started working on a low-level R&D effort 10 years ago, the assumption was that this advanced fuel system would use HEU since HEU is the fuel currently used in today's operational naval reactors. That R&D effort has not progressed to a point that is mature enough to prove that the fuel system is viable for either an HEU or LEU core.

The funding profile proposed in the 2016 report from FY 2018 – 2021 of \$265 million should be viewed in its entirety as funds to pursue an advanced fuel system using LEU. HEU specimen testing is a necessary part of the overall LEU advanced fuel system development, and would be essential to successful LEU development within the scope laid out in the 2016 report. Naval Reactors' view is that HEU specimen testing is an integral part of developing an advanced fuel system using LEU for the following reasons:

- The HEU data provides an early, general test of the advanced fuel system that would be expected to find any serious shortcomings before making larger, costly development investments.
- HEU specimens provide early data for an advanced fuel system, in parallel with putting infrastructure in place to handle irradiated LEU specimens that emit more neutron radiation than HEU specimens.
- Advanced LEU fuel would be enabled by extrapolating information from conventional naval HEU fuel benchmark data. Data from the advanced fuel system HEU specimens provide direct comparison to conventional naval fuel benchmark data. These comparisons would be required to validate an LEU fuel design and/or provide the information that could be used to improve a second LEU fuel test campaign.

Not including HEU specimen testing and benchmarking (described above) as part of the overall LEU development effort would delay the completion of fuel system development by at least 4 to 5 years and increase the risk that an

unknown technical concern could be discovered later in the fuel system development plan.

Subcommittee. To date, how much has been spent on HEU vs LEU advanced fuel system R&D?

Secretary Perry. Because the development of an advanced fuel system is still not at the point of determining its validity as an option for future naval nuclear reactor cores, regardless of the type of fuel used, HEU or LEU, all funding applied is categorized as R&D efforts toward an advanced fuel system. R&D for an advanced fuel system started in 2006 as a low-level R&D effort. Funding toward this research is approximately \$1-2M per year. Based on FY 2017 Congressional direction, Naval Reactors put \$5M toward the design effort which included an infrastructure and shipping container review focused on using LEU fuel. Additionally, funding was provided to an independent review by the JASON advisory group to review Naval Reactors' R&D plan.

Subcommittee. The report argues that initiation of test irradiation of LEU specimens must be delayed in part because of the unavailability of three required elements: LEU of proper enrichment; a cask to transport irradiated specimens; and a hot cell at the Advanced Test Reactor to conduct post-irradiation examination.

Is there any reason that NR could not use the existing LEU, cask, and hot cell that NNSA already uses for R&D of high-density LEU research reactor fuel?

Secretary Perry. The testing requirements to pursue an advanced fuel system using LEU could not be supported by existing NNSA resources and infrastructure. Naval Reactors has explored using other NNSA resources to be leveraged in pursuing an advanced fuel system using LEU:

- Existing NNSA LEU: naval nuclear fuel is unique in its design and chemical structure as compared to LEU used in research reactors. . A comparable amount of time would be needed to either downblend existing stock of Naval Reactors HEU fuel or reprocess existing NNSA LEU so that it could be used for naval fuel R&D efforts (reprocessing

NNSA LEU into the form needed for naval fuel could take longer than down blending HEU). Using NNSA LEU stock would not enable the program to more quickly obtain the type of LEU needed for testing.

- **Cask and Hot Cells:** The methodology Naval Reactors uses to qualify fuel for use in naval propulsion systems requires that fuel specimens be irradiated multiple times in the Advanced Test Reactor (ATR) with non-destructive examinations between each irradiation period. The unique testing requirements of naval nuclear fuel (i.e. rapid power changes, transients, etc.) as compared to research reactor fuel, requires a unique test apparatus that current NNSA facilities are unable to handle. Assembly, disassembly, and interim examination of these specimens can only be accomplished today at the Expended Core Facility at the Naval Reactors Facility. The cask used by the NNSA to ship LEU fuel specimens will not accommodate the size of the test train required for naval nuclear fuel.

Subcommittee. How far left could the schedule for naval LEU fuel R&D be shifted by using this existing uranium and infrastructure?

Secretary Perry. The testing requirements to pursue an advanced fuel system using LEU could not be supported by existing NNSA resources and infrastructure. The unique testing requirements of naval nuclear fuel (i.e. rapid power changes, transients, etc.) as compared to research reactor fuel, requires a unique test train that current NNSA facilities are unable to handle. Assembly, disassembly, and interim examination of these specimens can only be accomplished today at the Expended Core Facility at the Naval Reactors Facility, at the Idaho National Laboratory, which is a Department of Energy facility.

Subcommittee. It is unclear how many specimens are needed to begin LEU testing. The report refers to between 60 and 80, but Naval Reactors said in a subsequent briefing that 200 are required. By contrast, HEU testing can be started with only seven specimens, according to the report.

How many LEU specimens are envisioned overall, and how many are needed to start testing?

Secretary Perry. Past major naval fuel development efforts have typically involved testing 200-400 specimens. The test program outlined in the report to Congress consists of approximately 240 specimens (~40 HEU/~200 LEU) in 4 overlapping test campaigns based on Naval Reactors' extensive experience of new fuel system development over many decades. To date, seven HEU specimens have been tested. This is based on the limited resources that have been put toward developing an advanced fuel system over the past 10 years. This effort has always been a low-level R&D effort because of the other high priority programs being worked by Naval Nuclear Laboratory (i.e. fleet support, COLUMBIA Class life-of-ship core development). The first LEU campaign would contain approximately 40 specimens. The following items are required to begin irradiation of LEU samples:

- Availability of LEU fuel in the right form and enrichment level
- Successful manufacture of test specimens
- Redesign and construction of shipping casks with necessary shielding to allow transporting test trains to and from the Advanced Test Reactor (ATR), and any redesign and construction that needs to be done to handle test specimens during interim and final examination.
- Completion of these limiting activities is projected to occur about 4-5 years after resourcing and initiating the proposed development plan. The 4-5 year time frame to initiate testing is expected to be limited by the time needed to design, fabricate, and license specimen transport containers.

In addition, a test loop within the ATR would need to be reconstituted and returned to operation for naval fuel testing to complete the number of tests needed to qualify the advanced fuel system for use in a naval core. The development plan also assumes that the ATR is separately funded to replace aging infrastructure and increase its operational reliability from an average of 175 irradiation test days per year to 210 test days per year on a consistent basis.

Subcommittee. Could LEU testing start sooner with a small number of specimens, as was done for HEU testing?

Secretary Perry. The time frame to initiate LEU specimen testing is nearly independent of the number of specimens to be tested for any meaningful irradiation test campaign. The following items are required to begin irradiation of LEU samples:

- Availability of LEU fuel in the right form and enrichment level
- Successful manufacture of test specimens
- Redesign and construction of shipping casks with necessary shielding to allow transporting test trains to and from the Advanced Test Reactor, and any redesign and construction that needs to be done to handle test specimens during interim and final examination

Subcommittee. A smaller number of specimens would reduce the time needed to manufacture test specimens. The plan assumes that testing would begin as soon as test specimens, specimen handling infrastructure and reactor space are available. The 4-5 year time frame to initiate testing is expected to be limited by the time needed to design, fabricate, and license specimen transport containers.

CLEAN ENERGY RESEARCH AND DEVELOPMENT

Subcommittee. This year's budget request proposes to eliminate the Hubs and Clean Energy Manufacturing Institutes within the EERE account. Almost all of these centers had out year awards and there are bound to be closeout costs associated with shutting them down.

Can you tell us why you have decided to terminate these programs?

Secretary Perry. The FY 2018 Budget focuses EERE resources on early-stage R&D, where the Federal role is strongest, and reflects an increased reliance on the private sector to fund later-stage research, development, and commercialization of energy technologies. The Budget emphasizes energy technologies best positioned to support American energy independence and domestic job-growth in the near to mid-term. The Budget maintains America's leadership in transformative science and emerging energy technologies in sustainable transportation, renewable power, and energy efficiency.

As a result, no funds are requested for the institutes in the National Network for Manufacturing Innovation (NNMI) (also known as Manufacturing USA) Institutes or Energy Innovation Hubs that focused on later-stage activities.

Subcommittee. How would the elimination of these programs impact the national labs?

Secretary Perry. The budget maintains the most critical core capabilities and infrastructure at DOE National Laboratories related to sustainable transportation, renewable power and energy efficiency technologies. The FY18 Request proposes \$16.5 million in FY18 to support merit based, early-stage R&D consortia at National Laboratories and universities to address these important scientific and technical issues relevant to U.S. manufacturing. The program will ensure awarded consortia focus only on early-stage research to address technology challenges that have the potential for high return on investment, but which present a significant degree of scientific or technical uncertainty across a relatively lengthy time span, making it unlikely that industry would invest significant R&D on their own. Through the use of prior-year appropriation balances, termination of the existing Institutes will include assessment of impact of

close-out costs. This assessment will include impact on National Labs involved in existing awards.

Secretary Perry. In addition, in FY 2018, \$11 million is requested for early-stage R&D activities (technology readiness levels 2-4) at National Laboratory based manufacturing demonstration facilities (MDF), a model for public private partnership on cost-shared early-stage applied R&D at the National Laboratories, particularly in areas of additive manufacturing and carbon fiber materials research related to energy. Efforts will focus on expanding participation by university students and faculty in this early-stage research, in partnership with both National Laboratory and private sector researchers.

Subcommittee. In 2017, Congress funded these centers. Can you confirm that no action on termination will be taken until Congress has had an opportunity to act on your request?

Secretary Perry. The Department is continuing to meet Congressional direction for the Institutes and Energy Innovation Hubs through FY 2017 enacted funding. The Department is planning and preparing for termination; however, the Department will not terminate Institutes until Congress passes and the President signs it into law an FY18 appropriations Act that terminates the Institutes.

Subcommittee. Although the facility maintenance and operations at NREL, the National Renewable Energy Laboratory, are fully funded in the budget request, a lot of the work that NREL has done in the past was funded through EERE.

What is the Department's plan for NREL in light of the proposed reduction for EERE activities?

Secretary Perry. The Office of Energy Efficiency and Renewable Energy (EERE) is the primary federal steward of the National Renewable Energy Laboratory (NREL). Over the past 40 years, NREL has developed a unique set of core capabilities that has helped the nation advance the science and engineering of energy efficiency, sustainable transportation, and renewable power technologies and provided the knowledge and toolsets to integrate and optimize U.S. energy systems.

In FY 2016, EERE appropriations provided 80% of NREL's funding, of which 69% came from Programs and 31% came from Facilities and Infrastructure. Other DOE sponsors, including the Office of Science and the Office of Electricity Delivery and Energy Reliability, provided 7% of NREL funding in FY 2016.

The FY 2018 Budget Request maintains the most critical capabilities and infrastructure at DOE National Laboratories related to EERE's mission and would maintain NREL's budget at three-quarters of its FY 2017 funding. In particular, program funding will maintain critical capabilities in applied material science, chemical and molecular sciences, biological systems science and advanced computational sciences, as well as chemical, mechanical and power system engineering and analysis expertise at NREL. Together with the planned robust facilities and operation budget, the Request will ensure that NREL continues to deliver high impact technologies, including but not limited to: advanced materials for solar photovoltaics and fuel cells; physics-based whole wind plant models; and catalysts for biofuels and products. In addition, the FY 2018 Budget Request largely maintains Office of Science funding, which will also contribute to the ability of NREL to retain experts in catalysis, nanomaterials, solid-state physics, and other basic science areas.

In FY 2018, the Facilities and Infrastructure (F&I) request will support instrumentations and world-class facility upgrades to enable NREL's research and development (R&D) endeavors, including a Microbial Energetic Laboratory to enable new bioprocesses and a power generation upgrade at the National Wind Technology Center (NWTC) to increase grid interconnection capacity from 10MW to 19.9MW, enabling experimentation with larger turbines and research on large-scale solar and energy storage systems. Additionally, this request supports the initial phase of a four-year refresh of the Peregrine High Performance Computer (HPC) to meet the mission's growing requirements for advanced modeling and simulations, and to continue to provide enhanced analytical capability for evermore complex and integrated energy systems.

NREL's robust partnerships with American innovators provide market insights that inform its early stage research strategies, and in return, the innovations and insights that NREL creates within its Strategic Partnership

Projects (SPPs) and Cooperative Research and Development Agreements (CRADAs) enhance the competitiveness of its industrial partners. NREL leads all National Laboratories in the number of new CRADAs created per dollar of DOE funding, and the value NREL delivers to industry is evident in that SPPs provided 12% of its overall funding in FY 2016. EERE will continue to facilitate and emphasize the scale and speed of knowledge and technology transfer between NREL and its industry partners.

In conclusion, the Administration is pursuing a new strategy to secure and grow U.S. energy supplies. In doing so, the Request is refocusing EERE Programs on early-stage research, preserving the world-class capabilities at NREL to advance energy innovations and to maximize the return on investment to Americans.

NUCLEAR ENERGY

Subcommittee. Mr. Secretary, small modular reactors represent a unique innovation to deploy safe nuclear power that can rapidly respond to different power demands throughout the day. While the budget request for the SMR program is \$0, it mentions a research initiative to support new designs for SMRs. However, the request is light on the details.

What is this research initiative? Should SMR development be a top DOE priority? What is the Department's vision for continuing to support SMRs? What more could DOE be doing to accelerate the development of SMRs?

Secretary Perry. The Department agrees that advanced reactors, including small modular reactors, hold great promise as a clean, reliable, and secure power source for our nation. The Department also recognizes that advanced reactors face challenges to ultimately achieving commercialization. Accordingly, the Department plans to enter into technical partnerships with nuclear technology developers to conduct early-stage, cost-shared R&D on advanced small modular reactor and other advanced reactor designs. This will be accomplished by a solicitation focused on, but not limited to: early-stage applied R&D related to novel and advanced manufacturing, fabrication and construction-related technologies; sensors; instrumentation and control systems and the development of modeling and simulation capabilities to evaluate various elements of plant life cycle. The FY 2018 President's Budget prioritizes investments in early stage nuclear energy research and infrastructure to enable private sector innovation.

Subcommittee. Advanced non-water cooled reactors are being developed by numerous companies and the Department of Energy has been supporting their development through basic R&D at the national labs, fuel development and qualification work, and public private partnerships supporting R&D work by private companies in partnership with national labs. The Department's proposed budget emphasizes basic R&D but eliminates some of the programs that are accelerating the development of U.S. advanced reactor technology.

Secretary Perry, Do you agree that development of advanced non-water cooled reactors is essential for maintaining U.S. leadership in this industry?

Secretary Perry. Yes. Advanced non-water cooled reactors, particularly those at a smaller scale than current power plants, have the potential to improve the safety and economic viability of clean, reliable nuclear power in this country. The FY2018 Budget supports early stage research and development in these areas to better understand the technologies' potential. In addition to these domestic energy benefits, development of these reactors may also promote continued American leadership in global nuclear safety and security matters. As a number of other nations actively pursue these technologies, America will continue to lead through our own nuclear experts and businesses being engaged in developing the modern technologies that we expect to be deployed around the world.

Subcommittee. How does the Department's budget help ensure the rapid development of advanced reactor technology?

Secretary Perry. The Department's budget supports early-stage research and development on a range of promising reactor concepts and technologies, focusing on vendor- and design-neutral solutions to broad challenges such as advanced materials and fuels, modeling tools, and nuclear materials safeguards. DOE engages with industry, through various forums, such as working groups, to identify priority early-stage research and development to enable and accelerate advanced reactor development. These efforts address early-stage technology gaps that support multiple concepts, while allowing companies to pursue vendor-specific technological advances at their own direction and pace. In addition, DOE, in coordination with NRC, is supporting development of an advanced first-of-a-kind reactor licensing framework to reduce the regulatory risk of bringing innovative concepts to market.

NUCLEAR FUEL AND WASTE DISPOSITION

Subcommittee. I want to take a moment to understand the proposal to initiate an interim storage program while we await Yucca Mountain's license application decision. The budget request specifies that a portion of the request for interim storage would go towards planning and developing a competitive solicitation.

The proposed language for appropriating funds from the Nuclear Waste Fund does not appear to include the legislative language necessary to allow this plan to move forward – is that correct?

Secretary Perry. The FY 2018 Budget included a legislative proposal that is still under development.

Subcommittee. When can we expect to see this language?

Secretary Perry. The Administration is looking forward to working with the relevant Congressional Committees to discuss technical options for pursuing interim storage.

Subcommittee. A competitive solicitation will identify an interested operator but it does not address any siting concerns raised by local, state, or tribal governments.

What is your plan for dealing with the inevitable siting issues that will arise from your interim storage strategy?

Secretary Perry. The Budget supports preliminary, non-site specific activities that may be relevant to either private or federal interim storage sites. The Department will seek input from stakeholders when/if relevant to inform future decision-making.

Subcommittee. The budget request proposes to restart collecting fees for the Nuclear Waste Fund by 2020. In order to ensure the Department is collecting the right amount of fees, you need to have the correct cost profile for Yucca Mountain. The Department last completed a cost review for Yucca in 2008.

Do you have plans to update this cost review?

Secretary Perry. The Department plans to take steps necessary to develop analyses required to support the FY 2020 fee restart reflected in the FY 2018 Budget.

Subcommittee. When can we expect it to be completed?

Secretary Perry. Necessary analyses will be completed in advance of the fee restart.

ELECTRICITY DELIVERY AND ENERGY RELIABILITY

Subcommittee. Mr. Secretary, the Office of Electricity Delivery maintains a vital role developing tools, funding research and development activities, and operating facilities to mitigate cyber threats to the nation's electric grid. One of the biggest challenges in maintaining a strong cybersecurity program is that a one size fits all approach is impossible considering the nature of the grid's ownership and operation today.

How does this shape the Office of Electricity Delivery's approach in developing research and development goals for cybersecurity efforts?

Secretary Perry. Close partnership with the energy sector is key to DOE's strategy to advance the cybersecurity of the power grid, as about 90 percent of the Nation's energy infrastructure is owned and operated by the private sector. For nearly two decades, DOE has worked closely in a voluntary capacity with energy sector stakeholders at all levels—technical, operational, and executive—along with regional operators and state and local governments to identify and mitigate physical and cyber risks to energy systems. The energy industry and DOE have worked toward a common cybersecurity vision and roadmap first developed in 2006, and updated in 2011, with the publication of the *Roadmap to Achieve Energy Delivery Systems Cybersecurity*. The shared vision seeks to design, install, operate, and maintain resilient energy delivery control systems that can survive a cyber incident while sustaining critical functions.

DOE's strong partnership with the energy industry has created a foundation of earned trust that promotes the mutual exchange of information and resources to secure critical energy infrastructures. DOE has leveraged partnerships to share cyber threat, vulnerability, incident, and mitigation information; develop and share field-proven best practices and risk management tools for cybersecurity; and deliver innovative technologies to secure critical control systems. These relationships leverage the distinct technical expertise within industry and government to develop solutions to the highly specialized security challenges of energy delivery systems.

DOE's national laboratories serve as a critical strategic and technology partner, providing vital facilities, resources, and capabilities to support national security needs and conducting work that is not otherwise

available from the private sector. DOE and the energy sector work with the national laboratories on R&D of advanced technologies, analysis of cyber security risks and threats, modeling and simulation of cyber impacts, and information sharing on evolving threats.

Fulfilling DOE's authorities and responsibilities depends on this long-standing trust and coordination. The Fixing America's Surface Transportation (FAST) Act of 2015 designated DOE as the sector-specific agency (SSA) for cybersecurity for the energy sector. As the SSA, DOE serves as the day-to-day Federal interface for energy infrastructure security and resilience, including dynamic prioritization and coordination of sector-specific activities; carrying out incident coordination responsibilities consistent with statutory authority, policies, directives, or regulations; and providing technical assistance to identify vulnerabilities and help prevent or mitigate the effects of incidents.

Subcommittee. Cybersecurity will continue to be a persistent problem as the energy market changes and the grid becomes more advanced. How is the Office of Electricity Delivery preparing today to address the cybersecurity challenges of tomorrow?

Secretary Perry. The Department has developed a multiyear plan with a two-fold cybersecurity strategy: address growing threats and promote continuous improvement to strengthen today's energy delivery systems, and develop game-changing solutions that will create inherently secure, resilient, and self-healing energy systems for tomorrow. The plan enjoys strong support from energy companies because it supports industry priorities in the Cybersecurity Roadmap. DOE's strategy is built around three strategic priorities:

- Strengthen energy sector cybersecurity preparedness through information sharing and situational awareness, including bi-directional, real-time, machine-to-machine information sharing tools; provide risk management tools and technical assistance; and reduce cybersecurity supply chain risks.
- Coordinate cyber incident response and recovery by developing a coordinated national cyber incident response capability for the energy sector; improving cyber incident response training and incident reporting;

and conducting cyber incident response exercises. This supports the SSA role to develop and adopt procedures to enhance public-private communication and coordination to improve emergency response and recovery.

- Accelerate game-changing research and development (R&D) of resilient energy delivery systems to prevent, detect, and mitigate a cyber incident in today's systems; and support next-generation systems that can survive a cyber incident. R&D priorities include:
 - Anticipating future grid scenarios and designing cybersecurity into emerging devices from the start.
 - Enabling future power systems to automatically prevent, detect, mitigate, recover from, and survive a cyber incident.
 - Building strategic core capabilities in the National Laboratories and building university collaborations dedicated to advancing cybersecurity for energy delivery systems.

This strategy, developed and implemented in partnership with the energy sector, seeks to reduce cyber-attack vectors and identify attacks quickly; enable operators to sustain grid operations during an attack and prevent equipment damage; and enable rapid recovery from a cyber-attack against critical energy infrastructure.

Subcommittee. As the federal agency studying the grid, the Office of Electricity Delivery is well positioned to study EMPs and the protections grid operators need against this threat.

Can you discuss what is the Office of Electricity currently doing to study EMPs and how to protect the grid against their negative effects?

Secretary Perry. In July 2016, DOE released the Joint EMP Resilience Strategy with industry to enhance coordination, where appropriate and beneficial, and to guide future efforts to help meet the growing demands for EMP guidance. DOE then developed an Electromagnetic Pulse Resilience Action Plan (DOE Action Plan) to further refine and direct the Department's efforts to reduce EMP vulnerabilities and improve the response and recovery after EMP events through coordination with interagency, national laboratory,

industry, and international partners. Both documents are centered on five goals to minimize EMP impacts and improve resilience:

- Improve and share understanding of EMP threats, effects, and impacts
- Identify priority infrastructure
- Test and promote mitigation and protection approaches
- Enhance response and recovery capabilities to an EMP attack
- Share best practices across government and industry, nationally and internationally.
- Industry developed their own action plan, with close coordination between industry and DOE on the respective action plans to avoid duplication of efforts and ensure that priority items were addressed.
- Current efforts supporting the framework of the Joint Strategy and the DOE Action Plan include:
 - A report to Congress on *Vulnerability of the Electric Grid to an Electromagnetic Pulse and the Potential Impact on Electric Power Delivery and Reliability*, which is being reviewed within DOE.
 - Development of an unclassified EMP waveform so that industry has a design basis threat of the expected effects of an EMP. This effort will begin in August 2017.
 - The formation and leadership of a Mission Executive Council (MEC) EMP/GMD (geomagnetic disturbance) working group, a collaborative effort with the Departments of Homeland Security and Defense, the Office of the Director of National Intelligence, and the DOE labs.
 - The working group participated in the development of an EMP 101 guide that DOE will be publishing later this summer to improve and share stakeholders' understanding of EMP effects

and impacts and the state of the art for EMP mitigation and recovery.

- Internal to the MEC, *A Strategic Framework for Electromagnetic Pulse/Geomagnetic Disturbance: Electric Grid Impacts and Mitigation Strategies* has been completed and will be undergoing MEC agency review. The MEC working group focused on EMP/GMD impacts and preparedness strategies for the electric grid and sought to understand gaps, current and planned activities, capabilities, tools, and technologies of the MEC agencies. The report provides a framework that focuses efforts to fill knowledge gaps, develop qualification testing, and improve mitigation approaches.
- Work is ongoing in the area of large power transformers and associated equipment to understand specific event or threat scenarios (including EMP) that would potentially damage multiple large power transformers in such a way that utilities could not simply replace with their own spares or quickly repair. The scenarios being analyzed could support programs including mutual assistance contracts, spare transformer sharing programs such as the spare transformer equipment program (STEP), and commercial spare transformer providers such as Wattstock. Several utilities in a region are looking at the detailed impacts that such scenarios would have on their systems, and some of the methodology used will allow other utilities to similarly examine their respective systems.

Additionally, OE's Transformer Resilience and Advanced Components (TRAC) program is currently supporting research in the modeling and small-scale testing of GMD and EMP impacts on large power transformers (LPTs). Outcomes include improved models of how EMPs couple into transmission lines, transformer bushings, and surge arresters to assess their vulnerability, and better understanding of the system impact from the use of protection devices to GMD and EMP-E3.

TRAC is also supporting fundamental research needed to advance the development of next-generation components such as LPTs that are more flexible and adaptable. In the event that EMP results in the failure of multiple LPTs, these innovative designs can facilitate sharing and accelerate

installation times to mitigate the negative effects of long recovery times. Early stage R&D in low-cost power flow controllers could lead to capabilities that enable the routing of power to affected areas in support of recovery efforts after an EMP event.

FOSSIL ENERGY

Subcommittee. Mr. Secretary, the National Energy Technology Laboratory (NETL) is the Department's laboratory focused on applied energy research and development in fossil energy. NETL is spread out over three sites – one in Albany, Oregon, one in Pittsburgh, Pennsylvania, and one in Morgantown, West Virginia. While NETL didn't start off spread out in three different locations, each of these sites enables key research and facility partnerships in their regional locations.

The budget request proposes to close down the Oregon location and further study how to consolidate the Pennsylvania and West Virginia locations into one.

What does the Department gain from this strategy and what does the Department lose?

Secretary Perry. As part of the Department's effort to operate more efficiently and effectively, the FY 2018 Budget Request proposed a phased approach to consolidation of NETL's Albany research operations into NETL's Eastern sites. Consolidation will ensure that Government operates as efficiently as possible and, at minimum, will achieve savings through leaner operations such that more resources may be dedicated to programs.

LOAN GUARANTEE PROGRAMS

Subcommittee. The budget request proposes to eliminate all remaining loan authority except for conditional commitments made before the end of the fiscal year.

Do you expect to issue any additional conditional commitments to any projects before the end of the fiscal year?

Secretary Perry. As of the time of this hearing, the Loan Programs Office (LPO) has numerous projects in its transaction pipeline. The speed at which projects advance through the review and due diligence processes is heavily dependent on the timing and pace of applicants and project sponsors. Therefore we do not know how many conditional commitments will be issued before the end of the fiscal year.

SCIENCE

Subcommittee. Mr. Secretary, the budget request proposes \$346 million for the exascale initiative within the Office of Science. Developing exascale computing represents the next technological leap in high performance computing but many challenges remain.

The budget request sets a marker for 2021 as the expected date of deployment for an exascale capable machine. This is much faster than the previous plan. What is the main driver behind that date?

Secretary Perry. The 2021 date is result of a request for information issued in early 2017 and subsequent discussions with U.S. computing vendors. Based on this work, it was evident that results of previous high performance computing activities yielded sufficiently innovative technologies that, with the appropriate investments, make exascale achievable in 2021.

Achievement of exascale requires new hardware and software designs and technologies – not just more of the same technologies strung together – to overcome challenges in parallelism, energy efficiency, and reliability. We and our private-sector partners will be pushing our state-of-the-art fabrication techniques to the limit to achieve exascale. Significant one-time investments in engineering (“non-recurring engineering”) and design by the vendors in conjunction with DOE’s team must be started as soon as possible in order to deliver an exascale system by 2021. Considerable concurrent investments are needed to develop software and applications to effectively use an exascale system on scientific problems and nuclear weapons applications. The 2021 delivery of hardware is aligned with the timeframe for completion of the necessary software and application development.

Deploying at least one exascale system in 2021 will keep the U.S. competitive in the international exascale race. Exascale computing is critical to the national security, scientific, and energy missions of the Energy Department. Exascale is also critical to ensuring U.S. primacy in computing to advance economic competitiveness in technological and manufacturing processes. Achievement of exascale will deliver breakthrough computer performance to both the Federal and private sectors. The accelerated investments in design and engineering over the next 3-4 years will keep the

U.S. at the forefront of computational platforms. This will allow us to continue to lead in: scientific and engineering progress; advances in manufacturing techniques and rapid prototyping; nuclear security missions including stockpile stewardship without testing; and, the ability to explore, understand and harness natural and engineered systems that are too large, too complex, too dangerous, too small, or too fleeting to explore experimentally.

Subcommittee. Are we cutting any research and development activities to get to this faster deployment?

Secretary Perry. No research and development activities are decreased to get to this faster deployment.

Subcommittee. What is the future exascale need for the Department? Has the Department developed a plan on how exascale fits with the current computing capabilities and usage of the Department's research offices?

Secretary Perry. Achievement of exascale requires new hardware and software designs and technologies – not just more of the same technologies strung together – to overcome challenges in parallelism, energy efficiency, and reliability. We and our private-sector partners will be pushing our state-of-the-art fabrication techniques to the limit to achieve exascale. Significant one-time investments in engineering (“non-recurring engineering”) and design by the vendors in conjunction with DOE’s team must be started as soon as possible in order to deliver an exascale system in 2021. Considerable concurrent investments are needed to develop software and applications to effectively use an exascale system on scientific problems and nuclear weapons applications. The 2021 delivery of hardware is aligned with the timeframe for completion of the necessary software and application development.

Deploying at least one exascale system in 2021 will keep the U.S. competitive in the international exascale race. Exascale computing is critical to the national security, scientific, and energy missions of the Energy Department. Exascale is also critical to ensuring U.S. primacy in computing to advance economic competitiveness in technological and manufacturing processes. Achievement of exascale will deliver breakthrough computer performance to both the Federal and private sectors. The accelerated

investments in design and engineering over the next 3-4 years will keep the U.S. at the forefront of computational platforms. This will allow us to continue to lead in: scientific and engineering progress; advances in manufacturing techniques and rapid prototyping; nuclear security missions including stockpile stewardship without testing; and, the ability to explore, understand and harness natural and engineered systems that are too large, too complex, too dangerous, too small, or too fleeting to explore experimentally.

Subcommittee. The budget request proposes \$63 million to continue support for the ITER project. Last year, the Committee provided \$50 million for ITER with the ability to reprogram an additional \$50 million within other Office of Science funds.

What is the status of the additional \$50 million?

Secretary Perry. A reprogramming action to redirect additional funding to ITER from other Office of Science research is currently under consideration.

Subcommittee. \$63 million is not enough to continue supporting ITER at the rebaselined project level. Should we view this as a shutdown number?

Secretary Perry. The \$63 million request reflects the priorities and availability of funding within the budget allocated to the Office of Science.

Whether or not we continue with ITER, major planning changes with funding implications are on the horizon. If you move forward with ITER at the budget request level, future funding increases need to be incorporated in the Office of Science's budget without affecting domestic fusion research capabilities. If you decide to withdraw from the ITER project, we are left without a plan for demonstrating fusion energy as a commercial option.

Subcommittee. Can you explain how the Department will strategically move forward in either of these cases? What does the Office of Science look like with or without ITER?

Secretary Perry. The National Academies of Sciences has been charged with assessing the SC Fusion Energy Sciences program, with and

without ITER. An interim report is expected in October 2017, with the final report to be completed in 2018.

Subcommittee. How should the Federal effort be influenced by this development?

Secretary Perry. Once the National Academies study is completed, the Department and the Office of Science will use it to guide the Fusion Energy Sciences program, in particular with regards to ITER.

Subcommittee. The budget request for Basic Energy Sciences proposes closures of two nanoscale research centers and putting one of the light sources in “warm standby”. The nanoscale research centers are already oversubscribed with scientists wishing to use the facilities. The nation is a leader in science at the nanoscale, how are you ensuring our research capabilities won’t be diminished by these terminations?

Secretary Perry. The decision to cease operation for the Center for Integrated Nanotechnologies (CINT) and the Center for Functional Nanomaterials (CFN) in FY 2018 was carefully considered and made in light of the overall impacts to the nanoscience user community. If the FY 2018 Request is enacted, academic, government, and industry-funded research projects that utilize CINT and CFN will need to find alternate collaborators and facilities to continue their research. The remaining three NSRCs will continue to be world leaders in nanoscience and provide users with scientific expertise and capabilities for the synthesis, processing, fabrication, and analysis of nanoscale materials and structures.

Subcommittee. Mr. Secretary, additionally, the budget request proposes to place one of the light sources at the Stanford Linear Accelerator Laboratory on “warm standby”. This means it will operate for one quarter and then just keep the lights on for the rest of the year. The budget request proposes a 10 percent reduction to the operations level of the other light sources.

Mr. Secretary, the nation’s light sources are the envy of the world, which is why many countries have built, or are currently building, their own facilities. How will the Department ensure the nation retains its cutting edge in light of the request to reduce operations?

Secretary Perry. The Basic Energy Sciences (BES) strategy for light sources is informed by three recent reports by the BES Advisory Committee (BESAC): Report on Basic Energy Sciences Facilities Prioritization, Feb. 2013; Report of the BESAC Subcommittee on Future X-ray Light Sources, July 2013; and Report on Facility Upgrades, June 2016. BES plans to provide world leading x-ray scattering facilities based upon the complementary technologies of storage rings and free electron lasers (FEL) across the full spectrum from soft to hard x-rays. The storage ring-based facilities (the Advanced Photon Source at Argonne National Laboratory and, in future plans, the Advanced Light Source at Lawrence Berkeley National Laboratory) are to be upgraded to incorporate new multi-bend achromat (MBA) lattices to increase average brightness by 100-1000 times. The Linac Coherent Light Source (LCLS) at SLAC National Accelerator Laboratory is being upgraded to provide new high average brightness capabilities (LCLS-II) in addition to the extreme peak brightness performance. The upgrade is made possible by the use of superconducting linear accelerator technology which will increase the repetition rate from 120 Hz to 1 MHz.

ARPA-E

Subcommittee. Mr. Secretary, the budget request proposes to eliminate ARPA-E under the reasoning that the private sector is better positioned to finance disruptive energy research and development technologies. Has the Department conducted an analysis of the types of projects ARPA-E funds to support this conclusion?

Part of ARPA-E's grant ideation process was to identify transformational areas of research not currently supported by the Applied Energy and Science Offices. The Applied Energy and Science Offices sometimes get stuck in their lane and ARPA-E did a good job of bringing to light crosscutting and new areas where innovation could occur.

What is the plan to retain this capability if ARPA-E is eliminated?

Secretary Perry. The FY 2018 Budget focuses its investments on the basic, early-stage research & development (R&D) conducted by the scientists and engineers at our 17 national laboratories who are constantly on the path to developing the next great innovations that can transform society and create economic growth.

ADDITIONAL QUESTION

Subcommittee. Over the past several years, the Dept. of Energy has developed a voluntary Home Energy Performance Score so homeowners can assess the energy use of their home, help them make improvements to make their home more energy efficient, and save money on their utility bills. While this is a laudable goal, there are concerns that these kinds of energy score and labels may stigmatize older homes, impede real estate transactions and reduce property values.

As Secretary, what will you do to make sure that homeowners have accurate information to improve the energy efficiency of their homes on a voluntary basis without impacting the property values of older homes?

Secretary Perry. The HEScore is one of many tools that can be used on a voluntary basis to inform and allow homeowners to better understand the relative energy efficiency of their homes. DOE will maintain these tools and technologies to provide accurate information to homeowners, allowing them to better understand the costs and benefits of residential energy efficiency technologies and practices, resulting in more cost effective, productive, and healthy homes.

Subcommittee. Property Assessed Clean Energy programs are local government loan programs that help homeowners make residential energy efficiency improvements and pay back the loan through an assessment on their annual property tax bill. Although HUD and the DOE have supported these programs, the Federal Housing Finance Agency has expressed concerns that these programs might increase risk in mortgage markets and the possibility of fraud and abuse for low-income homeowners.

Will the DOE continue to support PACE programs, in light of these program's significant financial concerns, fraud and abuse media reports and risk to mortgage markets?

Secretary Perry. In November 2016, the Department of Energy (DOE) released the "Best Practice Guidelines for Residential Property Assessed Clean Energy (PACE) Financing Programs" - following earlier releases of guidance on residential PACE from the Department of Housing and Urban

Development and the Department of Veterans Affairs - in order to help states understand the importance of consumer and financial protections when implementing a residential PACE program. DOE will continue to answer technical questions and provide states with unbiased data and peer exchange opportunities on residential PACE programs, as well as other residential financing programs such as on-bill financing and unsecured lending programs, to ensure that states have the tools they need to make the best decisions for their constituents.

Subcommittee. The FY 2017 Omnibus appropriations bill included \$15 million for the DOE EPSCoR program.

How does DOE plan to utilize this funding? When do you expect to release a solicitation?

Secretary Perry. Given the timing of the FY 2017 Omnibus, a new solicitation was not issued. The FY 2017 funding supported continuation or renewal of existing implementation awards and awards for well-reviewed applications from EPSCoR jurisdictions, including early career awards to young professors.

Subcommittee. As you know, American innovators have a long history of developing and improving energy technologies enhance our nation's domestic electricity supply and improve energy security. The 17 world-class DOE-supported national energy laboratories, as well as the nation's premier research universities and private research facilities, constitute the most comprehensive energy research and development network of its kind. One of those facilities, Idaho National Laboratory, contributes nearly 2 billion dollars of economic activity annually in my state, while serving as our nation's leading center for nuclear energy research and development.

Historically, the Department's research programs have had the greatest impact when resources are focused on very clear, specific goals. Typical research efforts are long-term endeavors, but political transitions or the "popular project of the day" result in a counterproductive shift of resources that inhibits our nation's ability to solve some our biggest energy challenges.

As you know, the national lab system has shown the ability to reach ambitious goals when the Department sets them out. For example, the SunShot initiative set out a goal in 2011 for more affordable solar power and has met nearly 90% of their original cost target in just six years (*\$0.23 to \$0.07 per kilowatt-hour for utility-scale photovoltaic (PV) solar power*).

With that model in mind, would you support orienting DOE's research programs to develop specific goals for other important energy technologies, such as advanced nuclear reactors, innovative fossil energy systems, and grid-scale energy storage?

Secretary Perry. My goal is to ensure that the DOE, through its national laboratories, continues to support the world's best enterprise of scientists and engineers who create innovations to drive American prosperity, security and competitiveness for the next generation. Each DOE program—including in the areas of nuclear energy, fossil energy, energy efficiency, renewable energy, and the power grid—manages its technology roadmaps and goals in line with Administration priorities to most effectively drive those innovations on behalf of the American people.

Subcommittee. Given the Department's focus on "doing more with less," would setting this type of technology goal ensure scant federal dollars are being efficiently utilized to meet goals important for U.S. innovation leadership?

Secretary Perry. A strategic vision and goals are important for any organization to efficiently and effectively carry out its mission. The Department of Energy will develop and refine its strategy and goals as we carry out the Department's mission in support of the President's vision for promoting energy independence and economic growth.

Subcommittee. The FY18 budget request greatly reduces all "later stage" research and collaboration programs that bring government science and innovator together to develop and demonstrate of new energy technologies. This "back to basics" focus shifts the Department's resources on early stage basic research, most of which is publicly available and published online. Early stage research is key to driving fundamental system

change down the road and must be continued. However, early stage research without additional late stage applied research, like the work Idaho National Laboratory conducts to progress advance nuclear technologies, could put the United States at a competitive disadvantage. In fact, China has quietly surpassed the U.S. in spending on the later stage of R&D that turns discoveries into commercial products. It is essential that American entrepreneurs commercialize these technologies and capitalize on the economic benefits of being a global leader in innovation.

You stated prior to your recent trip to Asia that “the United States will continue to be a leader in energy technology, development, and delivery.” It is my understanding that advances in nuclear, LNG, and carbon capture were a big focus of your trip.

How can the Department better partner with American innovators to ensure research and development drives us toward the ultimate “delivery” of advanced energy technologies?

Secretary Perry. The Budget Request provides \$6.4 billion for research and development programs, with a renewed focus on cutting-edge innovation and fostering the transition of those breakthroughs to the private sector for commercialization.

The private sector plays a critical role in bringing innovations into the energy marketplace. The FY 2018 Budget refocuses the Department’s energy and science programs on early-stage research and development at our national laboratories to advance American primacy in scientific and energy research in an efficient and cost-effective manner. It focuses our investments on the basic, early-stage R&D conducted by the scientists and engineers at our 17 national laboratories who are constantly on the path to developing the next great innovations that can transform society, and bring forth a new era of prosperity for the American people.

In addition to providing \$6.4 billion for early-stage research towards cutting-edge innovations, including \$4.5 billion in the Office of Science and \$1.9 billion in energy R&D programs, the Budget consolidates programs focused on bringing technologies to the market in the Office of Technology Transitions (OTT). Through concerted effort and coordination with our

labs, this will reduce costs to the taxpayer while at the same time providing a robust technology transfer program to transfer breakthroughs from the national laboratories to the private sector.

Subcommittee. Could the “back to basics” shift inhibit deployment and delivery of the technologies our nation needs to lead in this space?

Secretary Perry. Through our 17 national laboratories, the Department engages in cutting-edge research that expands the frontiers of scientific knowledge and generates new technologies that address our greatest energy challenges. This budget will ensure that the Department’s national laboratories continue to be the backbone of American science leadership by supporting cutting-edge basic research, and by building and operating the world’s most advanced scientific user facilities—which will be used by over 27,000 researchers in FY 2018.

The Budget refocuses the intellectual prowess of our scientists and engineers on the development of technologies that the ingenuity and capital of America’s entrepreneurs and businesses can convert into commercial applications and products that improve the lives and security of all Americans.

Subcommittee. Many of the advanced nuclear designs being developed across the country utilize fast spectrum neutrons. To qualify for operation, these new fuel designs need a specialized fast research reactor, which the United States hasn’t had since the 1990’s. The FY18 budget includes \$10 million to begin planning for such a reactor. This type of research infrastructure is a critical part of the government’s efforts to facilitate the development of new nuclear technologies.

What will this initial \$10 million accomplish? What does the Department see as the long-term budget needs for to finish a fast neutron source, and over what time scale?

Secretary Perry. The \$10 million budget would allow identification and evaluation of the needs for and support pre-conceptual R&D to inform future decisions on a Versatile Fast Test Reactor. A multi-discipline team of experts from industry, national laboratories and universities will implement

an R&D program to (1) develop the set of requirements for a test reactor based on input from various stakeholders to accelerate the development of innovative nuclear concepts, (2) identify all the R&D which is a prerequisite to decisions to proceed to build a test reactor, (3) develop a plan for completion of the R&D and begin progress on it, and (4) begin developing pre-conceptual details of potential alternatives along with preliminary safety analysis work.

It is expected that it will take several years to develop credible cost and schedule estimates and complete the R&D necessary to enable a decision on whether to proceed to build a test reactor.

Annual operating costs of any test reactor would be determined by the size of the reactor and design parameters.

Subcommittee. NuScale Power is an advanced nuclear reactor company with a novel “small modular” design that will greatly decrease the up-front investment to build a reactor while improving safety. In March, the Nuclear Regulatory Commission announced it has accepted NuScale’s small modular reactor (SMR) design certification application and will begin the estimated 40 month review process. Once licensed, NuScale plans to build their first plant at Idaho National Lab.

The Department’s small modular reactor program has been helpful to NuScale in advancing applied research that benefits their design (and that of all small light water reactors). The FY18 budget request includes \$20 million for advanced small modular reactor research activities, and some have advocated for an expansion of this program to bolster additional reactor designs.

What activities does the Department intend to fund under the advanced SMR line in FY18? How can we better utilize Department of Energy nuclear programs to expedite the demonstration and ultimate commercialization of small modular reactors designs, given their importance to the expansion of carbon-emission free baseload electricity in this country?

This first commercial SMR would not have advanced to this point without the extensive public-private partnership to-date. This project's success is important to the future of American nuclear power.

Secretary Perry. The Department agrees that advanced reactors, including small modular reactors have the potential to improve the safety and economic viability of clean, reliable nuclear power in this country. The Department also recognizes that advanced reactors face challenges to ultimately achieve commercialization. The FY2018 Budget supports early stage research and development in these areas to better understand the technologies' potential. In addition to these domestic energy benefits, development of these reactors may also promote continued American leadership in global nuclear safety and security matters. As a number of other nations actively pursue these technologies, America will continue to lead through our own nuclear experts and businesses being engaged in developing the modern technologies that we expect to be deployed around the world. The FY 2018 President's Budget prioritizes investments in nuclear energy research infrastructure to enable private sector innovation.

Subcommittee. Once the NRC has licensed the project, how can the Department better partner with INL and the project proponent to make this first SMR a success?

Secretary Perry. The Department has unique nuclear energy research capabilities that support technology advancement. DOE will provide access to industry through the Gateway for Accelerated Innovation in Nuclear (GAIN) initiative. In addition, in 2016 DOE has signed a use permit with Utah Associated Municipal Power System (UAMPS) for the possible siting of a future small modular reactor at the Idaho National Laboratory site. UAMPS is still considering its options. .

Dozens of advanced reactor designs are being developed by entrepreneurs across North America. These designs are cheaper, more flexible, and smaller than current designs, with additional safety and waste benefits. While these designs are promising, developing a new nuclear reactor design requires significant up-front capital. Many of the necessary facilities and experience needed to develop nuclear technologies are only available at the national labs. Two private advanced nuclear designs received multi-year cost-shared

grants in FY16 to further develop their designs, but funding for these grants has been cancelled in FY18 - nearly halfway through the agreements.

It is important to note that these agreements have significant private contributions. Given the President's emphasis on public-private partnerships to advance important infrastructure, including energy infrastructure, is there concern that cancelling agreements halfway through will dissuade these types of partnerships.

Subcommittee. How will the Department support and partner with companies pursuing advanced nuclear design development going forward, given their importance to our nation's future electricity portfolio?

Secretary Perry. DOE recognizes the importance of strong private sector engagement, including leveraging private sector investment that facilitates the future commercialization of innovative technologies. The Department has established several valuable mechanisms to provide industry access to DOE expertise, infrastructure and capabilities. The Gateway for Accelerated Innovation in Nuclear (GAIN) initiative provides the nuclear community with access to DOE nuclear energy research capabilities and expertise so industry can move new or advanced nuclear reactor designs toward commercialization. We intend to continue existing cost-shared grants, subject to available funding, the recipient's meeting performance expectations and other programmatic considerations. DOE will continue these efforts through the GAIN initiative, consistent with the Administration's priorities.

Subcommittee. The Office of Nuclear Energy has begun implementing a new philosophy called "GAIN" (Gateway to Accelerated Innovation in Nuclear), which strives to streamline American private sector access to Department of Energy research. The GAIN initiative has the potential to focus DOE supported research around solving the greatest challenges faced by nuclear energy entrepreneurs.

This initiative seems to fit with the Administration's budget request, which focuses on strengthening public-private partnerships so private sector dollars utilize basic DOE research and finance next-stage R&D.

Will you continue the GAIN initiative and support its expansion?

Secretary Perry. Yes. The GAIN initiative has positively impacted numerous private companies in a short time, providing them easy access to world-class U.S. national laboratory technical expertise and facilities that these companies could not obtain otherwise. At least 50 percent of the awardees selected during the first two years of the NE Small Business Voucher pilot were new users of the DOE laboratory complex, demonstrating the success of this GAIN initiative activity. The FY 2018 Budget continues support for the initiative will enable GAIN to support private sector advanced nuclear technology innovators to conduct the crucial R&D that is needed before they can further their concepts to commercialization.

Building upon the success of the NE Small Business Voucher Program, NE will issue by early FY 2018 a Funding Opportunity Announcement (FOA) to provide for cost-shared early-stage R&D support innovative, industry-driven concepts that have high potential to improve the cost-competitiveness for nuclear power in the U.S. Funding for this FOA will be provided from multiple existing NE programs that support the conduct of innovative early-stage R&D and capability access activities related to advancing the state of existing, new, and next-generation reactor designs. The scope of the FOA will be very broad, including opportunities to develop manufacturing techniques, develop I&C systems and other needs identified by industry. The FOA will provide awards sized and tailored to address a range of technical issues impeding the progress of advanced reactor development.

Subcommittee. Broadly, how can the Department strengthen the partnerships between private industry and the Department's world-class research network to advance nuclear energy innovation?

Secretary Perry. The Department can strengthen private-public partnerships by streamlining contracting mechanisms used to conduct research at the national laboratories.

The Department can also make available the unique infrastructure and capability that exists within the Department's laboratory complex. One

mechanism that specifically supports this is the Nuclear Energy Enabling Technologies (NEET) Nuclear Science User Facilities (NSUF) which provides industry with an opportunity to advance early-stage innovative technologies. The NSUF offers competitively-awarded access to world-class research facilities and expertise at no cost to the researcher. The consortium of institutions that compose the NSUF maintain a comprehensive set of capabilities that are needed by private industry, with a current focus on irradiation effects in nuclear fuels and materials. Coupling industry research needs with the best scientific expertise and capabilities offered through the NSUF sets the stage to advance nuclear energy innovation. In support of the GAIN initiative, industry has been encouraged to propose and lead NSUF projects through the Consolidated Innovative Nuclear Research (CINR) solicitation since FY 2016. In FY 2018, NSUF will make up to \$8M available for access awards through the CINR and Rapid Turnaround Experiment (RTE) solicitations. All NSUF awarded projects to commercial entities require cost sharing for the research and development portion of the projects. NSUF will continue to acquire samples for the NSUF Nuclear Fuels and Materials Library (NFML) that are industry relevant and can be accessed through both the CINR and RTE solicitations. To this end, and in support of the GAIN initiative, the NSUF will issue a Request for Information (RFI) in FY 2018 to the nuclear industry community to identify and prioritize industry needs for irradiated materials of interest that the NSUF can acquire or independently produce and make available through the NFML.

CONGRESSMAN KEN CALVERT**SCIENTIFIC NETWORKING**

Mr. Calvert. Advanced scientific networking is critical for the delivery of the Department's missions – from scientific advancement to national security. ESnet, the DOE scientific network, is a world leader in delivering high bandwidth and reliable networking for science. It requires unique infrastructure and competencies and is a function about which commercial providers are not interested.

With the huge explosion in the amount of data being generated by the DOE's national scientific user facilities, the need for ESnet to be upgraded and prepared for future data growth is now. Waiting would put the network at risk – from a reliability standpoint, but also from a cyber security perspective. Additionally, as the Department moves toward exascale computing, the need for a robust and capable network will be even greater.

Unfortunately, the planned upgrade of ESnet, which was to begin in FY18 has not been funded in the President's request.

Can you describe for the Committee the plan for upgrading ESnet to ensure that there is adequate network capabilities among the Department's supercomputing facilities and DOE's portfolio of national scientific user facilities?

Secretary Perry. The Department recognizes that the ceaseless exponential growth in network traffic—10-fold every four years since 1990—requires continuous investment in ESnet, the Department's high performance research and development network. The DOE national laboratories and thousands more researchers in the U.S. academic community rely on ESnet to transport the enormous data volumes associated with our scientific user facilities and other research projects. ESnet itself is formally designated as a user facility because of its critical roles in advancing network R&D and enabling large-scale science across DOE and the Nation.

The current network, ESnet-5, was built in 2010-2012 and its components are approaching end-of-life. In December 2016, the Advanced

Scientific Computing Research Program (ASCR) in the Department's Office of Science initiated an upgrade project to completely redesign ESnet. The planned upgrade has three principal objectives: provide increased capacity; improve reliability by replacing near end-of-life components and by enhancing cyber-resiliency; and increase flexibility to support increasingly complex workflows between SC's user facilities. Achieving these goals will require significant innovations in design of the network's architecture. To this end, the ESnet team has conducted an extensive study of several design alternatives over the past year. This study, which is expected to be completed in mid-2017, will also identify a preferred design and the resources needed to build the new network. The proposed network design will undergo an external review in late 2017. ASCR anticipates conduct of a CD-1 (Critical Decision-1, Approve Alternative Selection and Cost Damage) Independent Project Review in early 2018.

HIGH PERFORMANCE COMPUTING

Mr. Calvert. The budget request proposes dramatic increases to the Department's high performance computing program for exascale computing. I agree with these increases and understand the importance of moving the country toward exascale for national security and innovation reasons, and to maintain U.S. leadership in supercomputing. However, I am worried about the lack of funding for the Office of Science's basic research program in computing and computational science.

Without adequate and sustained funding for basic computing and computational research, the nation may once again face the prospect of "catching up" – probably sooner than later. Ensuring long term leadership in supercomputing requires developing new technologies, such as quantum and neuromorphic computing, novel mathematics and algorithms, advanced software and storage technologies, and the next generation of computing and computational scientists. The proposed level of funding for basic computing and computational research is still significantly below what it was in FY15 (around \$168M then, \$111M proposed now).

What is the Department's plan for these programs? How do we ensure that we don't, once again, fall behind any other country in these fields?

Secretary Perry. The decrease in the math and computer science research budgets from FY 2016 reflects a transfer of exascale related funding to the Office of Science Exascale Computing Project. The base research budgets continue to support fundamental research in areas such as data intensive science, Artificial Intelligence, and computing beyond Moore's Law. For example, ASCR currently supports a handful of small-scale research projects for exploring potential growth areas at the intersection of applied mathematics and Artificial Intelligence (AI). These will be used to spark larger-scale University and DOE national laboratory research investments and computational efforts involving AI. This plan engages universities as performers of research either directly funded by ASCR or in partnership with our national laboratories.

DESI

Mr. Calvert. The DOE's proposed FY18 budget would drastically reduce funding for a mid-scale scientific experiment, the Dark Energy Spectroscopic Instrument, known as DESI. The proposed funding level of \$1.9M would de facto render this project dead – at a waste of more than \$50M already spent– dismantling a 500 person collaboration that includes 35 U.S. institutions and several international collaborators. I'm concerned that with installation to begin only months away, uncertainly in the FY18 Budget on the project will allow international competitors to nip at our heels in a field that the U.S. pioneered.

How the Department will keep DESI on schedule and on track to deliver its groundbreaking science – ahead of the competition?

Secretary Perry. In the lowest funding scenario considered by the Particle Physics Project Prioritization Panel (P5), which was above the funding level in the FY 2018 Budget Request, the panel did not recommend funding. In order to fund high priority HEP projects, it was necessary to reduce funding for DESI. HEP intends to rebaseline and complete the DESI project.

ADVANCED RESEARCH PROJECTS AGENCY-ENERGY (ARPA-E)

Mr. Calvert. Secretary Perry, I have heard from universities and companies in my state that very concerned about the President's proposal to eliminate funding for ARPA-E. According to them, entities that want to apply for ARPA-E grants cannot make capital investment decisions given the uncertainty the President's proposal has created.

There is additional uncertainty as to the fate of ARPA-E, with the delay of grant announcements for FY16 projects from the Department. Companies and universities that have applied for FY17 funded grants are concerned that there will be a delay in those announcements as well.

How do you see ARPA-E projects fitting in to the Department of Energy's mission moving forward?

Secretary Perry. The FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. Through careful prioritization and ensuring that funding goes to the most promising research, the DOE will continue to be a world-leading science and technology enterprise that generates the innovations that fulfill our missions ensuring the Nation's security and prosperity.

Mr. Calvert. If Congress does fund ARPA-E, do you foresee the Department continuing to delay the awards?

Secretary Perry. No. The Department of Energy will follow the law.

ALISO CANYON AND NATURAL GAS STORAGE

Mr. Calvert. Southern California is experiencing its first sustained heat wave right now. While the National Oceanic and Atmospheric Administration (NOAA) is forecasting a 60-70% chance of above normal temperatures throughout California this summer, there is no sign that the heat will let up any time soon in the region.

Amidst increased temperatures; I remain concerned about energy reliability in Southern California. Natural gas storage is a critical component of this reliability of the Southern California gas/electricity system.

As you know, a natural gas leak was discovered at the Aliso Canyon site on October 23, 2015. On February 18, 2016, state of California officials announced that the leak was permanently plugged. The site has since undergone modernization. Currently, the state of California continues to prohibit natural gas injection at Aliso Canyon.

I encourage the Department to continue to monitor the situation at Aliso Canyon and would appreciate any insight the Department could provide on the site.

Secretary Perry. The DOE will continue to stay apprised of the conditions at the Aliso Canyon facility. In August 2017, the Department is bringing together the national labs that participated in last year's Underground Gas Storage (UGS) Task Force Report next month to discuss updates in well integrity and reliability data and technology and to develop recommendations for potential R&D needed to help reduce the risk of other underground gas storage incidents, such as what happened at Aliso Canyon. Another workshop, similar to the one held in July 2016 on Underground Gas Storage Well Integrity, is also being planned for around March 2018 to bring together a broad set UGS stakeholders, including operators, regulators, service providers, and researchers.

DOE recognizes that Aliso Canyon is an important part of Southern California's energy system, supporting the reliability of natural gas and electricity services for millions of people. DOE will continue to maintain contact with Southern California Gas (SoCalGas) and others to remain up to date on conditions at Aliso. Recently, the California Public Utilities

Commission (CPUC) and Division of Oil, Gas, and Geothermal Resources (DOGGR) cleared SoCalGas to resume limited injections at the Aliso Canyon natural gas storage facility. SoCalGas has met—and in many cases, exceeded—the rigorous requirements of the state’s comprehensive safety review. However, in early July, Governor Brown called for a phased shutdown of Aliso. The Department will continue to work with the State and all stakeholders to determine the most practical path forward.

Under new regulations, gas will only flow through newly installed and pressure-tested, inner steel tubing. The outer casing of wells will only serve as a secondary layer of protection. At the state’s direction, the field will be operated at a reduced pressure, providing an added margin of safety. Additionally, SoCalGas has introduced industry-leading technology and practices in their operations at Aliso Canyon.

CONGRESSMAN CHUCK FLEISCHMANN**HIGH RISK EXCESS FACILITIES**

Mr. Fleischmann. Several years ago, the DOE Inspector General called High Risk Excess Facilities at Y-12 the “worst of the worst.”

Please explain how you will approach the complex-wide cleanup of these often massive, crumbling structures?

Secretary Perry. DOE’s near-term plan is to begin addressing the most urgent near-term risks of the excess contaminated facilities listed as Tier I and Tier II in the December 2016 “Plan for Deactivation and Decommissioning of Nonoperational Defense Nuclear Facilities”. The risk reduction activities planned include characterization and identification of hazards, followed by abatement and stabilization of hazards to place facilities in the most stable condition possible while awaiting deactivation, decommissioning, and eventual demolition.

The Administration’s FY 2018 budget request included \$225 million for a targeted effort to accelerate deactivation and decommissioning of specific high-risk facilities at the Y-12 National Security Complex and Lawrence Livermore National Laboratory.

NATIONAL LABORATORIES

Mr. Fleischmann. When I was 14 years old, I lost my Mother to cancer. DOE is making significant contributions to the “Cancer Moonshot” initiative given its leadership in computing.

Does the Department intend to continue the work of the national laboratories in fighting this disease?

Secretary Perry. Yes. The Department, through its national laboratories, continues to collaborate actively with the National Cancer Institute (NCI) of the National Institutes of Health on three important pilot programs and a fourth major cross-cutting initiative aimed at harnessing DOE supercomputing capabilities in an effort to radically deepen our understanding and advance the treatment of cancer. Moreover, the Department considers these efforts to be integral to our drive to develop smart, capable exascale high-performance computing (HPC) technologies at the intersection of machine learning, big data, and simulation. The DOE-NCI partnership helps ensure that one of the many major benefits of the achievement of exascale systems in the United States—along with countless other dividends for both science and industry—will be improvements in our understanding and treatment of cancer and other diseases.

That is because the continuing progress in HPC—and especially the growing potential of artificial intelligence and machine learning to “understand,” learn from, and gain new insights from complex, “big” data—represents a technology with potentially revolutionary medical impact. Cancer is a prime candidate for these applications. Taken as a whole, the realm of cancer is an extraordinarily data-rich environment—from complex atomic, molecular, and cell-level data on up to vast aggregates of clinical patient data from millions of patients. This data represents a vast resource that until recently we had only the most limited means to draw on and benefit from. Our growing supercomputing capability—especially as we move toward exascale systems—will enable us to learn from this data, deepen our understanding of cancer, and devise treatments ever better targeted to the particular patient and disease (so-called “precision medicine”).

The NCI-DOE pilot programs involve collaborations among researchers from several components of the NCI and four DOE national laboratories: Argonne, Lawrence Livermore, Los Alamos, and Oak Ridge. The three pilot programs are aimed at breakthrough science challenges for cancer research and developing new capabilities for current and future HPC systems.

The first Pilot, led by Argonne National Laboratory, seeks to develop predictive models based on patient-derived xenografts (typically the implantation of tumor cells in mice to help predict the course of the disease). The goal is to be able to predict disease course and drug response quickly and computationally, based on machine-intelligent analysis of data from countless past xenografts.

The second Pilot, led by Lawrence Livermore National Laboratory, focuses on computational atomistic simulation of mutations in the so-called RAS protein—mutations that figure in about a third of all cancers.

The third Pilot, led by Oak Ridge National Laboratory, aims at effectively curating, analyzing, and learning from the millions of patient records available in NCI's Surveillance, Epidemiology, and End Results (SEER) Program.

Finally, a cross-cutting initiative called CANDLE (CANCer Distributed Learning Environment), led by Argonne, is specifically aimed at developing the sophisticated algorithms needed to effectuate "machine learning" of this medical data in the coming exascale computing environment. CANDLE is funded directly under the Department's Exascale Computing Projects.

All the efforts involve close collaboration between computational experts at the DOE national laboratories and experimentalists at the national laboratories and the NCI.

OAK RIDGE NATIONAL LAB

Mr. Fleischmann. The nation's work on uranium enrichment is carried out primarily at the Oak Ridge National Lab. In cooperation with industry, Oak Ridge has developed the world's most advanced gas centrifuges.

I'm pleased that this program was adequately funded for 2018, and would like to hear your goals for a domestic enrichment capability.

Secretary Perry. NNSA's Domestic Uranium Enrichment program office is executing a three-part strategy to reestablish a domestic enrichment capability to support national security needs. The strategy will:

- Preserve and advance enrichment technology including the AC100 centrifuge developed by Centrus (formerly USEC) while also developing a smaller centrifuge alternative at ORNL to provide optionality and contingency;
- Continue the acquisition process to reestablish a domestic uranium enrichment facility to meet future national security needs; and
- Down-blend highly enriched uranium identified as excess to national security requirements in order to provide low-enriched uranium (LEU) and extend the need date for unobligated LEU for tritium production to 2038 – 2041.

CONGRESSMAN JEFF FORTENBERRY**ENERGY FRONTIER RESEARCH CENTERS**

Mr. Fortenberry. Nebraska-based researchers have been working on proposals to submit for the next solicitation of the Energy Frontier Research Centers program. This solicitation was expected this August or September. The future of this program is now uncertain based on the FY18 budget request.

What are the Department of Energy's plans for issuing a new solicitation associated with the Energy Frontiers Research Center program? Can these plans go forward using FY17 funding?

Secretary Perry. The FY 2018 President's Budget Request includes funding for a FOA which will encourage both new and renewal applications and will focus on use of the team research modality to tackle transformative opportunities related to materials and chemical sciences, geosciences, and biosciences that have been identified in recent strategic planning activities, including the BES Advisory Committee (BESAC) report on transformative opportunities for discovery science. All FY 2017 EFRC funds will support existing EFRCs, based on prior year awards. Awards made under the new FOA will utilize FY 2018 funding.

CONGRESSWOMAN JAIME HERRERA BEUTLER**HANFORD SITE - WASTE TREATMENT PLANT (WTP)**

Ms. Herrera Beutler. My district is downstream of the Hanford site, and the Waste Treatment Plant (WTP) is essential to protecting the Columbia River from the millions of gallons of nuclear waste currently stored in underground tanks at Hanford. WTP construction has been funded at approximately \$690 million for the last several years, and a similar amount was requested for FY18. Some have suggested that the Department of Energy will not be able to meet all the court-mandated deadlines for construction and operations of the Waste Treatment Plant if funding remains at \$690 million in future years.

Will this funding level be adequate? And if not, what is the Administration's plan to ensure that Waste Treatment Plant construction, startup and commissioning work stays on schedule?

Secretary Perry. The FY 2018 request continues the Department's Direct Feed Low Activity Waste (DFLAW) approach for tank waste treatment at the Hanford site and includes additional non-project related funding for WTP commissioning, in addition to the \$690M for the project. The Department continues to make progress on the Waste Treatment and Immobilization Plant (WTP), having installed the last major component in the Low Activity Waste facility this year, which is a key facility in the Department's effort to begin treating low activity waste by December 31, 2023.

324 BUILDING AT HANFORD

Ms. Herrera Beutler. Highly radioactive nuclear waste was found underneath the 324 Building at Hanford in very close proximity to the Columbia River.

When does DOE expect to finish remediation of this site, and how much funding will be needed in each fiscal year to complete the effort?

Secretary Perry. The expected completion date for remediation of the 300-296 waste site, which includes the highly radioactive waste found underneath the 324 Building at Hanford is January 2020, in accordance with the Tri-Party Agreement.

HANFORD SITE – CONTAMINATED GROUNDWATER

Ms. Herrera Beutler. Another significant threat to the Columbia River is contaminated groundwater at the Hanford Site. There are several ‘Pump & Treat’ facilities across the Hanford Site, currently treating over 2 billion gallons of groundwater every year.

How much funding for Pump & Treat operations is included in the Administration’s FY18 funding request, and is this figure adequate to ensure that the Columbia River is protected?

Secretary Perry. The Administration’s FY 2018 budget request includes \$150 million for soil and groundwater remediation activities. Protection and remediation of groundwater is a key activity and the funding request supports Pump and Treat operations.

BIOENERGY TECHNOLOGIES OFFICE (BETO, WITHIN EERE)

Ms. Herrera Beutler. Sec. Perry, as you may know my district is home to a Washington State University campus, which has done significant work in bioenergy and developing sustainable fuels, including jet fuels. WSU has partnered with the Pacific Northwest National Laboratory (PNNL) in this area, and the collaborations have been impressive, tackling basic science R&D but also taking the science and applying it so that it can be scaled.

While the budget request is focused on basic science/early technology, to simply abandon the application of that work at the appropriate scale would harm the mission-readiness of these efforts. The Bioenergy Technologies Office (BETO), slated for a significant cut in the budget request, includes applied work in its mission and has supported WSU and PNNL projects. I'm concerned that without the full breadth of BETO, our efforts to develop sustainable fuels will stall out.

Secretary Perry. How do you define “fundamental” or “early stage” R&D? Does it include R&D that industry isn't willing or able to do? In this context, what's your vision for BETO?

The FY 2018 Budget focuses EERE resources on early-stage R&D, where the Federal role is strongest, and reflects an increased reliance on the private sector to fund later-stage research, development, and commercialization of energy technologies.

The Bioenergy Technologies Program's (BETO) vision is to have a thriving and sustainable bioeconomy fueled by innovative technologies. BETO focuses on early stage applied R&D to strengthen the body of knowledge enabling industry to develop and deploy sustainable bioenergy technologies capable of producing price-competitive biofuels from non-food sources of biomass such as wastes and agricultural residues, and from energy crops like switchgrass, and algae. The program's primary focus is on R&D to produce “drop-in” biofuels that are compatible with existing fueling infrastructure and vehicles across a range of transportation modes, including renewable-gasoline, -diesel, and -jet fuels. The program also supports early stage R&D on converting biomass into high-value chemicals and products that can enhance the economics of biofuel production and improve energy security

by displacing demand for oil imports or increasing fuels exports while creating jobs and revenues in the United States.

UNITED STATES-ISRAEL STRATEGIC PARTNERSHIP ACT OF
2014

Ms. Herrera Beutler. The United States-Israel Strategic Partnership Act of 2014 authorized the Department of Energy to establish a joint U.S.-Israel center specializing in energy and water. Over the last several years, Congress has expressed clear interest in seeing such a Center established. It is also my understanding that Israel is eager to move forward and it's important that the U.S. acts soon to leverage joint capabilities.

Mr. Secretary, given your stated support and interest in fostering increased international collaborations, will you support the establishment of this center and can you describe the Department's plans to move forward with this critical U.S.-Israeli partnership?

Secretary Perry. The ongoing relationship with Israel remains a priority for the Department and DOE has robust collaboration with Israel across many areas, including energy and water. . The Department is exploring the establishment of a "virtual center", which can serve as a resource to include the results of past, current, and future joint research in energy and related areas.

CONGRESSMAN DAVE JOYCE**BROAD GOALS**

Mr. Joyce. As you know, American innovators have a long history of developing and improving energy technologies to enhance our nation's domestic electricity supply and improve energy security. Historically, my home state of Ohio has played an integral role in our nation's research and development efforts, dating back to the Manhattan project. Our premier academic institutions, like Case Western Reserve University, often partner with the Department to advance important energy storage, wind, and oil and gas research goals.

Historically, the Department's research programs have had the greatest impact when resources are focused on very clear, specific goals. Typical research efforts are long-term endeavors, but political transitions or the "popular project of the day" result in a counterproductive shift of resources that inhibits our nation's ability to solve some of our biggest energy challenges.

As you know, the national lab system has shown the ability to reach a goal when the Department sets them out. For example, the SunShot initiative set out a goal in 2011 for more affordable solar power and has met nearly 90% of their original cost target in just six years (*\$0.23 to \$0.07 per kilowatt-hour for utility-scale photovoltaic (PV) solar power*).

With that model in mind, would you support orienting DOE's research programs to develop specific goals for other important energy technologies, such as advanced nuclear reactors, innovative fossil energy systems, and grid-scale energy storage?

Secretary Perry. My goal is to ensure that the DOE, through its national laboratories, continues to support the world's best enterprise of scientists and engineers who create innovations to drive American prosperity, security and competitiveness for the next generation. Each DOE program—including in the areas of nuclear energy, fossil energy, energy efficiency, renewable energy, and the power grid—manages its technology

roadmaps and goals in line with Administration priorities to most effectively drive those innovations on behalf of the American people.

Mr. Joyce. Given the Department's focus on "doing more with less," would setting this type of technology goal ensure scant federal dollars are being efficiently utilized to meet goals important for U.S. innovation leadership?

Secretary Perry. A strategic vision and goals are important for any organization to efficiently and effectively carry out its mission. The Department of Energy will develop and refine its strategy and goals as we carry out the Department's mission in support of the President's vision for promoting energy independence and economic growth.

ADVANCED RESEARCH PROJECTS AGENCY – ENERGY

Mr. Joyce. The Advanced Research Projects Agency- Energy program is modeled after the infamous DARPA military program to leverage government dollars as efficiently as possible to develop new energy technologies. The program is very popular on both sides of the aisle, and the National Academies of Science recently released a comprehensive review of ARPA-E that concluded that the agency is succeeding, making vital progress on research towards important energy projects like advanced carbon capture and grid-scale battery storage.

Case Western Reserve University in Northeast Ohio has received almost \$10 million in ARPA-E awards across 5 awards, two of which are ongoing. The ARPA-E program, which the Department has proposed eliminating in the FY18 budget request, is essential to our nation's energy innovation efforts and has had a direct economic impact on Northeast Ohio.

Given the program's support, it is unlikely ARPA-E is going to be eliminated. In your view, how can the program under your management better meet your goal of ensuring the United States continues to be a "world leader in the development of next generation technology?"

Secretary Perry. The FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. Through careful prioritization and ensuring that funding goes to the most promising research, the DOE will continue to be a world-leading science and technology enterprise that generates the innovations that fulfill our missions ensuring the Nation's security and prosperity.

Mr. Joyce. Do you believe the Department should be funding research into long-shot technologies, which might one day prove useful for tackling our nation's energy and environmental challenges?

Secretary Perry. Yes. Accordingly, the FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy

independence and domestic job-growth in the near to mid-term. This shift allows the private sector to fund later-stage research, development, and commercialization of energy technologies.

ENERGY STORAGE GOALS

Mr. Joyce. The utility industry is expected to spend over \$120 billion over the next decade to update transmission and distribution infrastructure. Grid-scale energy storage would help defray some of these large infrastructure costs by capturing excess electricity, including renewable energy generation, when demand and prices are low, and then utilizing that energy during peak demand times with low storage cost. Unfortunately, current grid-scale energy storage is not nearly cheap or large enough to meet this objective. The Department's energy storage research programs are essential to develop a fundamentally cheaper grid-scale solution. For example, Case Western Reserve University in Northeast Ohio has an ongoing \$3.2 million ARPA-E award focused on an all-iron flow battery.

How can our research efforts be better focused on improving the cost of deployment? Would you be supportive of establishing a focused research goal to expedite the commercial deployment of affordable grid-scale energy storage?

Secretary Perry. Energy storage is a promising technology for grid modernization. It provides the flexibility for variability in electricity supply and demand, enhances asset utilization, and contributes to electric system reliability and resilience. While the cost of energy storage systems already enables many grid applications, further reductions in cost will open many more opportunities. Economic values of storage provided to the grid need further study to assist utilities in properly monetizing benefits to be derived from storage deployment.

The Office of Electricity Delivery and Energy Reliability's Energy Storage program has developed focused research goals aimed at reducing the cost of specific energy storage systems. From 2010 to 2016, research efforts demonstrated a 50 percent reduction in the cost of vanadium flow battery technology. The Energy Storage program has now targeted new redox flow chemistries with the potential for a further 50 percent reduction in costs. The current research goal is to demonstrate these systems can achieve costs of \$125 per kWh by 2022. This target would enable redox flow battery technology to be economically competitive for a wide range of grid services. A similar research goal applied to wider range of technologies would enable

a suite of storage solutions to be developed and help expedite the commercial deployment of affordable grid-scale storage.

The Office of Energy Efficiency and Renewable Energy's Water Power Technologies Office Hydropower Program has invested in innovative pumped-storage hydropower (PSH) systems—facilities where energy can be stored and generated by moving water between two reservoirs of differing elevations—that can reduce development costs and timelines. In addition to providing 97 percent of the total utility-scale storage in the United States, PSH plants have operational characteristics—such as high ramp rates and flexibility reserves—that contribute to greater flexibility and reliability of the power grid.

Mr. Joyce. It is my understanding that current research on energy storage technology is more focused on transportation uses. How can we bolster efforts to improve innovative grid-scale energy storage technologies?

Secretary Perry. Federal research investments in vehicle technologies are advancing the broader energy storage field, but there are unique challenges for grid scale energy storage that these investments do not address. To improve the deployment of grid scale energy storage technologies, the lifecycle costs of these systems must continue to decrease and the value energy storage provides to the grid must be defined and monetized.

The FY 2018 budget request focuses Federal funding on early stage research in selected technologies that can meet the more aggressive cost and lifetime targets needed for grid scale storage. Private industry can leverage this research for innovative applied solutions, as well as pilot and demonstration projects tailored to grid opportunities.

FOSSIL ENERGY RESEARCH

Mr. Joyce. The first commercial-scale U.S. carbon capture project, Petra Nova, just outside of Houston, began commercial operations earlier this year. It is designed to capture over 4,000 tons of carbon emissions from a coal plant and use those emissions to produce 15,000 barrels of Texas oil each day, a 50 times increase over the status quo.

The project was made possible by a public-private partnership with the National Energy Technology Laboratory (NETL), which has a major presence across the Ohio border near Pittsburgh. NETL's applied research on the cleaner production and use of domestic energy resources has contributed to Ohio's energy renaissance, and is important to ensuring Ohio and our nation can utilize its immense natural resources in the future. Given that the United States has over 200 years of coal and about 100 years of natural gas reserves at current consumption rates...

Do you believe the Department of Energy's fossil fuel research programs are an important part of the President's promise to support coal country?

Secretary Perry. The Department's efforts in fossil fuel research are a key component and central to the President's promise to support coal country. As you have noted, coal resources in the United States are abundant, provide a low cost source of reliable fuel, and provide stable employment in areas across the country. The President's budget request includes R&D for early stage advanced technologies, which will improve the efficiency and research methods of creating new products from coal and CO₂, and create new, more flexible power generation technologies. This research will lead to systems that can operate in distributed environments and provide additional revenue streams for existing and new coal fired power plants. These solutions will make coal more competitive in today's market place, which requires systems that are more flexible than traditional power systems, and reflect the Administration's commitment to supporting all forms of energy generation systems, including coal.

Mr. Joyce. How does the Department's budget aim to leverage federal resources to advance energy innovation and make our vast fossil energy

resources cleaner, more reliable, and more affordable while creating U.S. jobs?

Secretary Perry. The President's budget request leverages Federal resources in a number of key ways to improve and augment our use of coal in power generation that will make coal more competitive in today's market place by examining flexible power generation and multi product approaches.

A new request for transformative power generation aims to address the existing coal power generation fleet, which has played a critical role in providing reliable, on-demand power generation required for grid stability. This new research effort will focus on enhancing existing unit performance through early stage new materials development, improvements in water usage, recovery of low grade waste heat, and addressing parasitic losses within the plant coupled with advanced sensors and instrumentation.

The President's request also includes funding for carbon capture, utilization, and storage research, and continues to lower the cost and improve the performance of such systems. It is expected that these systems will provide low-cost CO₂, which can be sold for use in enhanced oil recovery, or converted into useful products.

The multiple focus areas within the Clean Coal R&D budget aim to make coal more flexible, provide additional revenue streams, and improve their economic competitiveness. Combined, these technologies will allow the continued use of domestic resources - while lowering coal's environmental footprint and continue to support all aspects of the coal economy in the United States.

Mr. Joyce. Petra Nova was preceded by an Alabama pilot project that was made possible by a public-private partnership. The pilot project identified technical issues before commercial deployment, and was fundamental in Petra Nova's success.

Given the Administration's focus on basic research, how will the Department of Energy collaborate with industry on pilot projects?

Secretary Perry. The FY 2018 Budget Request for the Department of Energy is guided by the reassertion of the proper Federal role as a supporter of early-stage R&D—in which the private sector has less incentive to invest—and an increased reliance on the private sector to fund later-stage R&D including demonstration and commercial deployment. The FER&D FY 2018 Budget Request is also informed by guiding principles of energy security, strong domestic energy production, and advancing clean coal technologies. This Request is committed to maintaining and supporting highly effective operations at the National Laboratories, particularly FER&D's National Energy Technology Laboratory, and ensuring funding for a robust cybersecurity program as it applies to the fossil energy sector, resources and assets. The FER&D budget focuses on cutting edge, early-stage research and development that will prepare innovative new technologies for the private sector to further develop, scale-up, and deploy. As a result, the FER&D FY 2018 budget focuses funding on lab- and university-led early-stage research.

CONGRESSMAN DAN NEWHOUSE**HANFORD – RICHLAND OPERATIONS OFFICE (RL)**

Mr. Newhouse. The cleanup activities at Hanford are managed through two separate DOE offices: the Office of River Protection (ORP) and the Richland Operations Office (RL), which is responsible for all non-tank waste cleanup activities. The President's Budget Request includes a \$200 million reduction for RL below FY2017 levels, which if enacted could have devastating consequences on critical cleanup work along the River Corridor and in the Central Plateau.

Can you please discuss how the Administration chose this funding level for RL? What planned activities for FY2018 will DOE forgo in order to meet this reduction in funding?

Secretary Perry. In the FY2018 Congressional Budget Justification document, DOE states:

"The Department is working to reduce the footprint at the Richland Site. The cleanup momentum over the past several years is significant. As such, effort continues to be focused on completing cleanup along the Columbia River Corridor and transitioning the Central Plateau of the Hanford Site to a modern, protective waste management operation, thereby, reducing the risks to workers, the community, and the environment."

Mr. Newhouse. While I agree there have been major accomplishments in RL's mission, I am concerned that the Administration's response is such a severe reduction in funding.

Secretary Perry. The FY 2018 budget positions the Department to continue making significant progress at the Hanford Site, which includes continued progress in safely removing the K Basin sludge from near the Columbia River to the central plateau, continuing pump and treat activities to remediate contaminated groundwater, and the maintenance, repair, and replacement of failing infrastructure, facilities, and systems. This includes a focus on addressing risks posed by those that are specifically clean-up related and those that support our cleanup activities.

The FY 2018 budget request is slightly greater than \$2.3 billion. This funding is greater than one-third of the entire budget for DOE's Office of Environmental Management (EM).

Taking many variables into account, DOE has generally prioritized its cleanup activities as follows:

- Activities to maintain a safe and secure posture in the EM complex;
- Radioactive tank waste stabilization, treatment, and disposal;
- Spent (used) nuclear fuel storage, receipt, and disposition;
- Special nuclear material consolidation, stabilization, and disposition;
- Transuranic and mixed/low-level waste disposition;
- Soil and groundwater remediation; and,
- Excess facilities deactivation and decommissioning.

DOE will continue to discharge its responsibilities by conducting cleanup within a "Safety First" culture that integrates environmental, safety, and health requirements and controls into all work activities. This ensures protection for the workers, public, and the environment.

Mr. Newhouse. At this level, how does DOE plan to prevent missed Tri-Party Agreement (TPA) milestones, major workforce reductions, and cleanup delays that will ultimately cost taxpayers more in the long run? Additionally, in your view what does "transitioning the Central Plateau of the Hanford Site to a modern, protective waste management operation" entail?

Hanford cleanup is an extraordinarily complex undertaking, and presents a variety of unique challenges. The subsidence event at PUREX Tunnel No. 1 is a very recent example of the threats to workers, the environment and the general public which remain at the Site.

Secretary Perry. The Department takes its regulatory commitments seriously and is actively working to meet its cleanup commitments at Hanford while continuing key risk reduction and remediation activities. To the extent milestones are delayed or impacted, DOE will follow the provisions in the TPA for making notifications and working with Federal and State regulators regarding schedule adjustments, if necessary. The Department remains committed to driving efficiency into base operations so that continued progress can be made to meet the Site cleanup mission.

The Department will complete the remaining cleanup projects along the River Corridor of the Hanford Site, and transition future waste management and treatment, groundwater cleanup, deactivation and demolition, and other operations to the Central Plateau of the Hanford site, effectively shrinking the active cleanup footprint.

Mr. Newhouse. At the Administration's proposed funding levels, how do you expect to identify and mitigate hazards similar to the PUREX tunnel at Hanford while also continuing to make meaningful cleanup progress? In the aftermath of the PUREX Tunnel collapse, what steps is DOE making to identify, prioritize and mitigate the remaining risks at the Hanford site which aren't currently part of the active cleanup effort? What funding will be needed to adequately address all of these sites? What specific risks has DOE already identified?

Secretary Perry. The Hanford Site cleanup is a high priority for me. As a former Governor, I have a strong appreciation and understanding of the role of elected officials. I am committed to working with the state of Washington, the Washington congressional delegation and our other important stakeholders to continue to make steady cleanup progress and develop new and innovative solutions to our cleanup challenges at the Hanford Site.

I want to look at opportunities to complete the Department's EM mission more efficiently and expeditiously, including the cleanup of the Hanford Site where considerable effort remains.

To that end, the Office of EM is working to identify and examine opportunities to improve the effectiveness of its cleanup efforts. This

includes examining ways to advance the tank waste cleanup mission at Hanford as we continue to maintain the focus on completing construction of the WTP Low Activity Waste Facility and making glass by December 31, 2023. I would also expect us to look at opportunities to advance the overall cleanup of the site as we complete cleanup efforts in the River Corridor area and shift our focus to the Central Plateau.

Moving forward with these efforts will take leadership on all of our parts and a commitment to partnership, to think creatively and to work together to remove barriers, while still being safe and protecting human health and the environment.

Mr. Newhouse. The Administration's funding request for DOE's Richland Operations Office and Office of River Protection includes a number of new and rearranged budget lines. For example, a new Site Wide Services PBS has been created (RL-0201), and it appears that RL-0011 has been eliminated. Please identify what work would be included (and at what funding level) in each of the proposed budget lines.

Secretary Perry. The new site-wide services PBS (RL-0201) was created to provide delineation between the direct project cleanup work and the site services, which have been funded through an allocation to most or all of the other Richland PBS's in prior years. The services include, but are not limited to, roads and transportation services; electrical and water services; facility maintenance; network and software engineering; and records management. The Richland funding request did not include PBS RL-0011 as work associated with the decommissioning and demolition of the Plutonium Finishing Plant facilities to slab-on-grade will be largely completed in FY 2017 with closeout activities performed in early FY 2018 that will be funded with FY 2017 appropriated funds.

HANFORD – OFFICE OF RIVER PROTECTION (ORP)

Mr. Newhouse. The Office of River Protection (ORP) is responsible for the retrieval, treatment, and disposal of the millions of gallons of defense nuclear waste stored at the site, as well as the completion of the Waste Treatment Plant (WTP) and supporting infrastructure to transfer waste from the tanks to WTP. These activities are vital to ensure Hanford's waste is treated and immobilized, as well as to meet Consent Decree milestones. While I appreciate the Administrations' request includes a \$90 million increase for ORP, this level is approximately \$110 million below what many experts predicted is necessary for the upcoming fiscal year.

Do you believe this amount is sufficient to meet ORP's FY2018 goals? Will any planned activities be unable to proceed under this funding level? If yes, please discuss the activities that will be delayed and the possible impacts a delay could have on ORP's clean-up mission.

Secretary Perry. Planned FY2018 activities including continued construction and commissioning activities for the Direct Feed Low Activity Waste approach at the WTP; maintaining Tank Farms in a safe and compliant manner; conducting Single-Shell/Double-Shell Tank Integrity assessments; continued tank vapors work and support of Single Shell Tank retrievals; and continued technical issue resolution for Pretreatment facility will be able to proceed under this funding level.

Mr. Newhouse. In order to safely dispose of the 56 million gallons of waste held in underground tanks at Hanford, adequate funding will be needed to continue design and construction of WTP. The request provides \$8 million for "WTP Commissioning," though additional funding will also be needed as commissioning and startup begins. What do you envision WTP's funding needs will be, particularly over the next five years, in order to meet the court-mandated timeline for full operations of WTP by 2036?

Secretary Perry. The Department's FY 2018 budget request reflects the priority of meeting the near-term commitments for beginning operations of the low-activity waste treatment facilities, while concurrently resolving the design and technical issues with the more complex Pretreatment and High-Level Waste facilities.

Future budget requests will reflect any additional funding needs for the more complex facilities as the specific plans for that portion of the mission are refined.

YUCCA MOUNTAIN

Mr. Newhouse. In addition to serving as a permanent repository for commercial nuclear waste, Yucca Mountain is also the planned destination for much of Hanford's high level waste. What steps does the administration plan to take, and what funding will be needed, to move forward with the Yucca Mountain licensing process?

Secretary Perry. The FY 2018 President's budget requests \$120M to resume the NRC licensing process for Yucca Mountain and implement a robust interim storage program. In FY 2018 the Department will take the steps needed to support the licensing effort. The funding requested for licensing will support, among other things, technical, scientific, and legal support for court challenges; preparation and review of depositions; preparation of DOE witnesses and testimony for ASLB hearings; discovery, including derivative discovery; preparation and response to interrogatories, and; support for motions and other legal actions.

PACIFIC NORTHWEST NATIONAL LABORATORY (PNNL)

Mr. Newhouse. PNNL is home to world-class researchers and facilities focused on addressing national priorities such as cyber security, grid security, and developing the electric grid of the future. It is also a national and global leader in basic sciences and has unique assets such as the Environmental Molecular Sciences Laboratory (EMSL) which are of incredible value to the larger scientific community and could not be replicated in industry. The President's FY2018 Budget Request would cut PNNL's funding by roughly \$200 million and result in approximately 1,000 layoffs. Similar cuts have been proposed for other national labs across the country as well.

How do you envision that the US can maintain its position as a global leader in scientific research and development at the proposed funding levels?

Secretary Perry. The FY 2018 Budget Request implements the Administration's decision to shift focus to more fundamental research across DOE. Through careful prioritization and ensuring that funding goes to the most promising research, this budget will ensure that the Department's national laboratories continue to be the backbone of American science leadership by supporting cutting-edge basic research and to advance American primacy in scientific and energy research in an efficient and cost effective manner.

GRID MODERNIZATION AND GRID MOD LABORATORY CONSORTIUM

Mr. Newhouse. A key focus of DOE's R&D programs is to improve the reliability, security and resilience of the grid. I'm deeply concerned about the proposed cuts to the Office of Electricity's R&D programs – I've toured PNNL many times and have seen the ground breaking research taking place, which has made them one of the leading labs working on grid modernization technologies. Some of this important work is being done via the Grid Modernization Lab Consortium, a collection of 14 national labs that is co-led by PNNL.

What is your plan to continue advancements in grid modernization and R&D? How will you keep the Consortium moving forward under drastically reduced funding levels?

Secretary Perry. The Department's FY 2018 budget request focuses funding to national laboratories' early stage scientific research efforts related to grid modernization. DOE expects to meet commitments concerning the existing Grid Modernization Lab Consortium (GMLC) efforts. DOE anticipates private industry will leverage DOE research for innovative applied solutions, demonstrations, and pilot projects tailored to market needs and opportunities.

EXASCALE COMPUTING

Mr. Newhouse. I was pleased to see the President's Budget Request provides increases in funding to accelerate the development of Exascale technology. Exascale technology is important to our national interests for a variety of reasons. With Exascale technology, we can fight diseases, better maintain our nuclear stockpile and analyze the potential for foreign threats against the U.S., and catalyze industry to produce products faster, cheaper, and more safely. Previous DOE plans have called for Exascale development in the 2023 timeframe, but the President's budget has included funding to accelerate its development to 2021.

Can you discuss the importance of enabling DOE to develop Exascale by 2021? Much of the work on Exascale is happening at labs like PNNL – are you concerned the cuts to various DOE programs that support our National Lab System could negatively impact or delay this goal?

Secretary Perry. Deploying at least one exascale system in 2021 will keep the U.S. competitive in the international exascale race. Exascale computing is critical to the national security, scientific, and energy missions of the Energy Department. Exascale also is critical to ensuring U.S. primacy in computing to advance economic competitiveness in technological and manufacturing processes. Achievement of exascale will deliver breakthrough computer performance to both the Federal and private sectors. The accelerated investments in design and engineering over the next 3-4 years will keep the U.S. at the forefront of computational platforms. This will allow us to continue to lead in: scientific and engineering progress; advances in manufacturing techniques and rapid prototyping; nuclear security missions including stockpile stewardship without testing; and, the ability to explore, understand and harness natural and engineered systems that are too large, too complex, too dangerous, too small, or too fleeting to explore experimentally.

POWER MARKETING ADMINISTRATIONS – SALE OF
TRANSMISSION ASSETS

Mr. Newhouse. I am concerned that the budget request includes a proposal to sell all transmission assets of the federal Power Marketing Administrations (PMAs), such as the Bonneville Power Administration (BPA), which provides about 28% of the electric power used in the Pacific Northwest.

My understanding is that the Department cannot carry out this proposal without statutory language, which would require the approval of Congress. Is that correct?

Secretary Perry. Yes.

MEDICAL ISOTOPES

Mr. Newhouse. In 2012, Congress passed the American Medical Isotope Production Act (AMIPA), with the goal of bringing domestic production of medical isotopes online as early as 2013. To date, none of the projects have come online and a number have been cancelled. We are now facing shut-downs of international facilities which will threaten the ability for our doctors to carry out 50,000 life-saving diagnostic tests every day in the United States, equaling 20,000,000 procedures a year involved in the early detection of heart disease, cancer, and dementia, among other illnesses. A 2016 report issued by the National Academies of Sciences, Engineering and Medicine stated that: "Although the current supply of molybdenum-99 and technetium-99m - isotopes used worldwide in medical diagnostic imaging is sufficient to meet domestic and global demand, changes to the supply chain before year-end could lead to severe shortages and impact the delivery of medical care....The capacity to supply molybdenum-99 will be reduced substantially when the reactor in Canada stops production at the end of October 2016. Canada will then become a supplier of last resort - producing molybdenum-99 only in case of severe global shortages - until its reactor shuts down permanently at the end of March 2018."

According to a 2015 Report by the Nuclear Science Advisory Committee, Moly99 Subcommittee, there is no domestic production of medical isotopes despite the fact that the U.S. makes up 50% of world demand. Given the lack of domestic supply, and the impending shortage American medical professionals will face, are you committed to following through with the goals of AMIPA and establishing a domestic supply source?

Secretary Perry. NNSA is fully committed to following through with the goals of AMIPA and supporting the establishment of a commercial, domestic Mo-99 supply produced without the use of highly enriched uranium. NNSA continues to provide support to our domestic commercial partners. We expect to see the first commercial, non-HEU-based domestic production of Mo-99 in late 2017 by our cooperative agreement partner, NorthStar, and expect additional domestic production in 2019. We also continue to make available non-proprietary support through the National Laboratories to any prospective domestic Mo-99 producers who provide qualifying proposals.

Mr. Newhouse. In order to increase domestic production of medical isotopes without the use of weapons grade, highly enriched uranium, AMIPA requires that project costs with non-federal partners be cost-shared through the NNSA up to 50% as set forth in the Section 988 of the Energy Policy Act of 2005. In the past administration, DOE and NNSA did not make available the full portion of the 50% cost-share by imposing a \$25 million cap on eligible projects, despite report language included in the FY 2016 Consolidated Appropriations Act (H.R. 2029) as well as the FY 2017 Omnibus (H.R. 244) reminding NNSA to “fund eligible projects up to the full portion of the 50% cost-share of construction as allowed under AMIPA,” and to “consider the needs of green field projects that do not rely on highly enriched uranium.” The inaction has prevented innovative projects from moving forward, as the arbitrary cap is preventing private investment. Are you committed to lifting this arbitrary cap and instead follow through with the Congressional intent of AMIPA to ensure life-saving domestic production?

Secretary Perry. NNSA’s policy of providing \$25 million on a 50%/50% cost-share basis to each of its cooperative agreement partners’ projects is in accordance with AMIPA and Energy Policy Act of 2005 requirements, and allows us to provide impactful support to each of these projects while ensuring that the U.S. government is not subsidizing Mo-99 production. We have not determined that funding 50% of a partner’s total project cost is necessary to achieve the goals of AMIPA. Given the significant escalation in some partners’ total project costs, it would also divert funding from higher national security priorities. Under this policy, NNSA is making significant progress towards meeting the goals of AMIPA. Two of our cooperative agreement partners have secured the necessary private investment to fund their projects along with the \$25 million of NNSA support, and multiple private companies are pursuing projects with no U.S. government support at all. NNSA has provided funding to the national laboratories for non-proprietary technical support that directly furthers the achievement of AMIPA goals.

Mr. Newhouse. Can you tell me what is currently in the FY18 proposed budget for the Moly99 program? How much is this will be used to

fund the existing cooperative agreements and can you provide me with a breakdown of how these funds will be allocated?

Secretary Perry. The FY 2018 President's Budget request for NNSA's Mo-99 program is \$27.4 million, of which \$19.6 million will be used to fund existing cooperative agreements. Of this \$19.6 million, \$6.2 million is planned for General Atomics, \$8.9 million for NorthStar's accelerator technology, and \$4.5 million for SHINE. With this funding, all three partners will have the full \$25 million of NNSA cost share awarded under their cooperative agreements.

BROAD GOALS

Mr. Newhouse. As you know, American innovators have a long history of developing and improving energy technologies enhance our nation's domestic electricity supply and improve energy security. The 17 world-class DOE-supported national energy laboratories, as well as the nation's premier research universities and private research facilities, constitute the most comprehensive energy research and development network of its kind. The Pacific Northwest National Lab in Richland, Washington is a world-leading facility providing valuable scientific research focused on energy resilience and homeland security. Historically, the Department's research programs have had the greatest impact when resources are focused on very clear, specific goals. Typical research efforts are long-term endeavors, but political transitions or the "popular project of the day" result in a counterproductive shift of resources that inhibits our nation's ability to solve some our biggest energy challenges.

As you know, the national lab system have shown the ability to reach a goal when the Department sets ones out. For example, the SunShot initiative set out a goal in 2011 for more affordable solar power and has met nearly 90% of their original cost target in just six years (*\$0.23 to \$0.07 per kilowatt-hour for utility-scale photovoltaic (PV) solar power*).

With that model in mind, would you support orienting DOE's research programs to develop specific goals for other important energy technologies, such as advanced nuclear reactors, innovative fossil energy systems, and grid-scale energy storage?

Secretary Perry. My goal is to ensure that the DOE, through its national laboratories, continues to support the world's best enterprise of scientists and engineers who create innovations to drive American prosperity, security and competitiveness for the next generation. Each DOE program—including in the areas of nuclear energy, fossil energy, energy efficiency, renewable energy, and the power grid—manages its technology roadmaps and goals in line with Administration priorities to most effectively drive those innovations on behalf of the American people.

Mr. Newhouse. Given the Department's focus on "doing more with less," would setting this type of technology goal ensure scant federal dollars are being efficiently utilized to meet goals important for U.S. innovation leadership?

Secretary Perry. A strategic vision and goals are important for any organization to efficiently and effectively carry out its mission. The Department of Energy will develop and refine its strategy and goals as we carry out the Department's mission in support of the President's vision for promoting energy independence and economic growth.

ADVANCED RESEARCH PROJECTS AGENCY – ENERGY (ARPA-E)

Mr. Newhouse. The Advanced Research Projects Agency- Energy program is modeled after the infamous DARPA military program to leverage government dollars as efficiently as possible to develop new energy technologies. The program is very popular on both sides of the aisle, and the National Academies of Science recently released a comprehensive review of ARPA-E that concluded that the agency is succeeding, making vital progress on research towards important energy projects like advanced carbon capture and grid-scale battery storage. The Pacific Northwest National Lab has five active ARPA-E projects, and has successfully completed 6 others is a wide variety of research areas. Grants from agencies like ARPA-E are essentially for the Western Washington and the Tri-Cities region.

Given the program's political support, it is unlikely ARPA-E is going to be eliminated. In your view, how can the program under your management better meet your goal of ensuring the United States continues to be a "world leader in the development of next generation technology?"

Secretary Perry. The FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. Through careful prioritization and ensuring that funding goes to the most promising research, the DOE will continue to be a world-leading science and technology enterprise that generates the innovations that fulfill our missions ensuring the Nation's security and prosperity.

Mr. Newhouse. Do you believe the Department should be funding research into long-shot technologies, which one day might prove useful for tackling our nation's energy and environmental challenges?

Secretary Perry. Yes. Accordingly, the FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. This shift allows the private sector to fund later-stage research, development, and commercialization of energy technologies.

ENERGY STORAGE GOALS

Mr. Newhouse. The utility industry is expected to spend over 120 billion dollars over the next decade to update transmission and distribution infrastructure. Grid-scale energy storage would help defray some of these large infrastructure costs by capturing excess electricity, including renewable energy generation, when demand and prices are low, and then utilizing that energy during peak demand times with low storage cost. Unfortunately, current grid-scale energy storage is not nearly cheap or large enough to meet this objective. My alma mater, Washington State University, has partnered with scientists at Pacific Northwest National Laboratory on innovative power grid modernization technologies. As electricity systems move towards greater variable renewables, bulk energy storage will become increasingly important. New low cost systems are currently being pioneered at PNNL, but are not yet commercially viable.

How can Department of Energy research efforts be better focused on improving the cost of deployment? Would you be supportive of establishing a focused research goal to expedite the commercial deployment of affordable grid-scale energy storage?

Secretary Perry. Energy storage is a promising technology for grid modernization. It provides the flexibility for variability in electricity supply and demand, enhances asset utilization, and contributes to electric system reliability and resilience. While the cost of energy storage systems already enables many grid applications, further reductions in cost will open many

more opportunities. Economic values of storage provided to the grid need further study to assist utilities in properly monetizing benefits to be derived from storage deployment.

The Office of Electricity Delivery and Energy Reliability's Energy Storage program has developed focused research goals aimed at reducing the cost of specific energy storage systems. From 2010 to 2016, research efforts demonstrated a 50 percent reduction in the cost of vanadium flow battery technology. The Energy Storage program has now targeted new redox flow chemistries with the potential for a further 50 percent reduction in costs. The current research goal is to demonstrate these systems can achieve costs of \$125 per kWh by 2022. This target would enable redox flow battery technology to be economically competitive for a wide range of grid services. A similar research goal applied to wider range of technologies would enable a suite of storage solutions to be developed and help expedite the commercial deployment of affordable grid-scale storage.

The Office of Energy Efficiency and Renewable Energy's Water Power Technologies Office Hydropower Program has invested in innovative pumped-storage hydropower (PSH) systems—facilities where energy can be stored and generated by moving water between two reservoirs of differing elevations—that can reduce development costs and timelines. In addition to providing 97 percent of the total utility-scale storage in the United States, PSH plants have operational characteristics—such as high ramp rates and flexibility reserves—that contribute to greater flexibility and reliability of the power grid.

Mr. Newhouse. It is my understanding that current research on energy storage technology is more focused on transportation-uses. How can we bolster efforts to improve innovative grid-scale energy storage technologies?

Secretary Perry. Federal research investments in vehicle technologies are advancing the broader energy storage field, but there are unique challenges for grid scale energy storage that these investments do not address. To improve the deployment of grid scale energy storage technologies, the lifecycle costs of these systems must continue to decrease and the value energy storage provides to the grid must be defined and monetized.

The FY 2018 budget request focuses Federal funding on early stage research in selected technologies that can meet the more aggressive cost and lifetime targets needed for grid scale storage. Private industry can leverage this research for innovative applied solutions, demonstrations, and pilot projects tailored to grid opportunities.

PRIZE COMPETITION

Mr. Newhouse. The Department of Energy recently wrapped up an 18-month Wave Energy Prize competition, which enlisted submissions from nearly 100 teams. Since the industry is young, the competition helped advance many of the ideas in the development pipeline. Other types of competitions have been proposed by my many of my colleagues that would encourage the development of energy efficient technologies.

Do you support federal prize competitions as a tool to promote private sector innovation?

Secretary Perry. The Department supports use of this authority, where appropriate. While the FY18 Budget Request does not specifically support any prize programs, DOE has supported prize competitions in the past and is open to using this authority in the future. The recent wave prize benchmarked the current status of technologies in this area and helped DOE focus our early-stage research on the most pressing cost and performance challenges while giving technology developers important, unbiased performance test data to help them further innovate.

CONGRESSWOMAN MARCY KAPTUR**POLICY UNDER A CR & LAYOFFS**

Ms. Kaptur. Mr. Secretary, your budget request proposes drastic reductions to many programs. I'm afraid that given where we are today, there is a likelihood of a CR so I would like to take just a minute to contemplate that eventuality before we get to the details of the budget.

Given, the Department's policy of operating to the lesser of the budget, house or senate mark, have you given any consideration to this policy? I assume if you are going to follow it, you will be issuing WARN Act notices next month?

Secretary Perry. In the event that Congress enacts a short-term continuing resolution (CR) beginning on October 1, 2017, the Department will fund programs and sites within the legal constraints specified in that CR.

Ms. Kaptur. How does a budget request that lays off some 7,000 technical staff and starves the University and Research community of an estimated \$2 billion dollars help sustain American leadership in energy and science innovation as China is primed to overtake us in the area of science and engineering?

Secretary Perry. The President's FY 2018 Budget refocuses the Department's energy and science programs on early-stage R&D at our national laboratories to advance American primacy in scientific and energy research in an efficient and cost-effective manner. The Budget provides \$6.4 billion, \$4.5 billion in the Office of Science and \$1.9 billion in energy R&D programs, with a renewed focus on cutting-edge innovation and transitioning those breakthroughs to the private marketplace.

Through our National Laboratories, we will continue to support the world's best enterprise of scientists and engineers who create innovations to drive American prosperity, security and competitiveness for the next generation. The FY 2018 Budget positions us to take up that challenge while continuing to ensure our national security.

Ms. Kaptur. We've allowed China to surpass us in global trade, doesn't this budget request begin our acquiescence in science?

Secretary Perry. Through our 17 national laboratories, the Department engages in cutting-edge research that expands the frontiers of scientific knowledge and generates new technologies that address our greatest energy challenges. This budget will ensure that the Department's national laboratories continue to be the backbone of American science leadership by supporting cutting-edge basic research, and by building and operating the world's most advanced scientific user facilities—which will be used by over 27,000 researchers in FY 2018.

Ms. Kaptur. Please provide for the record an estimate of layoffs at all national labs, as estimated by the laboratory contractors, by appropriation account.

Secretary Perry. All DOE national laboratories remain open under the FY 2018 Budget Request and with available funding, the budget prioritizes funding to mitigate impacts at the national labs. Through careful prioritization and ensuring that funding goes to the most promising research, the Department of Energy will continue to be a world-leading science and technology enterprise that generates the innovations that fulfill our missions ensuring the Nation's security and prosperity.

Ms. Kaptur. Please provide for the record an estimate, by program, of the competitive funding announcements for FY 2016 and FY 2017, along with an estimate of the amounts that would be issued under the budget request for FY 2018.

Secretary Perry. The Budget provides \$6.4 billion, \$4.5 billion in the Office of Science and \$1.9 billion in energy R&D programs, with a renewed focus on cutting-edge innovation and transitioning those breakthroughs to the private marketplace. While reducing later-stage research, development, demonstration, and deployment programs by \$3.1 billion from the FY 2017 enacted levels, these investments will ensure that the DOE, through its National Laboratories, will continue to support the world's best enterprise of scientists and engineers who create innovations to drive American prosperity, security and competitiveness for the next generation.

BUDGET EXECUTION

Ms. Kaptur. Mr. Secretary, on May 4th your Chief of Staff signed out a memo outlining a new process for the review of funding opportunity announcements. In this memo, the Chief of Staff explicitly says the reviews will make sure that FY 2017 obligations for financial assistance awards will be reviewed to ensure they are consistent with the FY 2018 budget blueprint. As you well know, Congress has not had the opportunity to dispose of your budget request, therefore no action should be taken contemplating what Congress may or may not approve.

Can you give me your word that the FY 2017 appropriations will be obligated and expended in a manner consistent with the Appropriation rather than your FY 2018 budget request?

Secretary Perry. Yes, the Department of Energy will follow the law.

Ms. Kaptur. Can you tell me who is doing these reviews? What qualifications do they have to review scientific funding announcements?

Secretary Perry. At the beginning of a new Administration, it is common for the incoming team to review ongoing programs to ensure consistency with the new Administration's policies within the flexibilities available to agencies.

In this manner, the Department of Energy initiated a full review of taxpayer-funded grants and cooperative agreements to apply good governance principles to how programs are being executed and to ensure that our financial assistance programs are consistent with Administration policies.

Ms. Kaptur. I understand the Weatherization Assistance Program is one of the programs held up by this policy. Also that Ohio and many other states have a July 1 program year start date, and if they don't get their funds by July 1, many of the local weatherization agencies could have to lay off employees. Can you commit to getting these funds out in time for the states to save jobs?

Secretary Perry. Yes.

Ms. Kaptur. Please provide for the record a list of all funding opportunities announcements that were processed through this review or will be processed through this review, the time to review the announcements, a summary of any changes that were made and a short description of how the final announcement was consistent with Congressional intent in the FY 2017 appropriation.

Secretary Perry. The Department is issuing awards and will issue funding opportunities as we move through this process.

Between March and late June, we announced \$595 million in awards to 489 different projects across our energy and science R&D programs, as well as \$35 million available through 5 new funding opportunities.

BASIC RESEARCH, LAB ORIENTED BUDGET REQUEST

Ms. Kaptur. Mr. Secretary, your budget request moves to a lab-centric, early stage research and development only approach. I mentioned in my opening my concern with this – we have been discussing for years the proper balance between the early and late stage R&D and why more of what the labs do doesn't lead to translation into the market.

Can you explain how we are not, if we were to approve your budget, just going to have a lot of good ideas left at the labs with no path to commercialization?

Secretary Perry. In addition to providing \$6.4 billion for early-stage research towards cutting-edge innovations, including \$4.5 billion in the Office of Science and \$1.9 billion in energy R&D programs, the Budget consolidates programs focused on bringing technologies to the market in the Office of Technology Transitions (OTT). Through concerted effort and coordination with our labs, this will reduce costs to the taxpayer while at the same time providing a robust technology transfer program to transfer breakthroughs from the national laboratories to the private sector.

Ms. Kaptur. Given the criticism of the Department regarding the lack of commercialization advances how specifically, are you going to manage commercialization of research?

Secretary Perry. The private sector plays a critical role in bringing innovations into the energy marketplace. The FY 2018 Budget refocuses the Department's energy and science programs on early-stage research and development at our national laboratories to advance American primacy in scientific and energy research in an efficient and cost-effective manner. It focuses our investments on the basic, early-stage R&D conducted by the scientists and engineers at our 17 national laboratories who are constantly on the path to developing the next great innovations that can transform society, and bring forth a new era of prosperity for the American people.

The Budget consolidates programs focused on bringing technologies to the market in the Office of Technology Transitions. Through concerted effort and coordination with our labs, this will reduce costs to the taxpayer while at

the same time providing a robust technology transfer program to transfer breakthroughs from the national laboratories to the private sector.

GRID STUDY

Ms. Kaptur. Mr. Secretary, I understand you directed a report on grid reliability be completed in a very short timeframe.

Can you discuss how you plan to treat the benefits of clean energy and distributed energy resources in this report?

Secretary Perry. The Department, at my direction, has undertaken an internal review to examine the state of electricity markets and grid reliability and produce a study aimed at ensuring that our electric grid remains reliable, resilient, and affordable. The study is an impartial review of the state of electricity markets and related policies, and there are no preconceived notions as to the findings and recommendations that will result from this review.

I appreciate the value of all energy sources. My track record speaks for itself. As Governor of Texas, I helped oversee an enormous increase in wind energy such that Texas is now the largest wind energy producing state in America. The study raises important and timely questions about the electric grid. For example, it asks why so many baseload plants—like coal and nuclear—have closed, whether wholesale energy and capacity markets are adequately compensating important resilience and reliability attributes and will explore other factors—like the impacts of increasing penetration of renewable energy and distributed energy resources on grid reliability and resilience. I have directed the Department to conduct rigorous analysis to answer these questions and to recommend sound policies to protect the Nation's electric grid.

LETTER FROM FORMER HEADS OF EERE

Mr. Secretary, I would like to refer to the letter that I read from in my opening statement from ALL of the former heads of EERE.

It goes on:

“World-wide investment in clean energy now measures in the hundreds of billions of dollars annually. Governments across the globe—and companies large and small—want a piece of this massive economic pie representing tens of trillions of dollars over the next three decades and millions of jobs. China, in particular, has made it a high priority to lead the globe in the clean energy industry and is reorganizing its energy R&D and deployment efforts in a broad array of clean energy technologies, many of them first developed in the U.S. at taxpayer expense.”

Now Mr. Secretary, this is a very strong letter. Would you like to respond to their criticism?

Secretary Perry. In the areas of energy and science research and development, the Budget provides \$6.4 billion, \$4.5 billion in the Office the Science and \$1.9 billion in energy R&D programs, with a renewed focus on cutting-edge innovation and transitioning those breakthroughs to the private marketplace. While reducing later-stage research, development, demonstration, and deployment programs by \$3.1 billion from the FY 2017 enacted levels, these investments will ensure that the DOE, through its National Laboratories, will continue to support the world’s best enterprise of scientists and engineers who create innovations to drive American prosperity, security and competitiveness for the next generation.

The FY 2018 Budget focuses Energy Efficiency and Renewable Energy (EERE) resources on early-stage R&D, where the Federal role is strongest, and reflects an increased reliance on the private sector to fund later-stage research, development, and commercialization of energy technologies. The Budget emphasizes energy technologies best positioned to support American energy independence and domestic job-growth in the near to mid-term. The Budget maintains America’s leadership in transformative science and

emerging energy technologies in sustainable transportation, renewable power, and energy efficiency.

Ms. Kaptur. How do you reconcile their strong bipartisan concerns about future jobs and industry with the stated goals of this President to “be the greatest jobs President ever?”

Secretary Perry. EERE early-stage research focuses on technology challenges that have the potential for high return on investment, but which present a significant degree of scientific or technical uncertainty across a relatively lengthy time span, making it unlikely that industry will invest significant R&D on their own. Thus, this budget maintains the most critical core capabilities and infrastructure at DOE National Laboratories related to sustainable transportation, renewable power and energy efficiency technologies. Technology solutions derived from EERE early-stage R&D give U.S. industries, businesses, and entrepreneurs the competitive edge needed to excel in the rapidly changing global energy economy. Industry deployment of these technologies creates jobs, reduces U.S. reliance on imported oil, increases energy affordability, improves energy security, ensures environmental responsibility and offers Americans a broader range of energy choices.

ARPA-E

Ms. Kaptur. I am a big cheerleader of the Department, and I often tout its record of accomplishments. I like to tell people that the Department of Energy should be called the Department of the Future, because you really bring these amazing futuristic ideas to us in our everyday lives. ARPA-E plays a giant role in making high tech ideas a reality.

Some of the tangible results that have come from the research there include: 581 scientific journal studies, 74 patents, an additional \$1.8 billion in private sector funding, and 56 new companies created.

Mr. Secretary, wouldn't you agree that that is an impressive record of success?

Secretary Perry. Yes, but Department funds could produce even greater results if used to support basic research. Applied research/commercialization should be left to the private sector.

Ms. Kaptur. The Mulvaney budget plans to eliminate this stellar program. Would you care to comment on those intentions?

Secretary Perry. The President's Budget will, by focusing on basic research, spur world-leading energy innovation, while also reducing costs to the taxpayer, transferring resulting technologies to the private sector, which will take the lead to successfully commercialize. I look forward to working with this Committee and both houses of Congress as the budget process moves forward.

Ms. Kaptur. Given that Congress did not appropriate funds for terminating the program, are you proposing to use any FY 2017 funding for activities related to the program's termination? If yes, can the Committee expect a reprogramming for these activities?

Secretary Perry. The FY 2018 Budget will spur world-leading energy innovation, while also reducing costs to the taxpayer. I look forward to working with this Committee and both houses of Congress as the budget process moves forward.

NNSA, FYNSP

Ms. Kaptur. For the NNSA section of the Fiscal Year 2018 budget request, the document does not include Future Years Nuclear Security Program (FYNSP) figures, as required by Congress. I am deeply troubled by this failure. The budget offers the reasoning that the administration is preparing a National Security Strategy document and a Nuclear Posture Review.

Is there any reasonable expectation that either of those documents will conclude that the NNSA should not complete the W76-1 life extension program? If so, please explain what alternative is being considered. If not, please provide FYNSP figures for the W76-1.

Secretary Perry. There is no expectation that the W76-1 program, which is in full production and scheduled to complete production in FY 2019, would be altered by the results of a National Strategy Review and Nuclear Posture Review. Estimates for the FY 2019 – FY 2023 base budget topline for the National Nuclear Security Administration reflect FY 2018 levels are escalated by 2.1 percent annually. This out-year topline does not reflect a policy judgement. The Presidential Memorandum on Rebuilding the Armed Forces, released on 01/27/17, directed a series of defense reviews including the initiation of a new Nuclear Posture Review, to ensure that the U.S. nuclear deterrent is modern, robust, flexible, resilient, ready, and appropriately tailored to deter 21st century threats and reassure our allies. Once the National Security Strategy and Nuclear Posture Review are completed, the Administration will make a policy judgement on amounts for the NNSA's FY 2019 – FY2023 topline in the FY 2019 Budget.

Ms. Kaptur. Is there any reasonable expectation that either of those documents will conclude that the NNSA should not pursue the B61-12 life extension program? If so, please explain what alternative is being considered. If not, please provide FYNSP figures for the B61-12.

Secretary Perry. There is no expectation that the B61-12 program, which is in production engineering and on schedule for FY 2020 first production, would be altered by the results of a National Strategy Review and Nuclear Posture Review. Estimates for the FY 2019 – FY 2023 base

budget topline for the National Nuclear Security Administration reflect FY 2018 levels are escalated by 2.1 percent annually. This out-year topline does not reflect a policy judgement. The Presidential Memorandum on Rebuilding the Armed Forces, released on 01/27/17, directed a series of defense reviews including the initiation of a new Nuclear Posture Review, to ensure that the U.S. nuclear deterrent is modern, robust, flexible, resilient, ready, and appropriately tailored to deter 21st century threats and reassure our allies. Once the National Security Strategy and Nuclear Posture Review are completed, the Administration will make a policy judgement on amounts for the NNSA's FY 2019 – FY2023 topline in the FY 2019 Budget.

Ms. Kaptur. Is there any reasonable expectation that either of those documents will conclude that the NNSA should not undertake the W88 Alteration? If so, please explain what alternative is being considered. If not, please provide FYNSP figures for the W88 Alteration.

Secretary Perry. There is no expectation that the W88 Alteration 370 program, which is in production engineering and on schedule for FY 2020 first production, would be altered by the results of a National Strategy Review and Nuclear Posture Review. Estimates for the FY 2019 – FY 2023 base budget topline for the National Nuclear Security Administration reflect FY 2018 levels are escalated by 2.1 percent annually. This out-year topline does not reflect a policy judgement. The Presidential Memorandum on Rebuilding the Armed Forces, released on 01/27/17, directed a series of defense reviews including the initiation of a new Nuclear Posture Review, to ensure that the U.S. nuclear deterrent is modern, robust, flexible, resilient, ready, and appropriately tailored to deter 21st century threats and reassure our allies. Once the National Security Strategy and Nuclear Posture Review are completed, the Administration will make a policy judgement on amounts for the NNSA's FY 2019 – FY2023 topline in the FY 2019 Budget.

NNSA, PIT PRODUCTION

Ms. Kaptur. In 2006, the NNSA concluded “that the majority of plutonium pits for most nuclear weapons have minimum lifetimes of at least 85 years.” The Fiscal Year 2016 Stockpile Stewardship and Management Plan noted “To date, the laboratories have found no evidence that would decrease the 2006 lifetime estimates.” But since 2006, given accelerated aging experiments, the laboratories should have more than 100 years of additional data on plutonium aging.

Please provide a more detailed description of the current estimates for pit lifetimes and how the data that has been accumulated over the last decade has or has not affected the 2006 estimate.

Secretary Perry. An unclassified response to this question cannot be provided. A classified response will be provided separately.

Ms. Kaptur. Please provide an unclassified list of the factors and components that affect the expected lifetimes of plutonium pits.

Secretary Perry. A classified response will be provided separately.

NNSA, 3+2 AND IW1

Ms. Kaptur. The NNSA is continuing to follow the “3+2 strategy” for stockpile stewardship, and discusses the IW1 program in the FY2018 budget request as follows:

In February 2017, DOD and NNSA representatives agreed to use the term “IW1” rather than “W78/88-1 LEP” to reflect that IW1 replaces capability rather than extending the life of current stockpile systems.

Does this description imply that the IW1 should be considered a new warhead, as it is replacing existing capability, rather than extending the life of current stockpile systems?

Secretary Perry. The Nuclear Weapons Council’s FY 2017 - 2042 Strategic Plan (August 2016) reaffirmed the need for the IW1 as the first ballistic missile in the 3+2 Nuclear Stockpile Strategy. The 3+2 Strategy is a long-term strategy with goals of reduced warhead types, emphasis on interoperability to support a smaller inactive stockpile and a reduced burden on production infrastructure. IW1 will not provide new military or deterrent capabilities different from what exists in the current stockpile, though they will be assembled in ways never before approved and certified. IW1 will use nuclear component designs and concepts from current stockpile designs. As currently planned, IW1’s components will be manufactured new to remove the risk of reliance on aged components. A majority of IW1’s non-nuclear components will be re-designed using improved technology and modern production processes to ensure a robust lifetime, reduced manufacturing cost, increased safety and security, and improved maintainability.

Ms. Kaptur. What are the implications of the significant expansion of the W88 Alteration for the proposed timeline for the IW1? Even if the W78 warheads are the first to be replaced by IW1s, won’t the current IW1 timeline lead to retiring W88 Alt warheads well before their lifetimes will have expired?

Secretary Perry. The W88 warhead is intended to be replaced by a combination of IW1 and IW2 warheads in order to rebalance the deployment of the submarine-launched leg of the triad for risk reduction against

technical failure. The service life extension of W88 provided by the Alt 370 program will overlap with the deployment of IW1, but this is a planned transition that provides for additional diversity in the submarine-launched leg of the triad to hedge against technical failure. The W88 Alt 370 warhead capability will be fully replaced with both IW1 and IW2.

IW1 is intended to accomplish the following:

- Replace capability provided by the aging W78;
- Rebalance the submarine-launched leg of the triad; and
- Coupled with IW2, enable replacement of capability provided by the W88.

Ms. Kaptur. The JASON scientific advisory group examined the 3+2 program and drew conclusions related to the NEPs and the number of aeroshells and reentry vehicles necessary. Will the development of the types of re-entry vehicles require the Air Force and the Navy to conduct additional flight tests?

Secretary Perry. Yes, any new or modified aeroshell program would likely require additional development flight tests to qualify the warhead for deployment as the 3+2 strategy is implemented.

Ms. Kaptur. The JASON group recommended that the NNSA study the implications of the potential tradeoffs between “surety, component commonality, and the number of warhead types on each Triad leg to better inform “3+2” decisions.” Has the NNSA done such a study and, if so, what were the results? If not, when does the NNSA expect to do such a study?

Secretary Perry. NNSA has not conducted whole-lifecycle and whole-complex analyses (e.g., trade studies) of the numerous impacts to the stockpile from the 3+2 strategy. However, the design, optimization, and qualification challenges identified by JASON in their subordinate statements are, in fact, being identified and studied by the NNSA and the design laboratories. The first such study relevant to the 3+2 strategy was an interoperability feasibility study completed in 2010 which considered fuze-

assembly design for cross-platform adaptability. This study was followed by full-system feasibility studies completed in 2012 and 2014, and included work performed for the postponed IW1. In 2015, the JASONS concluded that a study of the tradeoffs associated with interoperable warheads was necessary. In addition to these, NNSA Research, Development, Test and Evaluation (RDT&E) programs are developing science-based understanding of solutions to elements of the challenges highlighted in the JASON study, aligned to stockpile development of the 3+2 strategy (and outside of the LEPs' development.) Most of these RDT&E efforts will be critical to any future LEP effort or stockpile strategy, and are not specific to the 3+2 strategy. Drivers to such research include, but are not limited to, component reuse requirements, application of new manufacturing technologies, replacement of conventional high explosives with insensitive high explosives, and improved safety and security. The 3+2 strategy benefits from these research efforts, as science-based nuclear explosive package design solutions will be leveraged across multiple platforms.

LIFE EXTENSION PROGRAMS

Ms. Kaptur. The Government Accountability Office report “National Nuclear Security Administration: Action Needed to Address Affordability of Nuclear Modernization Programs,” provides several internal NNSA estimates indicating possible cost increases for the B61-12 life extension program, the W80-4 life extension program, and the W88 alteration.

What would be the implications for the NNSA budget if the B61-12 program will cost \$2.6 billion more than the current cost estimate? What would be the implications for the deployed B61 bombs if the first B61-12 is delayed by two years, as the GAO also notes the internal NNSA estimate finds?

Secretary Perry. The B61-12 Program Baseline Cost Report (BCR), October 2016, estimate is supported by a bottom-up cost estimate and earned-value analysis. NNSA in coordination with the U.S. Air Force is aggressively managing design and production risks of the B61-12 Program. It remains committed to meet the First Production Unit by March 2020. After extensive review of both estimates, the NNSA does not anticipate budget increases of the magnitude cited in the GAO report or schedule slips of that significance either, as projected by NNSA’s Office of Cost Estimating and Program Evaluation. If programmatic risks are realized that significantly increase cost above the BCR estimate or calculate schedule slippage, the NNSA will evaluate those effects and take appropriate action.

Ms. Kaptur. What would be the implications for the NNSA budget if the W80-4 program will cost \$1 billion more than the current cost estimate?

Secretary Perry. The W80-4 Program is evaluating design options and design studies to inform an initial bottoms-up cost study and design report leading to Development Engineering (Phase 6.3) authorization in FY 2018. Design development work in Development Engineering will better inform the estimated total costs, leading to a Baseline Cost Report in 2021. There are no current issues indicating the W80-4 Program will not meet schedule commitments or require significant increases in funding.

Ms. Kaptur. Will the NNSA be adding an update to the W88’s secondary to the alteration program for that warhead, as the GAO report

notes is possible? What would the cost of updating the secondary be, and how would it affect the production timeline? Following the completion of the W88 alteration, what will the expected lifetime of the updated warhead be?

Secretary Perry. There are no plans to add an update to the W88's secondary to the W88 Alt 370 program. The W88 Alt 370 will extend the protected period of this weapon. The exact length of that extension is classified and therefore cannot be answered in this format.

Ms. Kaptur. The NNSA is preparing to undertake four extensive programs on nuclear weapons simultaneously, with the W76-1 ramping down, and the B61-12, the W80-4 and the W88 alteration all ramping up. What level of confidence does the Department have that the NNSA will be able to complete all of those tasks on time and on budget?

Secretary Perry. NNSA understands the scope and complexity of the planned program of record, and has the management, policy, and procedures in place to execute on time and budget. NNSA has completed Baseline Cost Reports (BCR) for the B61-12 Life Extension Program and W88 Alt 370 Program, and continue System Acquisition Reports (SARs) of both programs plans in addition to the W76-1 Life Extension Program production currently underway. SARs document NNSA's budget, baseline estimate, and planned schedule. NNSA remains confident that these programs will remain on schedule and on budget. The W80-4 Program is evaluating design options and design studies to inform an initial bottoms-up cost study and design report leading to Development Engineering (Phase 6.3) authorization and design development in FY 2018.

CMRR

Ms. Kaptur. As far back as 2011 during the failed push for the Chemistry and Metallurgy Research Replacement-Nuclear Facility (CMRR-NF), the NNSA has long sought a pit production capacity of 50-80 pits per year, but has rarely provided an explicit justification for why that number of pits was required. The National Defense Authorization Act of 2015 amended the Atomic Energy Defense Act to require a specified number of pits be produced in specific years. The FY2017 Stockpile Stewardship and Management Plan cites those production requirements.

Please provide the NNSA's justification for a pit production capacity of 50-80 pits per year.

Secretary Perry. The January 16, 2014, Assessment of Nuclear Weapon Pit Production Requirements Report to Congress provided the requested justification, based on numerous factors, for achieving 50-80 pits per year (ppy) production capacity by 2030. Key among these are the need to support future stockpile planning requirements and address stockpile requirements due to plutonium pit aging. The requirement to achieve a 50-80 ppy production capacity was codified by Congress most recently in the 2016 National Defense Authorization Act (Sec. 3140). Further justification for the military requirements for future stockpile size should be directed to the Department of Defense.

Ms. Kaptur. Does the NNSA have a justification for the pit production schedule other than the mandate given in the amended Atomic Energy Defense Act? If so, what is it?

Secretary Perry. The size and composition of the nuclear weapons stockpile is delineated by the President in national security directives, most recently in National Security Presidential Memorandum 6 (NSPM-6). Implementation of this plan is executed by the Department of Defense and the Department of Energy through the Nuclear Weapons Council's Requirements Planning Document (RPD). The RPD directs NNSA to develop a pit production capacity that is consistent with both Congressional direction and stockpile plutonium pit requirements.

Stockpile plutonium pit requirements (i.e., the need for new pits) are based on both the planned size of the stockpile and the availability of existing plutonium pits for re-use due to age. Currently, these requirements dictate a steady-state need capacity of 80 war reserve pits per year. This is consistent with congressional direction. The January 16, 2014 Assessment of Nuclear Weapon Pit Production Requirements Report to Congress provides additional justification for this pit production schedule.

Ms. Kaptur. What changes will be required at PF-4 and what other additional facilities or changes at other facilities will be required in order to be able to meet the production scheduled mandated in the Atomic Energy Defense Act? What is the estimated cost of those changes, and the timeline for implementing them?

Secretary Perry. NNSA's current efforts to optimize existing infrastructure for plutonium operations at Los Alamos National Laboratory's PF-4 is projected to support a maximum 30 war reserve pit per year (ppy) production capacity. In order to achieve production capacity beyond 30 ppy and support future stockpile needs, additional infrastructure may be required.

NNSA is conducting an Analysis of Alternatives (AoA) to evaluate table options that could provide enduring plutonium infrastructure capability. The AoA itself is not a decision, rather a tool to ascertain and assess pertinent data as needed to inform the decision-making process. The AoA is expected to be completed in 2017.

Ms. Kaptur. Will this committee be expected to provide additional funding in order to meet the mandate in the Atomic Energy Defense Act?

Secretary Perry. Infrastructure and capability investments currently requested through the Chemistry and Metallurgy Research Replacement Project and Plutonium Sustainment Program, together, support NNSA's plutonium mission objectives, including pit production levels mandated in the FY 2015 National Defense Authorization Act (10 war reserve pits in 2024, 20 in 2026, and 30 in 2027). Reconstitution of additional production capacity is being analyzed in the ongoing Analysis of Alternatives (AoA). The AoA results will inform a decision for approval and the need for funding in future budget requests.

DISMANTLEMENTS

Ms. Kaptur. In the FY2018 request, the administration rejected the previous administration's proposed increase in the rate of dismantlement of retired nuclear weapons. The FY2018 request simply states it was "eliminating the planned acceleration stated in the FY 2017 budget request." I have supported the proposal last year primarily because it allowed for an improved long-term workflow balance at the Pantex plant. Workers hired now for dismantlement will already be appropriately trained for the significant work to come on the life extension programs for the enduring stockpile.

Does the NNSA agree that training for dismantlement work will provide a significant advance benefit to the future employees that will perform work on future life extension programs? If not, why not?

Secretary Perry. Yes, NNSA agrees that training for dismantlement work provides advanced benefit to the future employees that will perform work on future life extension programs (LEPs). This will benefit the LEPs since production technicians (PTs) will have the required security clearances and technical training to work on LEPs. NNSA's current staffing plan is to deploy a portion of the workforce currently executing dismantlement to the upcoming major acquisitions (B61-12 Life Extension Program and W88 Alt 370 Program) when the dismantlement work draws down.

Ms. Kaptur. Does the NNSA agree that the number of trained employees required for life extension programs will increase as the work on the B61, the W88 and (potentially) the W80 ramps up? If not, why not?

Secretary Perry. Yes, NNSA agrees that the number of trained employees required for life extension programs will increase as the work on the B61-12 Life Extension Program, the W88 Alt 370 Program, and the W80-4 Life Extension Program ramps up. Moreover, as dismantlement work draws down, NNSA will shift these trained and qualified production technicians to help mitigate potential LEP staffing concerns during these ramp ups.

CONGRESSWOMAN NITA LOWEY**ARPA-E**

Ms. Lowey. Your proposal to terminate the Advanced Research Projects Agency seems to fly in the face of its record of success in research and development. Your budget request proposes to use \$46 million, I believe from 2017, which we just enacted, to facilitate the closure of ARPA-E. Doing so would mean using funds in a manner not intended when it was appropriated by Congress.

Will the rest of the funding from 2017 be obligated on new projects? And, do you have a timeline for the execution of those funds?

While we are on the subject of congressional intent and appropriations, are there any other awards that will not be made under your proposal to realign the Department to early stage research and development? For instance, SuperTruck or Solid State Lighting?

Past appropriations language didn't specify technical readiness levels, or in other words, whether the funded R&D is early, middle, or late stage.

Secretary Perry. The FY 2018 Budget will spur world-leading energy innovation, while also reducing costs to the taxpayer. I look forward to working with this Committee and both houses of Congress as the budget process moves forward.

Ms. Lowey. Are we going to need to be explicit going forward in each case if we disagree with your budget proposal, or do you think the context of the appropriation will be generally sufficient?

Secretary Perry. No. The Department of Energy will follow the law.

WORKFORCE RESTRUCTURING

Ms. Lowey. Mr. Secretary, as Ranking Member Kaptur touched on earlier, your budget request would necessitate the loss of many scientists and engineers across the nation. These folks are responsible, in large part, for America's leadership in the innovation sphere.

What assurance can you give them that no action will be taken on any workforce restructuring without an act of Congress?

Secretary Perry. The Department will continue operating within current law and will follow the law specified by a final FY 2018 appropriation, once enacted.

EXASCALE

Ms. Lowey. Mr. Secretary, your budget request includes a large increase for exascale computing. Sadly, this increase comes in the context of a drastic reduction to research and operations of facilities within the Science account. Given budget constraints, it could be difficult to provide that kind of increase.

Could you take a moment to explain why so many resources should be devoted to this effort?

Secretary Perry. Deploying at least one exascale system in 2021 will keep the U.S. competitive in the international exascale race. China has three exascale prototype designs in development with plans to down select to two exascale design by the end of 2017 and the deployment of exascale systems in the 2018-2019 timeframe. Exascale computing is critical to the national security, scientific, and energy missions of the Energy Department. Exascale also is critical to ensuring U.S. primacy in computing to advance economic competitiveness in technological and manufacturing processes. Achievement of exascale will deliver breakthrough computer performance to both the Federal and private sectors. The accelerated investments in design and engineering over the next 3-4 years will keep the U.S. at the forefront of computational platforms. This will allow us to continue to lead in: scientific and engineering progress; advances in manufacturing techniques and rapid prototyping; nuclear security missions including stockpile stewardship without testing; and, the ability to explore, understand and harness natural and engineered systems that are too large, too complex, too dangerous, too small, or too fleeting to explore experimentally.

The 2021 date is result of a request for information issued in early 2017 and subsequent discussions with U.S. computing vendors. Based on this work, it was evident that results of previous high performance computing activities yielded sufficiently innovative technologies that, with the appropriate investments, make exascale achievable in 2021.

Achievement of exascale requires new hardware and software designs and technologies – not just more of the same technologies strung together – to overcome challenges in parallelism, energy efficiency, and reliability. We

and our private-sector partners will be pushing our state-of-the-art fabrication techniques to the limit to achieve exascale. Significant one-time investments in engineering (“non-recurring engineering”) and design by the vendors in conjunction with DOE’s team must be started as soon as possible in order to deliver an exascale system by 2021. Considerable concurrent investments are needed to develop software and applications to effectively use an exascale system on scientific problems and nuclear weapons applications. The 2021 delivery of hardware is aligned with the timeframe for completion of the necessary software and application development.

CONGRESSMAN PETE VISCLOSKY**STRATEGY FOR SECURITY OF NUCLEAR AND RADIOLOGICAL MATERIALS**

Mr. Visclosky. In addition to serving on this subcommittee, and as Ranking Member on the Defense Subcommittee, Rep. Fortenberry and I are co-chairs of the Congressional Nuclear Security Working Group. I place a high priority on the security of nuclear and radiological materials. The Obama administration held four Nuclear Security Summits (NSS) [2010 in Washington, 2012 in Seoul, 2014 in the Netherlands, and 2016 in Washington]. These summits drew sustained high-level attention to nuclear security and nuclear terrorism issues. Many experts argue that nuclear security sits at a key inflection point: cooperation with Russia on these issues has lapsed due to the Ukraine crisis; and there are no planned Nuclear Security Summits, so we no longer have that mechanism for high-level cooperation on these issues.

Do you agree that security of nuclear and radiological materials ought to be a priority for the United States? Is there a plan to build on the successes of the Nuclear Security Summits?

Secretary Perry. Security of radiological and nuclear (R/N) materials is a top priority for the United States. The consequences of a terrorist group using those materials in an improvised nuclear device (IND) or radiological dispersion device (RDD) against the United States or its interests would be grave. Additionally, terrorist groups have demonstrated interest in obtaining nuclear and radiological materials and the expertise needed to weaponize them, and the recent use of chemical weapons by ISIS indicates a willingness to employ WMD against civilian populations. As recently as 2015, ISIS surveillance of a Belgian nuclear security official drew concern that ISIS might attempt to acquire radioactive material from Belgian facilities and there have been numerous open source reports of deliberate attempts to acquire radiological material.

To prevent that threat, DOE/NNSA works with the U.S. interagency and bilaterally with over 100 countries to improve the security of nuclear and radiological materials, including U.S.-obligated nuclear material held in

foreign facilities. Many of these international partners made commitments during the Nuclear Security Summit (NSS) process, and DOE/NNSA will continue to work with them to implement these commitments. In addition, the NSS identified five international organizations charged with keeping a continued international focus on nuclear and radiological security (International Atomic Energy Agency, United Nations, International Criminal Police Organization-INTERPOL, Global Initiative to Combat Nuclear Terrorism, and Global Partnership Against the Spread of Weapons of Mass Destruction). NNSA works with all of these organizations that are acting as force multipliers of DOE/NNSA's bilateral work and helping to keep R/N security a priority globally.

Mr. Visclosky. To what extent, if at all, have you discussed this issue with Secretary Mattis, Secretary Tillerson, Secretary Kelly, and/or General McMaster?

Secretary Perry. DOE/NNSA works closely with the Department of Defense, Department of State, Department of Homeland Security, Department of Justice (Federal Bureau of Investigation), and the National Security Council. These agencies all have complementary, yet distinct roles in securing nuclear and radiological materials. To facilitate coordination, NNSA regularly meets with interagency partners to strategize and exercise global nuclear and radiological security improvements, including the discussion of priorities and plans to address issues, as well as the building of organizational relationships and the sharing of expertise.

CUTS TO NUCLEAR NONPROLIFERATION PROGRAMS

Mr. Visclosky. The FY18 DoE budget request for the Remove subprogram under the Material Management and Minimization program is less than half of the amount provided by Congress in FY17 (\$68.9M requested and approved under FY17 omnibus, \$32.9M requested for FY18). The budget request states that “The decrease in funding reflects the political and technical challenges that have delayed implementation of several removal efforts including those in Belarus, Iran, Kazakhstan, and Pakistan. Due to these delays, the program is projecting to cost less than expected in FY 2017 and will use uncosted balances to continue these removal efforts under the existing operating paradigm in FY 2018.”

Please describe the nature of these challenges in Belarus, Iran, Kazakhstan, and Pakistan in greater detail and how NNSA is tackling them to make these removal projects successful.

Secretary Perry. In Kazakhstan, there are technology limitations on the rate of the removal of excess nuclear material from locations such as the IVG-1M and IGR research reactors, since the reactors must first be converted from using highly enriched uranium (HEU) to low enriched uranium (LEU) fuel. DOE/NNSA is working with Kazakhstan to conduct technical analyses and develop a strategy to convert these reactors in the years to come.

Belarus, Iran, and Pakistan present political challenges, as these countries have not yet agreed to remove excess HEU inventories. With Belarus technical discussions are ongoing for planning steps to be ready for action when a political decision to proceed is made. For Pakistan and Iran, DOE/NNSA is investigating options on the best approach to these countries on potential nuclear material removal activities.

CONGRESSWOMAN DEBBIE WASSERMAN SCHULTZ

STATE WEATHERIZATION ASSISTANCE PROGRAMS

Ms. Wasserman Schultz. I understand that OMB and the Chief Financial Officer at DOE have refused to release sufficient funds to the states from Congressional appropriations for FY17 to provide funds to the states that operate the Weatherization Assistance Program, starting on July 1st.

Why have you not released these funds?

Secretary Perry. Following enactment in May of the Consolidated Appropriations Act, 2017, the Department acted expeditiously to determine final allocations for the recipients of Weatherization Assistance Program formula grants for FY 2017 and to distribute those funds to the grantees.

DOE'S MISMANAGEMENT OF FUNDS

Ms. Wasserman Schultz. I am concerned that DOE's mismanagement of funds under the new Administration has slowed the distribution of funds. While I recognize that this Administration does not support most of the programs that DOE operates, with budget cuts of 70% for clean energy programs, the failure to actually distribute congressionally approved funds before the end of the fiscal year is a cynical attempt to make these programs look bad.

What are you going to do to actually manage your agency?

Secretary Perry. At the beginning of a new Administration, it is common for the incoming team to review ongoing programs to ensure consistency with the new Administration's policies within the flexibilities available to agencies.

In this manner, the Department of Energy initiated a full review of taxpayer-funded grants and cooperative agreements to apply good governance principles to how programs are being executed and to ensure that our financial assistance programs are consistent with Administration policies.

The Department is issuing awards and will issue funding opportunities as we move through this process. Between March and late June, we announced \$595 million in awards to 489 different projects across our energy and science R&D programs, as well as \$35 million available through 5 new funding opportunities.

As we continue through this regular process transitioning our programs into the new Administration, we'll see more awards go out and more funding opportunities announced.

DOE'S APPROPRIATIONS SPENDING

Ms. Wasserman Schultz. As you know, the authority for funding the federal government is held by Congress. Appropriators expect departments within the federal government to spend according to Congressional appropriations.

Please confirm that the Department of Energy will be spending according the appropriated line items in all accounts, including sub-accounts and programs as spelled out in Section 740 of the FY17 omnibus signed into law by President Trump.

Secretary Perry. The Department of Energy will follow the law when spending FY 2017 appropriated funds. Specific to Sec. 740, the Department will ensure that “none of the funds made available in [the Consolidated Appropriations Act, 2017] or any other appropriations Act may be used to increase, eliminate, or reduce funding for a program, project, or activity as proposed in the President’s budget request for a fiscal year until such proposed change is subsequently enacted in an appropriation Act, or unless such change is made pursuant to the reprogramming or transfer provisions of this or any other appropriations Act.”

ENERGY EFFICIENCY

Ms. Wasserman Schultz. Energy efficiency is America's largest energy resource, and is domestic, generating some 2.2 million jobs, according to your department. It is very difficult to understand how a proposed cut of more than two thirds to your energy efficiency budget can maintain our needed investments in reducing energy waste.

Please explain how your leadership will invest and expand on this essential resource in 2017, 2018, and beyond.

Secretary Perry. Through careful prioritization and ensuring that funding goes to the most promising research, the DOE will continue to be a world-leading science and technology enterprise that generates the innovations that fulfill our missions ensuring the Nation's security and prosperity.

The FY 2018 Budget Request focuses resources on early-stage R&D, where the Federal role is strongest, for energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. This shift allows the private sector to fund later-stage research, development, and commercialization of energy technologies. By focusing on early stage R&D, the budget proposes critical investments necessary to sustain America's leadership in transformative science and emerging energy technologies.

ENERGY EFFICIENCY TECHNOLOGY DEPLOYMENT

Ms. Wasserman Schultz. What new programs and projects are you considering to invest in energy efficiency and the deployment of energy efficient technology?

Secretary Perry. In FY18, EERE's energy efficiency portfolio will build on the considerable progress made over the last 40 years and pursue early-stage R&D targeted at high impact technology areas such as advanced lighting, space heating and cooling, building envelopes, and manufacturing materials and processes. The overall goal of the energy efficiency portfolio is to strengthen the body of knowledge that enables businesses, industry and the Federal government to improve affordability, energy security-resiliency, and energy productivity of our buildings and manufacturing sectors. The knowledge outputs of this research can support a foundation for economic growth and job creation as businesses, consumers, and energy managers develop and deploy new energy-efficiency and manufacturing technologies and best practices.

The FY18 Budget requests \$159,500,000 for energy efficiency activities, including:

- \$82,000,000 in FY 2018 to support early-stage applied R&D focused on advancing and creating new understanding of underlying technologies, materials and processes relevant to the productive use of energy in manufacturing, as well as the competitive manufacturing of energy related products.
- \$10,000,000 in FY 2018 to continue FEMP's core activities of assisting Federal agencies to meet energy-related goals and provide Federal energy leadership to the country. FY 2018 funds will support continued assistance on energy projects and energy savings performance contracts, including Energy Savings Performance Contracts (ESPC), Utility Energy Service Contracts (UESC), and Power Purchase Agreements (PPA), enhancing the energy management skills of the federal workforce, and supporting agency accountability toward federal goals.
- \$67,500,000 in FY 2018 to support early-stage R&D of innovative building energy technologies such as lighting, space conditioning and

refrigeration, windows and envelope and their effective integration into efficient, resilient, grid-connected, and secure building systems. The Building Technologies Office's (BTO) research also focuses on developing the physics-based algorithms for improved energy modeling and system controls required to better predict and manage energy efficient appliance/equipment, system, and whole-building energy usage. BTO's early stage R&D on advanced and transactive controls will also help strengthen the body of knowledge to enable industry to develop and deploy truly "smart" buildings capable of connecting with the power grid in new and increasingly adaptive manners; this will help with overall electric system efficiency, resiliency and bringing down energy prices across the grid. Finally, it supports DOE working with industry and stakeholders to meet requirements for statutorily mandated efficiency standards and building energy codes determinations.

DOE'S ROLE IN ADVANCING INNOVATION

Ms. Wasserman Schultz. While the private sector can and should invest in innovation, there are standards and regulations that need to be agreed to amongst industry actors so that innovation can thrive. DOE plays an important role bringing industry together to advance those agreed standards.

How do you perceive this role and how do you intend to lead it?

Secretary Perry. It is a priority for us to strengthen our capabilities and the competencies in engaging with industry and other partners, to reduce barriers to industry engagement with the National Laboratories, and to enhance the transfer of technologies from the laboratories to the private sector for commercialization. We are actively convening leaders of industry and the investment communities to consider ways to catalyze public-private partnerships in the energy sector.

RESIDENTIAL ENERGY SAVINGS

Ms. Wasserman Schultz. America's homes and buildings are aging; as they age, more and more energy is lost through their roofs, ducts, and inefficient air conditioning and heating systems. DOE plays a critical role in educating America about how their energy use impacts not only their utility bills, but our planet.

How will you help the American people better understand their energy consumption and how best to reduce it and save money?

Secretary Perry. The Building Technologies Office (BTO) collaborates with industry, academia and other leaders across the building sector to validate and verify solutions that help building owners and homeowners reduce energy waste. These design and decision tools help Americans apply efficient building operational practices and technologies through improved understanding of their costs and benefits, resulting in more cost effective, productive and healthy buildings. BTO's Residential Buildings Integration (RBI) program has a program performance goal of enabling industry to develop and deploy cost-effective technologies and practices that can reduce the energy use intensity of new single family homes by at least 60 percent and existing homes by at least 40 percent by 2020 (relative to a 2010 baseline), while maintaining performance in all major climate regions, with a focus on reducing heating, cooling and water heating loads.

STATE ENERGY PROGRAMS

Ms. Wasserman Schultz. Our states need technical and financial support, particularly in support of low-income families.

Please explain further the justification for the elimination of the Weatherization Assistance Program and the State Energy Programs in the budget request and explain how, without these important programs, DOE will continue to support low-income families and assist them in saving energy and being able to afford to heat and cool their homes.

Secretary Perry. DOE's FY18 Budget Request includes no funding for the Weatherization Assistance Program (WAP) and the State Energy Program (SEP). These programs are not aligned with EERE's focus in FY18 on early-stage applied research and development for energy efficiency and renewable energy technologies. Activities in FY18 will focus on completing work activities associated with existing financial and technical assistance awards and initiatives with states and local governments and stakeholder organizations, closing out awards and agreements as they come to the end of their periods of performance, and providing resources and institutional knowledge to state and local entities as practicable. EERE's continued focus on early-stage R&D will ensure that American families, especially low-income households, have access to the most affordable and reliable energy sources to heat and cool their homes.

DOE'S ROLE IN INFRASTRUCTURE

Ms. Wasserman Schultz. Does the Administration consider our nation's gas, water, and electric distribution systems to be a part of core infrastructure, and will the Department prioritize inclusion of technologies to make these systems "smarter" and more efficient within the context of infrastructure upgrades?

Secretary Perry. The ongoing relationship with Israel remains a priority for the Department and DOE has robust collaboration with Israel across many areas, including energy and water. . The Department is exploring the establishment of a "virtual center", which can serve as a resource to include the results of past, current, and future joint research in energy and related areas.

GAS INFRASTRUCTURE

Ms. Wasserman Schultz. Across the country we have seen failures in our gas infrastructure – failures that have led to undetected leaks and gas explosions.

What will the Department of Energy do to encourage the safety of our gas distribution systems?

Secretary Perry. The DOE Midstream Natural Gas Infrastructure R&D Program Plan is focusing on core objectives to mitigate the safety and operational challenges facing gas distribution pipelines. FY 2018 funding will continue research efforts in the following areas: 1.) Increasing the efficiency of pipeline system operations to enhance safety that includes reducing leaks, 2.) Protecting the environment by fostering new pipeline monitoring technologies and pipeline materials that reduce or eliminate natural gas pipeline leaks and minimize environmental impacts resulting from construction and repair activities.

Specifically, the FY 2018 budget request will:

- Continue the R&D partnerships with industry, academia, and national laboratories to accelerate the development and deployment of advanced composite materials and non-reactive coatings with embedded sensors to enhance pipe strength, integrity and operational efficiency.
- Develop technologies to detect and measure methane leak and to monitor gas flow inside the pipe for strain and corrosion, with the objective of accelerating the development of low-cost methane mitigation technologies to support a "zero-emissions" pipeline infrastructure and communicate the results to stakeholders.
- Identify technologies that can discriminate among different types of internal and external pipe anomalies, navigate through a variety of pipeline sizes and configurations, and evaluate external pipeline conditions quickly from a distance and without the need for major excavation.

DOE and the National Association of Regulatory Utility Commissioners (NARUC) will continue the Natural Gas Infrastructure Modernization Partnership. The purpose of which is to support states and commissions in advancing technology and regulatory policies to improve safety and operational efficiency and mitigate methane emissions from natural gas distribution systems.

PUBLIC PRIVATE PARTNERSHIPS

Ms. Wasserman Schultz. Public Private Partnerships are a key way to advance energy savings.

What PPP tools will you be encouraging at the Department of Energy and how?

Secretary Perry. The Department utilizes a variety of public-private partnership models in the FY18 Budget Request to address critical early-stage R&D challenges. Additionally, DOE anticipates private industry will use the results of DOE-funded research to conduct later stages of applied research as well as provide investments to fund industry demonstrations and pilot projects. The publically available *Report on Technology Transfer and Related Technology Partnering Activities at the National Laboratories and Other Facilities for Fiscal Year 2014* provides many examples of past public private partnership models DOE has utilized. The Fiscal Year 2015 report is forthcoming.

ENERGY SAVINGS GOALS FOR THE FEDERAL GOVERNMENT

Ms. Wasserman Schultz. Previous Administrations, both Republican and Democrat, have advanced energy saving goals for our federal government.

What will you do to further reduce the energy waste in our federal buildings?

Secretary Perry. The Federal Energy Management Program (FEMP) FY 2018 Budget Request of \$10 million supports federal agencies in meeting statutory energy and water management related goals and requirements. In FY 2018, FEMP will focus on reducing the operating costs of the government by assisting Federal agencies in identifying, designing, and completing energy-savings projects, building upon previous accomplishments. FEMP works with our stakeholders to enable Federal agencies to meet energy related goals, identify affordable solutions, facilitate public-private partnership and provide energy leadership to the country by identifying government best practices. FEMP provides technical project development assistance for energy savings performance contracts (ESPC), utility energy savings contracts, and power purchase agreements in pursuit of energy and water efficiency improvements and demand reduction services.

FEMP will provide technical assistance that leverages performance contracting and power purchase agreements, helping agencies meet their statutory requirements, and enhancing workforce development. In conjunction with technical assistance, FEMP will provide portfolio planning guidance to promote strategic integration of advanced technologies into power supply and master facility planning, helping DOE as a whole strengthen national energy security by increasing energy supply, diversity, resiliency, and reliability. FEMP will also foster Federal building and fleet optimization by providing guidance and tools focused on metering, auditing, operations and maintenance, and water use.

As part of this support request by Federal agencies, the Federal Energy Management subprogram, working directly through experts at the DOE National Laboratories, will:

- Offer portfolio planning guidance to promote strategic integration of advanced energy technologies (such as renewable energy, micro-grids and advanced battery storage) into site/facility power supply and master site planning;
- Develop best practices for implementing resilient energy management strategies in Federal facilities;
- Develop best practice approaches to address the challenges and risks organizations face from cyber threats to the energy management platform;
- Standardize steps agencies can take to secure their energy-related hardware and data while integrating effective energy management; and
- Improve facility resiliency through enhanced energy management technologies and tools focused on optimization and cost reduction.

FEMP will continue to work with agencies to fulfill energy management performance statutory requirements through proactive engagements and enhanced workforce development services and opportunities.

RESEARCH FUNDING FOR ENERGY PROGRAMS

Ms. Wasserman Schultz. The budget proposal for DOE, particularly for Energy Efficiency and Renewable Energy, very deeply cuts or eliminates medium-stage and later-stage research, demonstrations, professional and public education, etc. No one disagrees on the importance of early-stage research, but we've seen many times that if government doesn't participate in those other activities, the early stage research will not produce results that help the nation.

Will you support us as we work to provide funding for the whole spectrum of federal support for efficiency?

Secretary Perry. In the areas of energy and science research and development, the Budget Request provides \$6.4 billion for research and development programs, with a renewed focus on cutting-edge innovation and fostering the transition of those breakthroughs to the private sector for commercialization.

The private sector plays a critical role in bringing innovations into the energy marketplace. The FY 2018 Budget refocuses the Department's energy and science programs on early-stage research and development at our national laboratories to advance American primacy in scientific and energy research in an efficient and cost-effective manner. It focuses our investments on the basic, early-stage R&D conducted by the scientists and engineers at our 17 national laboratories who are constantly on the path to developing the next great innovations that can transform society, and bring forth a new era of prosperity for the American people.

In addition to providing \$6.4 billion for early-stage research towards cutting-edge innovations, including \$4.5 billion in the Office of Science and \$1.9 billion in energy R&D programs, the Budget consolidates programs focused on bringing technologies to the market in the Office of Technology Transitions (OTT). Through concerted effort and coordination with our labs, this will reduce costs to the taxpayer while at the same time providing a robust technology transfer program to transfer breakthroughs from the national laboratories to the private sector.

As the Congress continues through the FY 2018 appropriations process, I will continue to work with you to ensure that we further American innovation while reducing costs to the taxpayer.

GRID RELIABILITY

Ms. Wasserman Schultz. I understand the department is putting together a report on grid reliability.

Please let me know how you plan to include the tremendous benefits of clean energy and distributed energy resources.

Secretary Perry. The Department, at my direction, has undertaken an internal review to examine the state of electricity markets and grid reliability and produce a study aimed at ensuring that our electric grid remains reliable, resilient, and affordable. The study is an impartial review of the state of electricity markets and related policies, and there are no preconceived notions as to the findings and recommendations that will result from this review.

I appreciate the value of all energy sources. My track record speaks for itself. As Governor of Texas, I helped oversee an enormous increase in wind energy such that Texas is now the largest wind energy producing state in America. The study raises important and timely questions about the electric grid. For example, it asks why so many baseload plants—like coal and nuclear—have closed, whether wholesale energy and capacity markets are adequately compensating important resilience and reliability attributes and will explore other factors—like the impacts of increasing penetration of renewable energy and distributed energy resources on grid reliability and resilience. I have directed the Department to conduct rigorous analysis to answer these questions and to recommend sound policies to protect the Nation's electric grid.

CONGRESSMAN PETE AGUILAR**B61-12 LIFE EXTENSION PROGRAM**

Mr. Aguilar. Mr. Secretary, as you know from a recently released GAO report, some have raised concerns that the costs estimates associated with our nuclear moderation programs might be understated. I'll use the B61-12 Life Extension Program as an example: one cost estimate produced by NNSA's Office of Cost Estimating and Program Evaluation points out that it could cost \$2.6 billion more than previous estimates to complete this program. But the original baseline was from the NNSA's Fiscal Year 2017 Stockpile Stewardship and Management Plan was just released in March 2016.

What's the reason for this discrepancy? Do the program cost estimates provided by the Office of Cost Estimating and Program Evaluation show that the cost estimates are improving or that the program itself is changing and expanding? And as a follow-up: What are the implications of these findings? For future budget requests, for the program schedule, for the sequencing with other LEPs, for other NNSA priorities?

Secretary Perry. The official cost estimate for the B61-12 Life Extension Program is contained in the B61-12 Baseline Cost Report, dated October 2016. The difference in the B61-12 Baseline Cost Report, performed by the B61-12 Program Office, and the Office of Cost Estimating and Program Evaluation's (CEPE) Independent Cost Estimate (ICE), is the ICE assess the potential of a two year slip to the B61-12 First Production Unit (FPU), due to the transition from engineering and testing to production. The potential FPU schedule delay along with a higher production cost estimate result in the increased costs projected also the ICE.

After an extensive review of both estimates, NNSA leadership determined that the program estimate based on a March 2020 FPU is appropriate for the basis for developing budgetary requirements for the FY 2018 Future Years Nuclear Security Program (FYNSP). The B61-12 Program Office is actively managing design and production risks and, in conjunction with the United States Air Force, remains committed to meet FPU by March 2020.

NONPROLIFERATION

Mr. Aguilar. The FY2018 budget also shows reductions in the request for NNSA's nuclear nonproliferation programs.

Will these reductions continue in future budgets? Does this say anything about changes in U.S. policy towards nuclear nonproliferation? Is NNSA taking money from the nonproliferation programs to support weapons activities?

Secretary Perry. The \$87 million (4.6 percent) reduction in the DNN budget in FY 2018 relative to the FY 2017 enacted is misleading. The reduction is a result of a decline in University of California (UC) Legacy pension costs, and a shift in DOE's strategy in its plutonium disposition program. The \$87 million reduction resulted from:

- \$56 million less requested for MOX construction;
- \$42 million less requested for UC Legacy Pension; and,
- \$11 million in increases to other DNN activities.

This Administration is committed to pursuing a comprehensive nonproliferation agenda, even in this budget environment. NNSA is requesting more money in FY 2018 for its core nonproliferation, counterterrorism, and counterproliferation work than requested in FY 2017. NNSA is effectively requesting the same amount as enacted in FY 2017, excluding UC Legacy pension payments and the MOX construction program, specifically:

- Compared to the FY 2017 request, DNN as a whole is 3.6 percent higher including both the core nonproliferation program and National Counterterrorism and Incident Response (NCTIR); the core nonproliferation program is 4.0 percent higher.

WEAPONS ACTIVITIES

Mr. Aguilar. NNSA's budget request for FY2018 includes a significant increase of over \$1 billion for the Weapons Activities account.

Is this a one-time change, or will future budgets include additional increases?

Secretary Perry. Estimates for the FY 2019 – FY 2023 base budget topline for the National Nuclear Security Administration reflect FY 2018 levels inflated by 2.1 percent annually. This outyear topline does not reflect a policy judgement. Instead, the Administration will make a policy judgement on amounts for the National Nuclear Security Administrations' FY 2019 – FY 2023 topline in the FY 2019 Budget, in accordance with the National Security Strategy and Nuclear Posture Review that are currently under development.

Statements
For the
Record



Albemarle-Pamlico Sound • Apalachicola-Chattahoochee-Flint River Basin • Chesapeake Bay
 Coastal Louisiana • Colorado River • Delaware River • Everglades • Galveston Bay • Great Lakes
 Gulf of Maine • Lake Champlain • Long Island Sound • Mississippi River • Missouri River
 Narragansett Bay • New York/New Jersey Harbor and Hudson Estuary • Ohio River
 Puget Sound • Rio Grande • San Francisco Bay • St. Johns River

April 14, 2017

The Honorable Mike Simpson, Chairman
 Appropriations Subcommittee on Energy and Water
 Development
 U.S. House of Representatives
 2362B Rayburn House Office Building
 Washington, DC 20515

The Honorable Marcy Kaptur, Ranking Member
 Appropriations Subcommittee on Energy and Water
 Development
 U.S. House of Representatives
 1016 Longworth House Office Building
 Washington, DC 20515

Dear Chairman Simpson and Ranking Member Kaptur:

We write to express our strong support for your Subcommittee's role and leadership for restoring America's Great Waters. As the Fiscal Year 2018 appropriations bills are developed, we respectfully urge you to maintain strong funding for programs that support important work to restore watersheds like those in and around America's 21 Great Waters¹. These waterways are both valuable ecological resources and significant economic drivers for large swaths of the nation, providing much-needed jobs and opportunities for untold numbers of Americans. As you make difficult decisions regarding funding, we unite together to highlight programs of importance to our work and the solid return on taxpayer investments in Great Waters restoration.

While our Great Waters are each unique, they are all complex systems that know no political boundaries. Local, state, and federal leaders have formed voluntary partnerships nationwide to responsibly manage these complex systems and safeguard their constituents' health and natural resources. Supporting these partnerships is a national priority. The successful stewardship of these waterways affects not only every local resident but the rightful natural heritage of every American – from the Great Lakes to the Everglades, from Puget Sound to the Chesapeake Bay and the millions of miles of watersheds they depend upon.

As you prepare the FY 2018 Energy and Water Appropriations bill, we encourage you to maintain robust funding for programs that support aquatic ecosystem restoration and exclude policy riders that harm our Great Waters and derail ongoing restoration efforts. Programs important for restoring Great Waters in the Interior bill include but are not limited to:

- U.S. Army Corps of Engineers' ecosystem restoration programs, including the Comprehensive Everglades Restoration Plan, which provides a framework for restoring the Central and Southern water resources in Florida; the Missouri River Recovery Program, the Missouri River Ecosystem Restoration Plan, and the Missouri River Authorized Purposes Study to enable restoration and advance economic development on America's longest river; the Upper Mississippi River Restoration - Environmental Management Program to continue important restoration work on

¹ America's Great Waters Coalition recognizes 21 Great Waters based on specific criteria. These waters are the Albemarle-Pamlico Sound, Apalachicola-Chattahoochee-Flint River Basin, Chesapeake Bay, Coastal Louisiana, Colorado River, Delaware River, Everglades, Galveston Bay, Great Lakes, Gulf of Maine, Lake Champlain, Long Island Sound, Mississippi River, Missouri River, Narragansett Bay, New York/New Jersey Harbor and Hudson Estuary, Ohio River, Puget Sound, Rio Grande, San Francisco Bay, and St. Johns River.

one of the nation's most significant navigation river systems; the Louisiana Coastal Area Program to restore natural features and ecosystem processes to Louisiana's wetlands; the South San Francisco Bay Shoreline Study, which combines flood protection and wetlands restoration; and the Hamilton Wetlands Restoration Project in San Pablo Bay and the Long Term Management Strategy (LTMS) for Dredged Material.

- The Estuary Restoration Program, a comprehensive interagency program that focuses on the restoration of the nation's estuaries and administers the Estuary Habitat Restoration Council, of which the U.S. Army Corps of Engineers is a member.

At a time when federal lawmakers need to make smart spending choices, restoration offers one of the best returns on investment in the federal budget. Restored watersheds improve our quality of life, increase property values, provide clean water, support fish and wildlife and enhance outdoor recreation for our families. The on-the-ground work to restore our coasts, lakes, rivers, and estuaries produces jobs and utilizes skills and machinery available in the local workforce that provide many benefits to local economies.

- According to Restore America's Estuaries, restoring our coasts can create more than 30 jobs for every million dollars invested, which is more than twice as many jobs as the oil and gas and road construction industries combined.
- Along the Mississippi River, estimates show that more than 50 habitat restoration projects contribute approximately \$16.5 million to small businesses and employ more than 300 people in rural counties where, so often, unemployment is the highest following the closure of factories and other industries along the river.
- A report by the Chesapeake Bay Foundation found that economic benefits provided by nature in the Chesapeake watershed will total \$130 billion annually, an increase of \$22 billion annually, when the Chesapeake Clean Water Blueprint is fully implemented.
- A study conducted by Mather Economics found that for every \$1 invested in restoring the Everglades, there is at least a \$4 return in economic benefits, and that over the next 50 years, the incremental impact of Everglades restoration is expected to produce more than 440,000 jobs.
- A study of the Delaware River Watershed found that it contributes \$25 billion in annual economic activity and \$21 billion in ecosystem goods and services.
- According to Gallup, "[p]olluted drinking water and the pollution of rivers, lakes and reservoirs have consistently topped Americans' concerns throughout Gallup's 27-year trend measuring these environmental issues." Gallup's 2016 national survey found that both Republicans and Democrats list water pollution as their top environmental concern.

The America's Great Waters Coalition represents diverse national, regional, state and local organizations working to protect, preserve and restore our nation's waters. The Coalition is a result of years of work by national and local organizations to bring the broader restoration community together to "lift all boats." Together, we urge you to continue to provide the highest level of funding possible for federal programs critical for effective Great Waters restoration.

Sincerely,

Albert H. Todd
Executive Director
Alliance for the Chesapeake Bay

Jim Bradley
Vice President, Policy and Government
Relations
American Rivers

Jim Vogt
President
**Aquashicola/ Pohopoco Watershed
Conservancy**

Anna Weeks
Environmental Policy Associate
Arkansas Public Policy Panel

Rich Innes
Executive Director
Association of National Estuary Programs

Lisa Alexander
Executive Director
Audubon Naturalist Society

Scott Zucker
Vice President & Conservation Chair
Audubon Society of the Everglades

Tony Janisch
Executive Director
Bad River Watershed Association

Linda Lou Bartle
Board Member and Water Testing Chairperson
Basha Kill Area Association NY

Sheryle A. Evasic
President
Blue Heron Environmental Network

Andrew Kimmel
Mississippi River Network Policy Manager
Bluestem Communications

Frank F. Rodgers
Executive Director
Cacapon Institute

Richard F. Delaney
President & C.E.O.
Center for Coastal Studies

Evan Isaacson
Chesapeake Bay Policy Analyst
Center for Progressive Reform

Alix Murdoch
Federal Policy Director
Chesapeake Bay Foundation

Mary Smith
Communications Coordinator
Church Women United in New York State

Kelly Reed
Vice President, Government Relations
The Conservation Fund

Brian Winslow
Executive Director
Delaware Nature Society

Steve Dubiel
Executive Director
EarthCorps

Robert E. Hughes
Executive Director
**Eastern PA Coalition for Abandoned Mine
Reclamation**

Dan Silver
Executive Director
Endangered Habitats League

Howard Learner
Executive Director
Environmental Law & Policy Center

Manley Fuller
 President
Florida Wildlife Federation

Jessica Fujan
 Midwest Regional Director
Food & Water Watch

Kris Unger
 Primary Conservator
Friends of Accotink Creek

Dan Smith
 President
Friends of Lower Beaverdam Creek

Joe McCue
 Chairman
Friends of the Middle River

Trevor A. Russell
 Water Program Director
Friends of the Mississippi River

Matt Meersman
 President
Friends of the St. Joe River Association

Jeff Skelding
 Executive Director
Friends of the Upper Delaware River

Mary Alessio Leck
 Chair
Friends for the Abbott Marshlands

Bob Stokes
 President
Galveston Bay Foundation

David Ullrich
 Executive Director
Great Lakes and St. Lawrence Cities Initiative

Victoria Laubach
 Executive Director
Green Valleys Watershed Association

Barry Lewis
 Executive Director
GreenTreks Network

Matt Rota
 Senior Policy Director
Gulf Restoration Network

Darwin Adams
 Chairman
Illinois Council of Trout Unlimited

Jared Mott
 Conservation Director
Izaak Walton League of America

Ivan J. Hack, Jr.
 President, Headwaters Chapter
Izaak Walton League of America

Robert Stegmier
 Past National Director at Large, MI
Izaak Walton League of America

Adrienne Kotula
 Government Affairs and Policy Manager
James River Association

Tom FitzGerald
 Director
Kentucky Resources Council, Inc.

Bijaya Shrestha
 Water Policy Director
Kentucky Waterways Alliance

Lori Fisher
 Executive Director
Lake Champlain Committee

Paulette Hammond
 President
Maryland Conservation Council

Karla Raettig
 Executive Director
Maryland League of Conservation Voters

Jim Long
President
Mattawoman Watershed Society

Carol Parenzan
Executive Director
Middle Susquehanna Riverkeeper

Cheryl Nenn
Riverkeeper
Milwaukee Riverkeeper

Dean Klinkenberg
The Mississippi Valley Traveler

Theresa Pierno
President & CEO
National Parks Conservation Association

Adam Kolton
Vice President of Federal Policy
National Wildlife Federation

Captain Pete Grimbilas
Chair
New Jersey Outdoor Alliance

Richard Thomas
Council Chair
New Jersey Trout Unlimited

Marcia Bystryn
President
New York League of Conservation Voters

Beth Huning
SFBJV Coordinator
The non-federal partners of the San Francisco Bay Joint Venture

Ron Urban
Chairman
NY Trout Unlimited

Meredith Comi
Restoration Program Director
NY/NJ Baykeeper

Rob Moir, Ph.D.
Executive Director
Ocean River Institute

Kristy Meyer
Managing Director, Natural Resources
Ohio Environmental Council

Rich Cogen
Executive Director
Ohio River Foundation

Ezra P. Thrush, MPA
Campaign Manager--Watershed Advocacy
PennFuture

The Rev. Sandra L. Strauss
Director of Advocacy and Ecumenical Outreach
Pennsylvania Council of Churches

Hedrick Belin
President
Potomac Conservancy

Phillip Musegaas
Vice President of Programs and Litigation
Potomac Riverkeeper Network

Carol Hays
Executive Director
Prairie Rivers Network

Sheida Sahandy
Executive Director
Puget Sound Partnership

Jeff Benoit
President
Restore America's Estuaries

Thomas Wolfe
Executive Director
Savage River Watershed Association

William Reichert
President
Schuylkill Headwaters Association, Inc.

Stanley Pannaman
Sierra Club Broward Group

Michael L. Pisauro, Jr. Esq.
Policy Director
Stony Brook-Millstone Watershed Association

Dana Wright
Water Policy Director
Tennessee Clean Water Network

Edward W. Tamson, Ph.D.
Florida Representative
Theodore Roosevelt Conservation Partnership

Victoria Carberry
Environmental Education Program Director
UrbanPromise

Shaun Fielder
Executive Director
Vermont Rural Water Association

Angie Rosser
Executive Director
West Virginia Rivers Coalition

Lynda Schneekloth
Advocacy Chair
Western New York Environmental Alliance

Linn Beck
State Council Chair
Wisconsin Trout Unlimited

May 18, 2017

The Honorable Rodney Frelinghuysen
Chairman
House Committee on Appropriations
H-307, U.S. Capitol
Washington, DC 20515
c/o Nancy Fox

The Honorable Nita Lowey
Ranking Member
House Committee on Appropriations
1016 Longworth House Office Building
Washington, DC 20515
c/o Shalanda Young

The Honorable Mike Simpson
Chairman
House Committee on Appropriations
Subcommittee on Energy and Water
Development
2362B Rayburn House Office Building
Washington, DC 20515
c/o Angie Giancarlo

The Honorable Marcy Kaptur
Ranking Member
House Committee on Appropriations
Subcommittee on Energy and Water
Development
1016 Longworth House Office Building
Washington, DC 20515
c/o Taunja Berquam

Dear Chairmen Frelinghuysen and Simpson and Ranking Members Lowey and Kaptur:

The undersigned navigation stakeholders express their gratitude for your leadership in funding for the U.S. Army Corps of Engineers' (USACE) navigation program at \$2.604 billion for the FY 2017 Energy and Water Development, and Related Agencies (E&W) Appropriations Act. We appreciate your leadership in recognizing the nexus between water resources development and economic prosperity, and we appreciate your efforts to increase USACE navigation program funding.

As you turn your attention to the FY 2018 E&W appropriations bill, we respectfully request \$2.9 billion for the USACE navigation program. The amount will enable:

- FY 2018 funding to 'Hit the HMT Target' as established in WRDA legislation
- Full use of Inland Waterway Trust Fund revenues
- Full funding of the Donor and Energy Transfer Ports Program
- Existing USACE navigation planning studies to achieve the WRRDA 2014 three-year completion schedule

We also support providing funding and guidance for new study and construction starts.

Federal investments in navigation-related infrastructure are an essential and effective utilization of limited resources. These investments pay dividends through increased trade and international competitiveness, sustainable job creation and federal, state and local tax revenues. We welcome

the opportunity to work with you and members of the Subcommittee and full Committee in support of passing a FY 2018 E&W appropriations bill that will enable safe and efficient freight movement that is essential to our nation's 21st century economic growth.

Sincerely,

American Association of Port Authorities
 American Association of State Highway and
 Transportation Officials
 American Great Lakes Ports Association
 American Petroleum Institute
 American Road and Transportation Builders
 Association
 American Waterways Operators
 Associated General Contractors
 Association of Ship Brokers and Agents
 Big River Coalition
 California Marine Affairs and Navigation
 Conference
 Dredging Contractors of America
 Florida Ports Council
 Gulf Intracoastal Canal Association

Gulf Ports Association of the Americas
 Lake Carriers Association
 Maritime Exchange for the Delaware River
 and Bay
 National Association of Maritime
 Organizations
 National Association of Waterfront
 Employers
 National Grain and Feed Association
 New York Shipping Association
 Pacific Northwest Waterways Association
 Propeller Club of New Orleans
 U.S. Chamber of Commerce
 U.S. Maritime Association
 Waterways Council, Inc.

The Honorable Rick Perry
Secretary
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

May 23, 2017

Dear Secretary Perry:

As the new administration sets its priorities for the Department of Energy (DOE), the undersigned architecture firms urge you to preserve and protect vital programs at the Department that support our core business functions and ensure the public's safety, health, and wellbeing. The architecture industry provides nearly 200,000 jobs in the United States. Architectural services are a key export for the United States as well, and American architects are hard at work using their skills to design buildings all over the world. Our expertise in energy efficient buildings is a major driver of this demand, and DOE's research and programs are vitally important to the ability of architects to continue this work.

The Building Technologies Office (BTO), within the Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), supports work of critical importance to architects and the entire building industry. From energy modeling software to building code development analysis, the BTO's research, initiatives, and tools support the design and construction of the world's buildings.

Research and Data. The energy efficiency advances being supported by the BTO have major implications for our long-term energy security and economic growth. Increased energy efficiency in the built environment is the fastest way to accelerate our energy independence and boosts the domestic economy by reducing operating costs for commercial building owners, residential consumers, and government assets. BTO research supports these outcomes by advancing technology and knowledge for the building industry.

Working closely with the National Laboratories, the BTO leads research into energy-saving HVAC (heating, ventilation, and air conditioning), building envelope, window, and control technologies, bringing these technology advances to market. These products are then specified in order to help architects and their clients design appropriate and impactful high performance buildings.

Building Codes and Energy Modeling. Communities rely on building codes as the first line of defense in ensuring that minimum acceptable standards are met in the built environment. Specific energy codes serve similarly to set baselines for building energy performance. The codes and standards development process is significantly enhanced by the expertise of DOE, which provides neutral analysis of the impact of code change proposals on construction cost and energy performance. These voluntary, consensus-based codes are developed by stakeholders in the industry and adopted by various communities across the country according to local conditions and needs. Architects participate in the code development process and apply these requirements in their day-to-day design work. This work is made possible, in part, by energy modeling data and software tools like OpenStudio that the BTO develops. Without these tools and software, the demand for increased energy performance could not be met.

Commercial Building Baselines. The Commercial Building Energy Consumption Survey, or CBECS, serves a critically important function to the building design and construction industry. First conducted in 1979, this periodic study of building energy usage is administered by the Energy Information Administration (EIA) and serves as an important baseline for energy efficient design. The corresponding Residential Energy Consumption Survey (RECS) is similarly administered and is equally as important. DOE provides tools to help analyze and interpret CBECS and RECS data in order to increase its utility for designers and other users. This data is vital to the practice of architecture, and also underpins important industry energy reduction goals like the American Institute of Architects' 2030 Commitment for reducing building energy usage and the federal government's fossil fuel reduction targets required by Section 433 of the 2007 Energy Independence and Security Act.

The Building Technologies Office's numerous programs, including the Better Buildings and Build America Initiatives, the Department's support of codes and standards development, and the availability of Commercial Building Energy Consumption data, are just a few examples of the DOE resources that directly support innovative design work in our communities. Eliminating tools and data, cutting staff, or reducing funding for any of these programs will severely impact our ability to meet client demands, stay competitive in an increasingly global marketplace, and fulfill our building performance goals. We look forward to working with you to preserve these vital programs and to further the Department of Energy's important mission to advance energy technology and promote a cleaner, healthier environment.

Sincerely,

*Multiplicities
 +LAB Architect PLLC
 3R Sustainability
 8 Fox Run Productions, LLC
 A|r
 A2B Architecture LLC
 AC Hocek Architecture llc
 Affiliated Engineers, Inc (AEI)
 Ageloff & Associates
 AGGA
 AHT Architects, Inc.
 aidlin darling design
 ajc architects
 Alamo Architects
 Alan Ford Architects PC
 Alan Glassman, Consultant
 Albert R. Russell, Architect
 Albertsson Hansen Architecture
 Alex Ward, Architect
 Alexandra Benardete Architect, PLLC
 Alfandre Architecture, PC
 Alison Wright Architect
 Alliance
 ALSC Architects
 Amacher and Associates
 Anderson Architecture, PLLC

Andrulaitis+Mixon Architects
 ANF Architects
 Angel Eagle Consult
 Anjali Grant Design
 archeTYpe llc
 archimania
 Architect Carl L. Strona, FAIA
 Architects and Planners
 Architects McDonald, Soutar & Paz
 Architectural Applications
 Architectural Fusion, LLC
 Architectural Werks, Inc.
 Architecture + Urban Design
 Architecture Green LLC
 Arkidesign Inc.
 Arkin Tilt Architects
 Arrowstreet
 Art & Architecture Studio
 Artemis Development
 Atelier Ten
 atelierjones LLC
 ATTN ATTN A/D PLLC
 Ayers Saint Gross
 AYN Architect Studio LLC
 Azizi Architects, Inc.
 BakerArchitects&Builders, LLC

Bakker & Lewis Architects
 Balestri Architects
 Banta Campbell Architects, Inc.
 BAR Architects
 Barbara A. Campagna, FAIA
 Barnette Bagley Architects PSC
 Bartlett Architects AIA
 Baumgardner
 Baxter Projects
 Beck Group
 Bergmeyer
 Bernheimer Architecture PLLC
 Bestor Architecture
 Betty Woo, AIA Architect
 BIOME Architecture, PLLC
 BKSK Architects
 Blackburn Architecture
 Blaes Architects
 BLT Architects
 BLUEdot Design
 BNIM
 Bohlin Cywinski Jackson
 Bora Architects
 Boulder Associates Architects
 Brewer Ingram Fuller Architects Inc.
 Brooks + Scarpa
 Bruce D. Turner, Architect
 Bruner/Cott & Associates
 BSA LifeStructures
 Build Efficiently. LLC
 Building Performance Architecture
 Büro Koray Duman
 BWBR
 CallisonRTKL
 Campaigne Kestner Architects
 Champion A. Platt Architect, PC
 Campus Matters
 Candace M.P. Smith Architect, PC
 CannonDesign
 Capital Project Delivery Consultants, LLC
 Caples Jefferson Architects PC
 Carl Kaiserman, AIA
 Carleton Hart Architecture
 Carlisle Associates Inc.
 Carlson Studio Architecture Inc.
 Cashman Stahler Group
 Celeste Allen Novak Architect
 CEM Design
 Centric Design Studio
 Cermak Rhoades Architects
 Chamberlin Architects, P.C.
 Charles Pipal, AIA
 Cheryl Jacobs
 Chia-Ming Sze Architect Inc.
 ChrDAUER Architects
 Chris Ferger ARchitects, LLC
 Christner
 Christopher A Roach AIA
 Christopher P Williams Architects PLLC
 CICADA Architecture/Planning, Inc.
 Clark Buchner Architect
 Clark Nexsen
 CO Architects
 Commonwealth Architects
 Constance Emilie Gill, AIA Architect
 Constance Lezenby Architects LLC
 Consultant in Architectural Acoustics
 COOPER CARRY
 Corri Sandwick Architecture
 Corsini Stark Architects
 COULSON
 Cox Group Architects LLC
 CPLA Architects, LLC
 Croxton Collaborative Architects PC
 CTA Architects Engineers
 CTA Architects P.C.
 Cuninghame Group Architecture
 Curtis + Ginsberg Architects LLP
 CWA Architecture
 CWB Architects
 C-Wise Design and Consulting
 Cycle Architecture, PLLC
 Cynthia Bankey Architect, Inc.
 Dake Wells Architecture
 Dana Reingold Waxler, AIA
 Daniel Williams Architect
 David A. Tirman AIA
 David Baker Architects
 David Lavender Architect PC
 David Lindquist, AIA, Architect
 David Lloyd Maron / Architect PC
 David Panich, AIA - Architect
 David R. DeFilippo Architect
 David Whitney Architects, Inc.
 Davis Partnership Architects
 Davis Wince, Ltd

DAZ Architecture
 DCP Architecture PLLC
 De Jesus Architecture & Design
 DeLaCour Ferrara Church Architects P.C.
 Dembling + Dembling Architects, P.C.
 Design 3 Architecture, PC
 Design Management, Architects, Inc.
 Design Synergies Architecture
 design2 LAST, inc
 Designs for Life llc
 De-Spec inc
 Deus Ex Design
 Dewberry Architects, Inc
 DF Swoboda Architecture
 DFD Architecture, LLC
 Diana Bellgowan, Architect
 Diana Scheffler Architect
 Dick & Fritsche Design Group (DFDG)
 Dietz & Company Architects, Inc.
 DiLoreto Architecture
 Dindo Architect PC
 Dineen Architecture + Design
 DLR Group
 DMHA Architecture and Interiors
 Donald Watson, FAIA
 Donnelly Architecture, LLC
 Dougherty
 Douglas Kelbaugh FAIA
 DRS Architects, Inc.
 DSGN
 DSH // architecture
 DTW Architects + Planners
 Durand-Hollis Rupe Architects
 EA Buildings
 EAGLE CONSULT
 Earth and Sky Architecture
 eco_logic STUDIO
 EcoDEEP
 EcoDesign Partners llc
 Ed Akins Architect, LLC
 Ed Werth, Architect
 Edward Keegan Architect
 Edward R. Acker, AIA
 Edwin O. Elliott, Jr., AIA - Architect
 ehdd
 Ekose'a Homes, Inc.
 Eley Consulting
 Ellenzweig
 Ennead Architects
 EnvironMental Design
 Eric Morrow AIA
 Erica H. Ling Architect
 ESG Architects, Inc
 Eskew+Dumez+Ripple
 EvB Design
 Ewers Architecture
 EwingCole
 EYP
 Eytan Kaufman design
 FabCab
 Farr Associates
 Fellner Associates Architects
 Ferguson Architecture PS
 Finegold Alexander Architects
 Fithian Architecture
 FKP Architects
 Fleming Alliance Architecture, Inc.
 Ford 3 Architects LLC
 Foster Dale Architects, Inc.
 Fougeron Architecture
 Fox Run Productions, LLC
 Frameworks Design
 Francois de Mmenil Architect, PC
 Franziska Amacher
 Front Studio Architects
 Fused Studios P.C.
 FXFOWLE Architects LLP
 G2kDesign
 Gabellini Sheppard Associates
 Gail Flynn Architects
 Gaines Group Architects
 Gangi Architects
 Gans studio
 Gardner Architects LLC
 Gast Architects
 gbA Architecture and Planning
 GBD Architects
 Geise Architects
 Gensler
 Geoff
 Geoff Briggs
 George Penniman Architects LLC
 Georgia/Carolinas PCI, a chapter of the
 Precast/Prestressed Concrete Institute
 GGLO
 gkkworks

Global Urban Solutions
 Glumac
 Glynn Brown AIA
 GMG Architects
 Goldhammer
 Goody Clancy
 Gordon + Gordon Architecture
 gordon architecture, inc.
 Green Dinosaur, Inc.
 Green Ideas Building Science Consultants
 green|spaces
 Greenbank Associates
 Grimm + Parker Architects
 Grunig Wertz Architects
 GSBS ARCHITECTS
 Guidon Design Inc.
 Gwynne Pugh FAIA ASCE LEEDap
 H.J. Krzysik, Architect
 HA Architecture
 Hanna Scott, Inc.
 Harley Ellis Devereaux (HED)
 Harold Olin Architect
 Harvey Cohn Architecture PLLC
 hb+a Architects
 Heather M. Marquard, AIA + LEED Faculty
 Heckendorn Shiles Architects
 Helix Architects
 Hetherington Architecture LLC
 HIRSCH GROUP ARCHITECTURE
 HJKessler Associates
 HKS Inc.
 HMAP
 HOK
 Housing Studio, PA
 Howard I. Littman, AIA Emeritus
 Howorth & Associates Architects
 Hubbell & Hubbell Architects
 Hudson Valley Architecture, PLLC
 HUFFMORRIS ARCHITECTS
 ICON architecture, inc.
 Ilene Rogers Tyler
 Independent Consulting Specifier
 Indigo I Hammond & Playle Architects, LLP
 IndigoJLD
 Innovative Design
 Inscape Studio
 J. Harrison, Architects
 J. Stephen Lane Architect
 Jack P Morgan, AIA, CSI - Architect
 James & Kutyla Architecture
 James J. Malanaphy AIA NCARB
 James Kressbach AIA, Architect
 James Patrick Dugan AIA
 Jan Hird Pokorny Associates, Inc.
 Jay Raskin Architect
 Jim Jennings Architecture
 JMS Architecture, Inc
 JOA
 Joel Sanders Architect
 John D. Kelley, AIA Architect
 John Friedman Alice Kimm Architects
 John Grable
 JOHN MANISCALCO ARCHITECTURE, INC.
 John McLean, Architect
 John P. Kalmon Architect
 John S. Reynolds FAIA
 John Shafer & Assoc., Inc.
 John TeSelle Architecture
 jones | haydu
 Jones John Harrison
 Jones Studio, Inc.
 Joseph Herrin
 Julie Evans Architecture & Design
 KAL Architects, Inc.
 KAPC
 Karen Fiene Architects
 Katherine Austin, AIA, Architect
 Keclik Associates Ltd.
 Kennan-Meyer Architecture PS
 Kenneth Hahn Architects
 KieranTimberlake
 Kiku Obata & Company
 Kilburn Architects
 Kipnis Architecture + Planning
 Kira Gould CONNECT
 Kirksey Architecture
 Kittner & Pate Design Associates
 KKA Architecture, PA
 Kleinmann Architects
 Korth Collaborative Design
 Koutsomitis Architects PC
 koval Architects
 Kreger Design Build
 Kristi Byers, Architect
 Krueck+Sexton Architects
 Kuhlmann Design Group, Inc.

L M Holder III, FAIA
 L. Henry Lowrance, AIA
 Lake/Flato Architects
 Lam Partners Inc
 Lassel Architects PA
 Laurel Architecture
 Lavallee Brensinger Architects
 Leddy Maytum Stacy Architects
 Lee Gamelsky Architects P.C.
 Lee Mei Architect-Planner
 Leevi Kiil, FAIA, Architect
 Legerton Architecture, P.A.
 Lehrer Architects, LA Inc.
 Lemanski & Rockwell Architects Inc.
 Levy Art + Architecture
 LG Architects, Inc.
 LHB, Inc.
 Lifespan Design Studio, LLC
 Light/Space/Design
 Linda Reeder Architecture, LLC
 Linda Yowell Architects
 Lindsay Suter Architects
 Lisa C. Rigazio
 LMN Architects
 Loci Architecture
 Lominack Kolman Smith Architects
 Long Green Specifications
 Lowney Architecture
 LPA Inc.
 LSW Architects
 Lucas Sustainable, PLLC
 Lugosch Architect
 Lundberg Design
 Luttrell Architecture, LLC
 M Matta Architects
 M. Kathryn Devlin, AIA
 M.Thrailkill.Architect LLC
 Madisen Maher Architects
 Mahlum Architects
 MALeco
 Manuel Zeitlin Architects
 Mark Allison, Architect
 Mark English architects
 Marner Architecture
 Marsh + Woods Architects
 Martin A. Benassi, AIA - Architect, LLC
 Mary Ben Bonham, AIA, LEED AP
 Mashek MacLean Architects, Inc.
 Maureen Guttman Architect
 Mayse & Associates
 Mazzetti+GBA
 McCann Adams Studio
 McCool Carlson Green
 McLennan Design LLC
 Meditch Murphey Architects
 Menter Byrne Architects
 Meryl Kramer Architect
 MEYERS+ Engineers
 Michael Bausch Architect
 Michael Beattie, Architect, llc
 Michael Coleman Architect
 Michael Glynn Architects
 Michael Joseph Holtz, FAIA Architect
 Michael P Dolce A.I.A. Architect
 Michelle F. Gillette-Murphy, AIA
 Mike Jackson, FAIA
 Miller Dunwiddie Architecture
 Miller Dyer Spears, Inc.
 Miller Hull Partnership
 Mindful Spaces Architecture
 ming | architecture and design
 Mithun
 MJH Architect
 MODU Architecture
 Moore Architects, PC
 Moore Architecture + Design, LLC
 Moore Ruble Yudell Architects & Planners
 Morrison/EDM, Inc.
 Mosaic Architecture
 Moseley Architects
 Moshier Studio
 MR Architecture + Decor
 ms consultants, inc.
 N M Black & Associates
 NA+AA
 Nathan Good Architects
 NBBJ
 Nelligan White Architects
 Neu Campus Planning, Inc
 New Leaf COLlaborative Architecture & Design
 PLC
 Newick Architects
 Newman Marchive Carlisle, Incorporated
 Nick Peckham. FAIA
 No Name Architects
 Noble, Wickersham & Heart

Noel Cross+Architects
 Northfield Design Associates, Inc.,
 Olson Kundig
 Omni Architects
 One Design
 OPN Architects
 Opsi Architecture
 Optimized Design Solution
 Orcutt Winslow
 organicARCHITECT
 Overland Partners
 OZ Architecture
 Pachano & Vollert Architecture
 PAD designs
 Page & Turnbull
 Page Ayres Cowley Architecture, LLC
 Paladino and Company
 Palms Hawaii Architecture, LLC
 Paul B Clark, Architect PLLC
 Paul F Aubin Consulting Services, Inc.
 Payette
 PBS/AAD
 Peckham Architecture
 Pelli Clarke Pelli Architects
 Penner & Associates Architects
 Perkins + Will
 Perkins Eastman Architects
 Peter Grueneisen
 Peter J. Arsenault, Architect
 Peter T. Gross Architects, P.A.
 PF&A Design
 Phillips|Sekanick Architects, inc
 Pickard Chilton
 Pickell Architecture, LLC
 Pieper O'Brien Herr Architects
 PIERI ARCHITECTS
 pirie associates architects
 Planning for Health
 Platt/Whitelaw Architects
 PMC or DPMC
 POHL ROSA POHL
 Polly Osborne
 Pudik Architecture, P.C.
 Quattrocchi Kwok Architects
 Quezada Architecture
 R+D ARCHITECTURE
 Ralph Bicknese, AIA, LEED Fellow
 Ralph Eglin Wafer, AIA
 Randall Eveleigh, Architect
 Rasmussen & Associates
 RAW-NYC Architects
 RBCook Architects
 RCGA Architects
 RdIR Architects
 RDM Architecture
 REA Architects
 Red Iron Architects
 Reddy Architecture PLLC
 Reed Rubey Architect
 Reedy & Sykes, Architecture and Design
 Renker Eich Parks Architects
 Resource Refocus LLC
 RevoluSun LLC
 RHA
 Rice-Stromgren Architects
 Richard Bloch Architect
 Richard Krent
 Rise Projects LLC
 RKB Architects, Inc.
 RMW architecture & interiors
 RNL Design
 Robert G. Emert Architect, Inc.
 Robert H Hersey AIA Architect ret
 Robert J. Koester Architect
 Robert J. Rysavy, LLC
 Robert Shaw Pfaffmann, FAIA
 Robert von Zumbusch, Architect
 Robert.Buchan.Architect PLLC
 Roberta Washington Architects, PC
 Robertson/Sherwood/Architects pc
 Rochon
 ROGERS PARTNERS Architects + Urban
 Designers
 Ross Design, Inc.
 Ross G. Spiegel Architect
 RossTarrant Architects
 RSSC Architecture
 S BERRY JONES ARCHITECTS
 Sabrina J Castle, AIA
 Sanders Pace Architecture
 Santos Prescott and Associates
 Sasaki Associates
 Schwartz aand Peoples
 Scott Ellinwood & Associates
 SCRarchitects
 Sebastian Eilert Architecture, Inc.

SEM Partners, Inc.
 SEQUIL Systems, Inc.
 SERA Architects
 Serena Sturm Architects, LTD
 Sheldon Pennoyer
 Shelter Architecture, LLC
 Shepley Bulfinch
 SHIV ARCHITECTURE P.C.
 SHP Leading Design
 Siegel & Strain Architects
 SIH Design
 Sim2
 Simply Stated Architecture, PC
 SmartHaus + Wexler/Kollman
 Smith and Thompson Architects
 Smith Architects, PA
 SmithGroupJJR
 Snow Kreilich Architects
 Sol design + consulting
 Spacesmith llp
 Spatial Designs Architects
 Spector Associates Architects
 Sporleder architects
 SRG Partnership, Inc
 Stacey Ruhle Kliesch, Architect LLC
 Stanley Studio
 Stantec Architecture
 STAT Architecture PC
 Stefan Helgeson Associates, LLC
 Steffen+Schwerin Architects, Ltd.
 Stephanie Gelb Architect
 Stephen Ely Architect
 Stephen Tilly, Architect
 Sterner Design, LLC
 Steven Benner Architect
 Steven K. Nose, Architect
 Stott Architecture
 Straus-Edwards Associates, Architects
 Strening Architects
 Studio 1 Architects
 Studio 5 Partnership
 Studio Bondy Architecture
 Studio Completiva
 studio e architects
 Studio Ma
 Studio Nova A Architectctcs
 Studio VARA
 studioB design LLC
 STUDIO-E Architecture, PC
 substance
 Sustainable Design + Behavior
 Sustainable Design Consulting, LLC
 Sutton Suzuki Architects
 suzanne zuniga architect llc
 Suzuki/Morgan Architects
 SWBR Architects
 Swis.Loc Architecture PLLC
 SYNCRO Architecture Studio
 Taheri Architecture, Inc.
 TDSi - The Design Studio, inc.
 TEN Arquitectos
 Terrapin Bright Green
 Terraplen Architects-Builders
 th+a architects
 The Architects Collective
 The Green Engineer, Inc.
 The Kubala Washatko Architects, Inc.
 The Nevins Group Architecture
 The Ostberg Architects
 The Weidt Group
 theo David Architects
 Thomas W Angell, Architect, AIA
 Thornton Tomasetti
 Tilton, Kelly + Bell, LLC
 Timothy Shea Architecture
 TLC Engineering for Architecture
 TMPartners, PLLC
 Tony Albrecht A.I.A.
 Touch Architecture, Inc.
 Tracey Dillon Architecture
 Transform Global
 TreanorHL
 Tyler Mason, AIA
 Urban X Studio Architecture PLLC
 UrbanARCH Associates
 Valerio Dewalt Train
 Van Pond Architect, PLLC
 Vanderweil Engineers
 Ver Ploeg Architecture
 Verdical Group
 Vierra Design & Education Services, LLC
 Voorsanger Architects PC
 Walter D. Street III AIA NOMA
 Ward + Blake Architects
 Warner Summers
 Wauters Design Group

WDA
Webb & Company Architects
Weber Thompson
Weller & Michal Architects
Weppner Architect
Wight & Company
Wilets Architecture, LLC
Wiley Architects
Wiley Wilson
William Bechhoefer, FAIA
William Zeph Ginsberg AIA
Wilson Architects
Windy Hill Associates
Wirt Design Group
Witke Consulting Services, LLC
WJA Design Collaborative
Woodblock Architecture
WORKac
Workshop for Architecture
WORKSHOP8
Wrap Architecture
WRNS Studio
WSP USA
WTW Architects
WXY architecture + urban design
Yee Leung AIA Architect
YHR Partners
ZGF Architects, LLP
Zimmerman Studio LLC



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Office of the General Manager

May 24, 2017

The Honorable Mike Simpson
Chairman

House Appropriations Subcommittee on Energy and Water Development and Related Agencies
2362-B Rayburn House Office Building
Washington, D.C. 20515

RE: Fiscal Year 2018 (FY18) Appropriations Priorities

Dear Chairman Simpson:

On behalf of the Metropolitan Water District of Southern California I write you today to request the Committee's support for significant funding in the FY18 Energy and Water Development Appropriations bill for a host of water programs and policies established by the enactment of S. 612, the Water Infrastructure Investments for the Nation Act of 2016. Increased investments in water storage, enhanced science-based water systems operational flexibility, and investments in local water supply development will be beneficial to state water users throughout the West. S.612 also includes much needed reforms to the Bureau of Reclamation's Title XVI Program, which will now function as a competitive grant program for the benefit of new local and regional water supplies.

Metropolitan has identified three appropriations priorities which we believe are vital to addressing California's continuing water needs going forward. As you begin your consideration of the White House FY18 budget request, Metropolitan encourages your support for the following funding items:

1. Bay Delta Planning and Permits

The San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) is a key part of California's water supplies and investing in further scientific understanding of the complex interrelationships of various factors affecting this area and improving infrastructure is essential. In 2017, state and federal approvals for the California WaterFix project are expected to be finalized and, following this critical period, a continuing partnership in FY18 between federal and state agencies is essential to meet California's co-equal goals of water supply reliability and ecosystem restoration for the Delta. The federal/state partnership depends on:

- Reauthorizing CALFED, and directing funds to CA WaterFix, which are both critical to securing California's water supply and achieving success in the Delta. The Association of California Water Agencies (ACWA) has called for \$40,000,000 in funding for CALFED. Metropolitan supports the reauthorization of CALFED and joins with ACWA in urging your support for this appropriation request.
- Providing funding to advance the science necessary to enhance and restore the Bay-Delta ecosystem and provide greater water supply reliability. Metropolitan supports funding to the

The Honorable Mike Simpson
 Page 2
 May 24, 2017

U.S. Department of Interior for scientific investigations, pilot projects and restoration actions to benefit threatened and endangered fish populations, including funding for projects authorized under the WIIN Act. In particular, Metropolitan encourages the following: funding for a Delta Smelt distribution study to gain a better understanding of Delta Smelt distribution, abundance and habitat requirements; funding for the Rio Vista Research Station and Fish Technology Center designed to include a refuge population for Delta Smelt to be used for species conservation and research; funding to implement a pilot project to test Delta Cross Channel gate operations to protect salmon; funding for installation of fish barriers in the North Delta to protect salmon; funding to continue Battle Creek habitat restoration including removal of fish barriers; funding for Delta Smelt Resiliency Strategy actions to enhance the food web that supports Delta Smelt, including projects in the North Delta and Suisun Marsh; funding for Franks Tract restoration feasibility and planning; funding for aquatic weed control in the Delta to improve habitat conditions; funding to develop fish tagging technologies, which will enhance information of Delta fisheries studies; and funding for the Collaborative Science and Adaptive Management Program.

2. Colorado River Drought Response and Salinity Control

We urge continued support for drought relief programs that can benefit the Colorado River System, including the following:

- Additional funding of \$2,100,000 for Title II of the Salinity Control Program above the current FY17 budget (\$8,100,000) for the Bureau of Reclamation is needed to address ongoing economic damages associated with increased salinity in the Colorado River. Funding of \$1,500,000 is also needed for related programs under the Bureau of Land Management as well as \$15,200,000 for the Natural Resources Conservation Service's Environment Quality Improvement Program.

3. Local Water Resources

California's long-term projections for future shortages make it imperative that the Administration significantly enhance FY2018 funding for methods to develop permanent new local water supplies through conservation, recycling, groundwater replenishment and desalination. The Bureau of Reclamation has several programs relevant to this objective, including the Title XVI and Water Smart Grant Programs. We support the additional funding for WaterSmart programs, including the funding in the President's budget to advance science on ecological flows, drought impacts, and climate as well as funding to advance local community supplies. Metropolitan also supports funding of \$40,000,000 for Title XVI in FY18. By prioritizing funds that assist local communities in building resiliency, there will be new permanent local water supplies and conservation in Southern California that will significantly reduce reliance on water imported from outside Metropolitan's regional service area.

In addition to these three priorities, Metropolitan also supports industry-wide priorities that are important to many of our member agencies and the efforts to invest in innovative technologies to promote options for increasing water supplies. We encourage a further emphasis on funding for water supply projects and related habitat projects as well as for scientific understanding. Other priorities include:

The Honorable Mike Simpson
 Page 3
 May 24, 2017

- **Hydrologic and Atmospheric Data** – California’s emergency drought shifted to emergency flood conditions this year underscoring the vital importance of maintaining key data sources for forecasting, measuring and monitoring the state’s volatile water resource conditions. We urge continued funding of various hydrologic and atmospheric research and data collection programs including the United States Geologic Survey streamgage program at FY17 levels.
- **Habitat Conservation** – Water project operations are often dictated by environmental conditions. Successful resource management is often achieved through multi-benefit projects. We support the Land and Water Conservation Fund and its partnerships with state and local entities and encourage its continued funding at FY17 levels. These funds are key to habitat restoration efforts that benefit water supply reliability.
- **Water Research Foundation Drinking Water Research** – We encourage your support of the Water Research Foundation’s request to maintain funding at \$5,000,000 for the U.S. EPA Office of Research and Development budget designated for its cost-shared, competitive grant program. Funding at this level will help to ensure that critical water and wastewater-related research continues to meet the needs identified by the local agencies responsible for complying with federal mandates. The Water Research Foundation’s members provide 80 percent of the nation’s drinking water supply. Research at the Foundation continues to focus on the most pressing drinking water issues, including the uncertainties associated with climate change, drought response, desalination, wastewater reuse, replacing aging drinking water systems, and treating water contaminants.
- **Water Infrastructure Funding**: Support measures to fund Environmental Infrastructure Accounts, as enacted under the Water Resources Development Act of 2007. This provision has helped water providers in other states to develop local water projects with the benefit from federal cost sharing that off-sets the cost of processing the permits necessary to move forward with necessary local water infrastructure. California has yet to benefit from this authorized account and Metropolitan requests that a provision be included in the FY18 Energy and Water Development Appropriations bill directing the Army Corps of Engineers to implement the program in a manner that will be applied to California.

Metropolitan appreciates your leadership on national water policy initiatives and your ongoing support and commitment to finding solutions for Southern California’s regional water supply and water quality concerns. We look forward to continuing to work with you on these important water policy objectives.

Thank you for your consideration of these requests.

Sincerely,



Jeffrey Kightlinger
 General Manager



Alliance of the Ports of Canada, the Caribbean, Latin America and the United States

Seaports
Deliver
Prosperity

May 26, 2017

The Honorable Rodney Frelinghuysen
Chairman
House Committee on Appropriations
H-305 Capitol Building
Washington, DC 20515
c/o Nancy Fox

The Honorable Nita Lowey
Ranking Member
House Committee on Appropriations
1016 Longworth House Office Building
Washington, DC 20515
c/o Shalanda Young

The Honorable Mike Simpson
Chairman
House Appropriations Subcommittee on
Energy and Water Development
2362-B Rayburn House Office Building
Washington, DC 20515
c/o Angie Giancarlo

The Honorable Marcy Kaptur
Ranking Member
House Appropriations Subcommittee on
Energy and Water Development
1016 Longworth House Office Building
Washington, DC 20515
c/o Taunja Berquam

Chairmen Frelinghuysen and Simpson, Ranking Members Lowey and Kaptur:

The undersigned ports express their gratitude for your leadership in funding for the U.S. Army Corps of Engineers' (USACE) navigation program at \$2.6 billion for FY 2017, including over \$642 million in programmatic funding increases. We appreciate the Donor and Energy Transfer Ports funding of \$28 million, as authorized in Section 2106 of the Water Resources Reform and Development Act (WRRDA) of 2014.

Each of you recognizes, and has been a champion encouraging others to recognize, the nexus between water resources development and economic prosperity. For that, we thank you. We must maintain our navigation channels for safe and efficient freight movement over the long term.

We look forward to working with you and members of the Subcommittee and full Committee on the FY 2018 Energy and Water Development Appropriations bill for USACE navigation funding, including the full \$50 million for Donor and Energy Transfer Ports authorized in WRRDA.

Sincerely,

Alabama State Port Authority
American Association of Port Authorities
Lake Charles Harbor and Terminal District
Maryland Port Administration
Plaquemines Port, Harbor and Terminal
District
Port Everglades
Port Hueneme
Port of Beaumont
Port of Corpus Christi Authority
Port of Greater Baton Rouge
Port of Houston Authority

Port of Long Beach
Port of Los Angeles
Port of New Orleans
Port of San Diego
Port of Seattle
Port of South Louisiana
Port of Tacoma
Port of Virginia
PortMiami
The Port Authority of New York & New Jersey
The Port of Texas City

June 8, 2017

asbpa

American Shore & Beach Preservation Association

Advocating for healthy coastlines

Online at www.asbpa.org

Washington, DC Office

553 Park Rd NW

Washington, DC 20010

Phone: (202)827-4246

Email: Derek.Brockbank@asbpa.org

Executive Office:

5460 Beaujolais Lane

Fort Myers, FL 33919-2704

Phone: (239) 489-2616

Fax: (239) 362-9771

Email: managing@asbpa.org

The Honorable Lamar Alexander
Chairman
Energy & Water,
Senate Appropriations Committee
U.S. Senate
Washington, DC 20510

The Honorable Dianne Feinstein
Ranking Member
Energy & Water,
Senate Appropriations Committee
U.S. Senate
Washington, DC 20510

The Honorable Mike Simpson
Chairman
Energy & Water Resources,
House Appropriations Committee
U.S. House of Representatives
Washington, DC 20515

The Honorable Marcy Kaptur
Ranking Member
Energy & Water Resources,
House Appropriations Committee
U.S. House of Representatives
Washington, DC 20515

Dear Chairmen Alexander and Simpson and Ranking Members Feinstein and Kaptur:

Since 1926, the American Shore & Beach Preservation Association (ASBPA), a 501(c)3 non-profit, has been dedicated to preserving, protecting and enhancing our coasts by merging science and public policy. Our members are industry, local government officials, academics and residents of coastal districts; we are advocates for healthy coastlines.

As the Senate and House Energy and Water Appropriations sub-committees crafts legislation for Fiscal Year (FY) 2018, we respectfully request you to include the following:

- 1) ***Provide \$75 million in U.S. Army Corps of Engineers-Civil Works (USACE-CW) construction account for shore protection.***

Coastal shoreline counties contribute \$6.9 trillion to our GDP¹. Coastal habitats including beaches, wetlands, mangroves and estuarine systems are some of the most ecologically productive and economically important on earth². But perhaps most importantly to communities that live along a coast, **a healthy coastline provides protection of life and property from the hazards of living by the water** – storm surge, waves, and sea level rise.

With this in mind, we ask you to **support the U.S. Army Corps of Engineers' shore protection budget in the FY18 budget**. While the administration's budget has consistently left shore protection unfunded, Congress has reliably added funding for this critical mission of the USACE. After steady declines for shore protection - \$75 million in FY14, \$45 million in FY15, and \$40 million in FY16 – we were pleased to see an increase to \$50

¹ NOAA. State of the Coast. 2012. <http://stateofthecoast.noaa.gov/>

² Barbier, Et al. "The value of estuarine and coastal ecosystem services". Ecological Monographs, 2011. <http://www.esajournals.org/doi/pdf/10.1890/10-1510.1>

million in FY17. But with our nation's coastal communities increasingly vulnerable to coastal storms and the inevitability of the next major hurricane we ask that you return shore protection levels to that of FY14. The current USACE capacity for shore protection construction exceeds \$150 million, so \$75 million is still less than half of what USACE could accomplish. **Please provide \$75 million in U.S. Army Corps of Engineers-Civil Works (USACE-CW) construction account for shore protection.**

2) Provide \$7.8 million for USACE-CW Operation & Maintenance (O&M) Remaining Item, "Regional Sediment Management (RSM)," to begin work on the South Atlantic Coastal Study.

The WIIN Act authorized a South Atlantic Coastal Study (Sec. 1204), which is a comprehensive study to proactively address the flood risks of vulnerable coastal populations within the South Atlantic Division (North Carolina to Mississippi). The proposed study would address coastal risk management, coastal resilience and sustainability and be modeled closely after the North Atlantic Comprehensive Coastal Study (NACCS) (implemented after Hurricane Sandy) with extensive leveraging of lessons learned, tools and process applied. The goal of the South Atlantic Coastal Study (SACS) is to identify the risks to and vulnerabilities of South Atlantic coastal areas and opportunities to enhance resiliency and lower risks to population centers, economic development, and environmental resources. The proposed study would include:

- Regional reconnaissance-level analyses of vulnerability to sea level rise that will help prioritize future USACE, State, local study efforts;
- Consistent, regional assessment of coastal vulnerability including identification of measures/costs that can address these vulnerabilities;
- Catalogue of ongoing efforts (Federal, State, local, NGO) to address risk and vulnerabilities;
- Regional sediment management (RSM) as a long term management philosophy to maintain or enhance current level of storm protection;
- Coordination with stakeholders, Federal agencies, State, local, and Tribal officials as appropriate.

The full cost of the study is estimated at \$10-14 million, but an initial federal investment of \$6 million would allow the study to begin in earnest and provide usable tools and metrics for coastal communities. Much of the study includes research of vulnerability and availability of sediment currently, which is currently being undertaken nationwide (but with less detail) under the existing "Regional Sediment Management Program" in the U.S. Army Corps of Engineers. **Therefore, the quickest and most efficient way to begin working on the SACS, is to "plus-up" the Regional Sediment Management Program by \$6 million with report language identifying its recommend purpose.**

- 1) **Maintain or increase funding levels for coastal data collection including:**
- a. **O&M item, "Coastal Data Information Program (CDIP)," a minimum of \$5.4 million;**
 - b. **O&M item, "National Coastal Mapping Program," a minimum of the FY17 amount of \$6.8 million;**
 - c. **Investigations item, "Coastal Field Data Collection Program," at the FY17 amount of \$1 million**

The CDIP maintains wave buoys on the Atlantic, Gulf and Pacific coasts that provide data such as wave height, direction and sea surface temperatures. This data is critical to engineering coastal projects, and can provide essential information about long term coastal trends. Congress has maintained funding levels of \$5.4 million for CDIP for the past few years. **Please support the CDIP at the amount of \$5.4 million.** The Coastal Mapping Program is essential to measure shoreline change across the nation; **please support Coastal Mapping at the amount of \$6.8 million.** Coastal Field Data Collection supports the work of the USACE Field Research Facility in Duck, NC, which provides coastal data and research support to all federal agencies. This data is

critical to engineering coastal projects, and can provide essential information about long-term coastal trends; **please support coastal field data collection at the amount of \$1 million.**

ASBPA is grateful to your sub-committees and Congress for making sure the critical missions of the U.S. Army Corps of Engineers, in particular that of coastal flood risk reduction and shore protection, are funded, even when the administration doesn't see fit to support them. Of course, shore protection, RSM and the USACE Coastal Data programs are only a few small pieces of a much larger investment needed in preparing our coastal communities for increasingly intense and frequent coastal storms and hazards. Improving the resilience of coastal communities will take coordination across multiple federal agencies working together with state and local authorities. It will also take a large scale dedicated investment in coastal infrastructure. However a good first step in protecting coastal communities is ensuring shore protection, regional sediment management, and coastal data acquisition are appropriately funded.

Sincerely,



Derek Brockbank
Executive Director

CC: Sens. Thad Cochran, Patrick Leahy; Reps. Rodney Frelinghuysen, Nita Lowey; *Chairs & Ranking Members, Appropriations Committee*



June 13, 2017

The Honorable Thad Cochran
Chairman
Senate Appropriations Committee
113 Dirksen Senate Office Building
Washington, DC 21502

The Honorable Rodney P. Frelinghuysen
Chairman
House Appropriations Committee
2306 Rayburn House Office Building
Washington, DC 20515

The Honorable Patrick Leahy
Ranking Member
Senate Appropriations Committee
437 Russell Senate Office Building
Washington, DC 20510

The Honorable Nita M. Lowey
Ranking Member
House Appropriations Committee
2365 Rayburn House Office Building
Washington, DC 20515

Dear Chairmen Cochran and Frelinghuysen and Ranking Members Leahy and Lowey,

We write to express the serious concern of the U.S. renewable energy industry regarding proposed cuts to the Department of Energy (DOE)'s budget for Fiscal Year (FY) 2018. The Administration has proposed cutting more than \$1.7 billion from programs supporting energy innovation and deployment, a 66 percent decrease from current annualized funding levels. We believe that such cuts would seriously jeopardize America's leadership in cutting-edge research on clean energy technologies and harm our country's overall competitiveness in a rapidly growing global industry that presents a multi-trillion-dollar business opportunity.

The DOE, through its Office of Energy Efficiency and Renewable Energy (EERE), the National Renewable Energy Laboratory (NREL) and other national labs, and the Advanced Research Programs Agency – Energy (ARPA-E), have been instrumental in the research, development and deployment of many important electric power innovations. Investments made through the Office of EERE and the individual technology programs within it have contributed to increased clean energy output, improved reliability, reductions in deployment barriers, and reduced costs, among other benefits. In addition, NREL has secured more than 100 patents and been the source of technological breakthroughs that have improved productivity and reduced the costs of wind turbines, solar panels, geothermal systems, biofuels, electric vehicles and energy storage systems. NREL's work has helped the renewable energy industry achieve impressive cost reductions and NREL has also been a critical partner for the private sector through hundreds of technology partnerships.

The ARPA-E program, which advances high-potential, high-impact research and development across an array of potentially transformative technologies, has provided critical financial support to the energy sector. ARPA-E invests in early-stage projects that typically are not yet mature enough to attract private sector capital. This model has proven successful – of the 580 ARPA-E projects funded since 2009, 74 have already advanced far enough into development to attract private capital and

have secured more than \$1.8 billion in private sector investment.¹ These projects are across an array of technologies, including energy storage, nuclear energy, wind, solar, and carbon capture and sequestration.

The work done by EERE, NREL, and ARPA-E fills a critical gap in research and development programs. In the energy space, the U.S. is at risk of falling behind other countries that are investing in this area, such as China, as it races to develop the next generation of energy technologies.

NREL is not the only national lab impacted by the proposed cuts. Important research on renewable energy, smart grids, grid reliability, cybersecurity, energy storage and grid resiliency is being conducted at over 14 national labs spread across the nation in states such as California, Idaho, Illinois, Iowa, New Mexico, New York, South Carolina, Tennessee, and Washington. The work performed at these labs is vital to modernizing our electricity system. Unfortunately, the administration's proposed budget for FY 2018 would seriously jeopardize important research by these laboratories, cutting over \$2 billion (58%) from current spending levels. This reduction would significantly slow the research and deployment of new and innovative technologies that enable greater energy production at lower costs, and would jeopardize the United States' dominant technological position in electric power and renewable energy research and development.

This is a particularly poor time to reduce research and development investment in energy, because the nation's aging electricity system requires significant new investment in modern infrastructure. NREL and the other national labs are at the forefront of the development of many of the new technologies and software important to a high-performing and reliable grid system. Further, the need for investment in a modern grid system is a global phenomenon and presents a massive market opportunity for American businesses and entrepreneurs. The global energy market attracted \$1.8 trillion worth of investment in 2015 alone.²

Advanced energy technologies represent a multi-trillion-dollar opportunity for American businesses and workers. We respectfully urge you to oppose the proposed FY 2018 cuts to important programs supporting research and development of clean and innovative energy technologies.

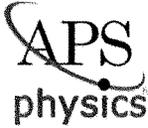
Please feel free to contact us for additional information or if we can be of help in any way.

Sincerely,

American Council On Renewable Energy
 American Wind Energy Association
 Geothermal Energy Association
 National Hydropower Association
 Solar Energy Industries Association

¹ ARPA-E Press Release, available at: <https://arpa-e.energy.gov/?q=news-item/arpa-e-projects-receive-more-18-billion-private-follow-funding-transformational-energy>

² International Energy Agency, "World Energy Investment 2016: Executive Summary", September 2016. Available at: <https://www.iea.org/Textbase/npsum/WEI2016SUM.pdf>.



Division of Nuclear Physics

The American Physical Society

MICHAEL THOENNESSEN
Chair

DAVID J. DEAN
Chair-Elect

ROBERT V. F. JANSSENS
Vice-Chair

BENJAMIN F. GIBSON
Secretary-Treasurer

June 14, 2017

The Honorable Mike Simpson, Chairman
 Committee on Appropriations
 Subcommittee on Energy and Water
 Development
 2084 Rayburn House Office Building
 Washington, DC 20515

The Honorable Marcy Kaptur, Ranking Member
 Committee on Appropriations
 Subcommittee on Energy and Water
 Development
 2186 Rayburn House Office Building
 Washington, DC 20515

Dear Congressman Simpson and Congresswoman Kaptur:

On behalf of the members of the Division of Nuclear Physics (DNP) of the American Physical Society (APS) we are writing to urge you to reject the proposed cuts to federally funded research as described in the FY2018 President's Budget Request. We are particularly concerned with cuts to the fundamental research supported by the Department of Energy's (DOE) Office of Science and the National Science Foundation (NSF) Math and Physical Sciences Directorate. Funding for nuclear science not only makes possible significant discoveries in fundamental research, it also leads to major technical innovations benefiting society (for example in medical imaging, cancer treatment through radio-isotope production, national security, computer simulations and energy production) and stimulating the economy.

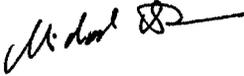
For more than 30 years, the Nuclear Science Advisory Committee (NSAC) has developed Long Range Plans (LRP) outlining the priorities of the field. Over this period of time, federal policy implementing these LRPs and funding provided by Congress have produced a world-leading research enterprise. The most recent LRP (2015) was drafted with the understanding that hard choices and sacrifices had to be made in the event of budgetary constraints. However, never in its planning did the community anticipate such a dramatic cut to the sciences as presented in the President's FY2018 budget request. The LRP explicitly states as the highest priority that "realizing world-leading science also requires robust support of experimental and theoretical research at universities and national laboratories." This priority cannot be achieved through this budget request.

The FY2018 President's budget request does not provide for sufficient funds to maintain U.S. leadership in nuclear science nor to effectively conduct competitive research. It will lead to significant reductions in support of students, postdoctoral fellows, and scientists, which will have long-term implications for the education and availability of highly trained U.S. based experts in nuclear science. The proposed budget would significantly reduce all research activities across nuclear science, terminate several programs, pause or reduce operations at all accelerator facilities, and delay major construction and instrumentation projects.

This President's Budget Request directly impacts the future of nuclear physics through layoffs of highly specialized and trained scientific and technical personnel. Overall, the budget request, representing a reduction of 19% for the DOE Office of Science, Nuclear Physics and 11% for the NSF relative to the FY2017 enacted levels, would have a devastating and long-term impact on nuclear science in the United States, in particular on retaining research personnel and in training the next generation of US nuclear scientists.

With the guidance of the LRP process and close interactions between government sponsors and the research community, the US presently enjoys world leadership in nuclear science research. Concurrently, our community generates tremendous technical expertise that underpins many areas of science and technology that are critical for the national interest. In order to maintain and extend our demonstrable record of excellence and world-leadership, we request that you fund nuclear science at the modest growth scenario from the FY2017 levels as outlined in the NSAC 2015 Long Range Plan.

Sincerely,



Michael Thoennessen, Chair
for the DNP Executive Committee:

David Dean, Chair-Elect
Robert Janssens, Vice Chair
Gordon Cates, Past Chair
Akif Balantekin, Councilor
Benjamin Gibson, Secretary/Treasurer
Gail Dodge, Executive Committee Member
Jorge Piekarewicz, Executive Committee Member
Raju Venugopalan, Executive Committee Member
John Arrington, Executive Committee Member
Rebecca Surman, Executive Committee Member
Remco Zegers, Executive Committee Member

Michael Thoennessen
Chair, APS Division of Nuclear Physics
University Distinguished Professor
Department of Physics & Astronomy
Michigan State University
East Lansing MI 48824

thoenness@msu.edu
Tel.: 517 908 7323
Fax: 517 353 5967



June 14, 2017

The Honorable Lamar Alexander
Chairman
U.S. Senate Committee on Appropriations
Subcommittee on Energy and Water
Development
Washington, DC 20515

The Honorable Dianne Feinstein
Ranking Member
U.S. Senate Committee on Appropriations
Subcommittee on Energy and Water
Development
Washington, DC 20515

The Honorable Mike Simpson
Chairman
U.S. House of Representatives
Committee on Appropriations
Subcommittee on Energy and Water
Development
Washington, DC 20515

The Honorable Marcy Kaptur
Ranking Member
U.S. House of Representatives
Committee on Appropriations
Subcommittee on Energy and Water
Development
Washington, DC 20515

Dear Chairman Alexander, Ranking Member Feinstein, Chairman Simpson and Ranking Member Kaptur:

We write to urge you to support the Department of Energy's (DOE) Combined Heat and Power (CHP) Technical Assistance Partnerships (TAPs) and other activities at DOE that save consumers money, strengthen our nation's energy security, and reduce harmful emissions.

President Trump's 2018 budget blueprint proposes a 70 percent reduction in funding for DOE's Office of Energy Efficiency and Renewable Energy (EERE). Such a reduction would slash resources for DOE's CHP TAPs, housed within EERE, greatly limiting outreach and education about CHP and Waste Heat to Power (WHP) – clean energy sources that can make significant contributions to our country's industrial energy efficiency. The budget further expresses a strong preference for innovative technologies that are "too far from market realization to merit sufficient industry focus and critical mass,"¹ overlooking proven resources to make manufacturers more competitive and reduce emissions. We recommend the EERE continue to focus resources on existing as well as innovative technologies in order to make the most impact.

Cutting support for the TAPs and targeting DOE resources to emerging technologies would undermine America's progress to make our manufacturers more efficient and competitive, increase the reliability of the electric grid, and lower emissions. We urge the Appropriations Committee to reconsider these budget numbers and maintain funding for federal programs that support CHP and WHP deployment.

CHP and WHP face critical barriers in the marketplace, especially a lack of information on the part of businesses who might host these facilities and state and local governments who might

¹ U.S. Office of Chief Financial Officer, May 2017, DOE FY2018 Congressional Budget Request, https://energy.gov/sites/prod/files/2017/05/f34/FY2018BudgetinBrief_0.pdf ("This budget focuses DOE resources toward early-stage R&D.... All EERE programs will focus on research that industry either does not have the technical capability to undertake or is too far from market realization to merit sufficient industry focus and critical mass.")



include them in their energy plans. DOE supports the CHP and WHP industry by helping businesses, government and others understand the potential and benefits of these technologies. Among other things, the DOE TAPs conduct screenings to determine if facilities are good candidates for CHP and WHP. These screenings have included a comprehensive assessment of Army military bases, which led to a federal goal of tripling deployment on Army property by 2020. DOE also produces valuable information about CHP opportunities. For instance, the agency maintains a comprehensive 50-state database of CHP installations, a series of case studies about successful projects, and produces regular reports identifying technical potential. These resources educate potential hosts about the opportunity and encourage them to consider deployment. DOE is also advancing innovative approaches to CHP and WHP deployment by promoting packaged CHP and WHP systems to potential hosts.

DOE's most recent technical potential report identifies 149 gigawatts – or the equivalent of 300 additional power plants - in technical on-site CHP potential, and 15 GW in WHP potential. Recent analysis by the Alliance for Industrial Efficiency finds that deploying even a fraction of these projects could save U.S. businesses \$141 billion in avoided energy costs from 2016-2030.²

The TAPs help the private sector seize this opportunity. The TAPs conduct screenings to help stakeholders determine if they are good candidates for projects and identify resources to help with funding. DOE's CHP database, case studies, and technical potential reports help policymakers identify sectors with significant deployment opportunities.

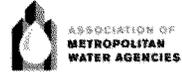
Conventional power generation is incredibly inefficient. By producing both heat and electricity from a single fuel source, CHP dramatically increases the efficiency of energy production. Likewise, WHP systems increase the efficiency of industrial operations by generating electricity on-site from waste heat with no additional fuel or emissions. These energy savings, in turn, reduce energy costs for project hosts, making them more competitive. Because CHP systems can operate independently of the grid, these systems can also keep the lights and power on during extreme weather events. And greater efficiency translates to lower emissions; EPA reports that a typical CHP system can cut greenhouse gas emissions *in half* compared to the separate generation of heat and power, and WHP systems generate additional electricity with no incremental emissions. Recognizing these benefits, EPA has repeatedly identified CHP as a compliance option in Clean Air Act rules.

We urge you to maintain funding for DOE's TAPs and to support continued efforts at the agency around CHP and WHP because these technologies increase U.S. competitiveness, enhance the resiliency of our energy infrastructure, and lower emissions.

Sincerely,

Jennifer Kefer
Executive Director
Alliance for Industrial Efficiency

² The Alliance for Industrial Efficiency, Sep, 2016, "State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency" (<http://www.aieefficiency.com>). Report considers CHP potential alongside other industrial efficiency improvements. Citation refers to unpublished data reflecting CHP and WHP deployment alone.



June 14, 2017

Chairman Rodney Frelinghuysen
 Ranking Member Nita Lowey
 House Committee on Appropriations
 Washington, D.C. 25015

Dear Chairman Frelinghuysen and Ranking Member Lowey,

As leaders at western water utilities and on behalf of the members of WaterNow Alliance and the Association of Metropolitan Water Agencies, we write to ask for your support for increased funding for the Bureau of Reclamation's WaterSMART Grants Program in the Interior FY 2018 appropriations bill. This modest program provides vitally needed and innovative support for effective water management throughout the West. Specifically, we request that you fund the Bureau of Reclamation's WaterSMART Grants Program at \$30 million and pass a multi-year extension of Section 9504 of the SECURE Water Act (42 U.S.C. 10364) to ensure the water-saving program continues without interruption.

Public water utilities comprise over 80% of U.S. municipal water providers. Our ability to provide clean and reliable drinking water supplies faces growing challenges from drought, stormwater runoff, aging infrastructure, rising costs, and more. The Colorado River provides drinking water to over 35 million people, supplies water to over 5 million acres of irrigated land, and supports an estimated \$1 trillion dollars in total economic activity – including a thriving recreation industry worth over \$26 billion dollars annually. But by 2060, the Bureau of Reclamation anticipates water demands will exceed available supplies by over 3 million acre-feet.

The WaterSMART Grants Program saves an estimated 1 million acre-feet annually, providing enough water for over 4.5 million people. Nonetheless, there is a significant amount of unmet savings potential — only 1 in 5 grant applications receive funds. A \$30 million appropriation will leverage many additional millions in non-federal funds and make significant progress toward closing the water supply gap across the West.

It is vital to continue to fund and support effective federal programs for water management solutions in the West. Effective collaboration between federal, state, and local governments and tribes is required to more efficiently administer water in the region. Therefore, we urge you to increase funding for the WaterSMART Grants Program to the authorized level of \$30 million.

Thank you for your consideration of our request.

Sincerely,

Cynthia Koehler
 Executive Director
 WaterNow Alliance

Diane VanDe Hei
 Chief Executive Officer
 Association of Metropolitan Water Agencies

Frank L. Blanco
Director
Apache Junction Water District, AZ

Kyla Allen
Councilmember
City of Cottonwood, AZ

Eva Putzova
Councilmember
City of Flagstaff, AZ

Bart Turner
Councilmember
City of Glendale, AZ

Wally Campbell
Vice Mayor
City of Goodyear, AZ

Mark Holmes
Water Resources Manager
City of Goodyear, AZ

Dave Richins
Former Councilman
City of Mesa, AZ

Kevin Thompson
Councilmember
City of Mesa, AZ

Vicki Hunt
Councilmember
City of Peoria, AZ

Kate Gallego
Councilmember
City of Phoenix, AZ

Thelda Williams
Councilmember
City of Phoenix, AZ

Lauren Kuby
Councilmember
City of Tempe, AZ

Gary Knight
Councilmember
City of Yuma, AZ

Stacy Taylor
External Affairs Manager
Mesa Water District, AZ

Wayne Debrosky
Public Works/Utilities Director
Town of Clarkdale, AZ

Martin L. Koller
Director (ret.)
Alameda County Water District, CA

Robert Dean
Board President
Calaveras County Resource Conservation District, CA

Larry Moody
Mayor
City of East Palo Alto, CA

Sam Hindi
Vice Mayor
City of Foster City, CA

Michael Kasperzak
Former Mayor
City of Mountain View, CA

John McAlister
Councilmember
City of Mountain View, CA

Patricia Showalter
Councilmember
City of Mountain View, CA

Kathleen Ward
Mayor
City of San Clemente, CA

Sylvia Ballin
Mayor
City of San Fernando, CA

Kerry Ferguson
Mayor
City of San Juan Capistrano, CA

Jason Dominguez
Mayor Pro Tem
City of Santa Barbara, CA



Meghan Sahli-Wells
Councilmember
Culver City, CA

Marguerite Young
Director
East Bay Municipal Utility District, CA

Kathy Besser
Executive Manager of External Affairs & Policy Dev.
Inland Empire Utilities Agency, CA

Steven Elie
President
Inland Empire Utilities Agency, CA

Harry Saltzgaver
Water Commissioner
Long Beach Water Department, CA

Tom DuBois
Councilmember
City of Palo Alto, CA

Steve Jordan
Director
Purissima Hills Water District, CA

Tim Smith
Board Director
San Diego County Water Authority, CA

Gary Kremen
Director
Santa Clara Valley Water District, CA

Ron Duncan
General Manager
Soquel Creek Water District, CA

Dennis A. Erdman
Director
South Coast Water District, CA

Bill Green
Director
South Coast Water District, CA

Marshall P. Brown
Aurora Water Director
City of Aurora, CO

Bob Roth
Councilmember
City of Aurora, CO

Matt Appelbaum
Councilmember
City of Boulder, CO

Philip F. Johnson
Director of Public Works
City of Cortez, CO

John Ballew
Utilities Commissioner
City of Durango, CO

Gerry Horak
Mayor Pro Tem
City of Fort Collins, CO

John Harris
Public Works Director
City of Montrose, CO

R. Eric Kuhn
General Manager
Colorado River Water Conservation District, CO

Dave Edwards
Mayor Pro Tem
Town of Palisade, CO

Chris Bryant
City Commissioner
City of Clovis, NM

Olga Pedroza
City Councilor
City of Las Cruces, NM

Peter Ives
Councilmember
City of Santa Fe, NM

Joseph M. Maestas
City Councilor
City of Santa Fe, NM

Debbie Hughes
Executive Director
New Mexico Association of Conservation Districts

William "Geno" Withelder
Mayor Pro Tem
City of Mesquite, NV

Tim H. Nelson
Deputy Mayor Pro Tem
City of Frisco, TX

Steve Kana
Director of Water & Sewer Utilities
City of Killeen, TX

Jeannie Simmonds
Chair
Cache Water District, UT

Maile Wilson
Mayor
Cedar City, UT

Sharla Beverly
Councilmember
City of South Salt Lake, UT

Erin Mendenhall
Councilmember
Salt Lake City, UT

Thomas Ward
Director of Sandy Public Utilities
Sandy City, UT

Cynthia R. Pratt
Deputy Mayor
City of Lacey, WA

De'Sean Quinn
Councilmember
City of Tukwila, WA

CC: Chairman Simpson, Energy and Water Subcommittee
Ranking Member Kaptur, Energy and Water Subcommittee



June 19, 2017

Headline Sponsors

U.S. Department of Energy
General Motors Company

Honorable Members of Congress

United States Congress
Washington, D.C. 20515

Visionary Partners

MathWorks
National Science Foundation
California Air Resources Board
NXP

RE: Preservation of Funding in the FY2018 Budget for the U.S. Department of Energy's Advanced Vehicle Technology Competitions (AVTC) (*Energy, Volume 3, Pg. 41, 43*)
<https://www.energy.gov/sites/prod/files/2017/05/f34/FY2018BudgetVolume3.pdf>

Dear Honorable Members of Congress:

Leadership Partners

AVL Powertrain Engineering
BOSCH
ETAS
PACCAR
dSPACE, Inc.

As 14 presidents of the U.S. universities participating in the Department of Energy's Advanced Vehicle Technology Competitions (AVTC), **we urge you to protect the DOE's AVTC program from having its funding eliminated under the President's current proposed Fiscal Year 2018 budget.**

Sustaining Partners

Snap-on Tools
Siemens
GKN Driveline
Transportation Research Center

DOE's \$10M contribution over the four-year program represents just over 36% of the program budget. This is highly leveraged by additional industry and government support totaling more than \$17.5M for the four-year program. This is supplemented by over \$910M of in-kind support including software, hardware, and components from industry that goes directly to the universities participating in the program.

Supporter

Denso
Champlain Cable
Woodward
Proterra
Ricardo

For more than 28 years, the U.S. Department of Energy has sponsored Advance Vehicle Technology Competitions, such as EcoCAR 3, in partnership with the North American auto industry and academia. Exemplifying the power of public and private partnerships, AVTCs have helped build capabilities that evolve American engineering and manufacturing, while accelerating the development and demonstration of emerging automotive technologies, which are mission-critical to American competitiveness and continued workforce development. Recently the President signed an executive order on apprenticeships – proof positive these types of programs are successful and accountable.

Contributor

Mentor Graphics
New Eagle
tesa tape
Vector
Delphi Foundation
EcoMotors
EPRI
A123 Systems
Flextronics

As you know, the automotive industry accounts for nearly 3.5 percent of the U.S. gross domestic product and is directly responsible for more than 9 million high-paying American jobs. And there's a big ripple effect -- half of the companies listed in the Dow Jones Industrial Average depend on the auto industry for revenue. Outside of the U.S., the auto industry is the single greatest engine of economic growth which means competition is fierce. It is imperative that we make the investments necessary to keep America's leadership position in an increasingly competitive global marketplace.

As you consider the administration's proposed budget, we hope we can count on your support for AVTCs – a program that builds American engineering prowess and has successfully moved more than 17,000 students into the workforce. Here is just a small sample of where they have gone on to secure jobs: General Motors, Ford, Tesla, Siemens, Apple, Google, ExxonMobil, IBM, GE, Caterpillar and PACCAR to name just a few.

Arizona State University • California State University – Los Angeles • Colorado State University
Embry-Riddle Aeronautical University • Georgia Tech • McMaster University
Mississippi State University • Ohio State University • Penn State University
University of Tennessee, Knoxville • University of Alabama • University of Washington
University of Waterloo • Virginia Tech • Wayne State University • West Virginia University



June 19, 2017

In solidarity with the 14 presidents of U.S. universities participating in EcoCAR 3, we call on you to safeguard America's premiere automotive engineering competition. **Please consider protecting the FY2018 funding for AVTCs.**

Thank you for the opportunity to share our concerns and for your consideration. To learn more about AVTCs, please feel free to reach out to any of us directly, visit the program's website - <http://avtcs.org/> or for information on the current competition go to www.ecocar3.org.

Sincerely,

DocuSigned by:
President Mark E. Keenum
 Mark E. Keenum
 President
 Mississippi State University

DocuSigned by:
President Michael M. Crow
 Michael M. Crow
 President
 Arizona State University

DocuSigned by:
President William A. Covino
 William A. Covino
 President
 California State University, Los Angeles

DocuSigned by:
President Tony Frank
 Tony Frank
 President
 Colorado State University

DocuSigned by:
President G. P. "Bud" Peterson
 G.P. "Bud" Peterson
 President
 Georgia Tech

DocuSigned by:
President Michael V. Drake
 Michael V. Drake
 President
 The Ohio State University

DocuSigned by:
President Eric J. Barron
 Eric J. Barron
 President
 Pennsylvania State University

DocuSigned by:
President Stuart R. Bell
 Stuart R. Bell
 President
 University of Alabama

DocuSigned by:
President Joseph A. DiPietro
 Joe DiPietro
 President
 University of Tennessee

DocuSigned by:
President Ana Mari Cauce
 Ana Mari Cauce
 President
 University of Washington

DocuSigned by:
President Timothy Sands
 Timothy Sands
 President
 Virginia Tech

DocuSigned by:
President M. Roy Wilson
 M. Roy Wilson
 President
 Wayne State University

DocuSigned by:
President E. Gordon Gee
 E. Gordon Gee
 President
 West Virginia University

DocuSigned by:
President P. Barry Butler
 Dr. P. Barry Butler
 President
 Embry Riddle Aeronautical University

Arizona State University • California State University – Los Angeles • Colorado State University
 Embry-Riddle Aeronautical University • Georgia Tech • McMaster University
 Mississippi State University • Ohio State University • Penn State University
 University of Tennessee, Knoxville • University of Alabama • University of Washington
 University of Waterloo • Virginia Tech • Wayne State University • West Virginia University



June 21, 2017

BICEP Network Members:

Annie's Inc.
 Aspen Skiing Company
 Autodesk, Inc.
 Aveda
 Ben & Jerry's
 Burton Snowboards
 CA Technologies
 Clif Bar & Company
 Dignity Health
 eBay Inc.
 Eileen Fisher
 Etsy, Inc.
 Fetzer Vineyards
 Gap Inc.
 General Mills, Inc.
 IKEA
 JLL
 KB Home
 The Kellogg Company
 Levi Strauss & Co.
 LBrands
 L'Oreal USA
 Mars Incorporated
 Nestlé
 New Belgium Brewing
 Nike
 The North Face
 Outdoor Industry Association
 Owens Corning
 Patagonia
 Portland Trail Blazers
 Seventh Generation
 Sierra Nevada Brewing Co.
 Starbucks
 Stonyfield Farm
 Symantec Corporation
 Timberland
 Unilever
 VF Corporation
 Vulcan, Inc.
 Worthen Industries

The Honorable Rodney
 Frelinghuysen
 U.S. House of Representatives
 Committee on Appropriations
 H 305, The Capitol
 Washington, D.C. 20510

The Honorable Nita M. Lowey
 U.S. House of Representatives
 Committee on Appropriations
 H 305, The Capitol
 Washington, D.C. 20510

The Honorable Mike Simpson
 U.S. House of Representatives
 Appropriations Subcommittee on
 Energy and Water Development
 H 305, The Capitol
 Washington, D.C. 20510

The Honorable Marcy Kaptur
 U.S. House of Representatives
 Appropriations Subcommittee on
 Energy and Water Development
 H 305, The Capitol
 Washington, D.C. 20510

RE: Energy and Water Development FY18 Appropriations

Dear Chairman Frelinghuysen, Ranking Member Lowey, Chairman Simpson,
 and Ranking Member Kaptur:

As a coalition of diverse U.S. businesses and business groups, Business for Innovative Climate and Energy Policy (BICEP) urges you to maintain funding for key programs within the Department of Energy, including the Energy Efficiency and Renewable Energy (EERE) program, the Office of Science, the Advanced Research Projects Agency (ARPA-E), the Advanced Technology Vehicles Manufacturing (ATVM) Loan Program, and the Title XVII Innovated Clean Energy Projects Loan Guarantee Program (Title XVII).

BICEP is a coalition of leading businesses that understand the importance and popularity of continued development of clean energy resources and supporting technologies and practices. Many BICEP companies have significant renewable energy and energy efficiency targets, and the programs contained within the Department of Energy are critical to help these companies meet those goals.

EERE, which supports various clean energy and technology development and research programs, faces a 69.3 percent spending cut – including cuts to various technology offices such as wind, solar, and geothermal. The coalition urges you to provide at least \$2.06 billion to the office for FY18 – in line with FY17 funding levels. EERE has proved instrumental in the development, adoption, and rapid expansion of solar, wind, and other renewable energy



sources – as well as their integration into the electric grid. For example, the SunShot program partners with public and private companies to drive down the price of solar energy and to make the technology more accessible. However, under the President’s budget request, over 56 percent of renewable energy funding is cut.

EERE also supports other projects, such as energy efficiency and sustainable transportation programs. In a world of energy and resource scarcity, these programs are necessary to help the U.S. and its homegrown businesses stay a step ahead in the 21st century global economy.

BICEP also supports continuing full FY17 levels of funding for the Office of Science. This office provides the necessary basic science and early stage research to both further scientific knowledge and to be able to develop new technologies and innovations. Much of the research that has come out of the Office of Science has not only improved knowledge of the environment, but has also led to tangible innovations in areas from national defense to energy.

The coalition strongly supports continuing, and expanding, ARPA-E, which the budget proposal eliminates. This program has shown promising returns in high-risk, high reward energy technology research, which typically would be too risky for the private sector to undertake. There have already been strong results: with around \$300 million of annual funding, the program has supported companies that have gone on to secure more than \$1.8 billion in outside funding. One company, 1366 Technologies, is currently building a factory in New York for solar wafer manufacturing, thanks to ARPA-E’s investments. The President’s budget has argued that the private sector is better suited to fill ARPA-E’s role. However, according to a recent report by the National Academies of Sciences, ARPA-E has led to significant innovations in energy R&D that would not have taken place in absence of the program. The types of innovative research that the program funds has the potential to fundamentally change the way energy is produced, stored, and used.

The President’s budget proposal also eliminates two key loan programs, the ATVM and Title XVII. BICEP supports the full funding of both these loan programs as per FY17 levels. The ATVM is an important loan program that helps car manufacturers research and develop higher fuel-economy cars and lessen dependence on oil. Tesla is an example of a beneficiary of the program, and has fully repaid its loan. Title XVII provides loans that accelerate new technologies in fossil, nuclear, and renewable energy to move towards a more sustainable and clean future. Both these programs fill a critical gap in the development of new clean technologies, and support companies on the verge of commercialization when private funding is waiting on the sidelines.

The Department of Energy plays a vital role in ensuring the safety and sustainability of energy sources. The BICEP coalition believes a large part of that is through the development of new and innovative clean energy sources. However, the President’s budget proposal significantly cuts and eliminates important programs and undermines the ability to transition to a low-carbon, sustainable 21st century economy. Investment in new technology and energy is necessary to stay competitive and



relevant in a changing climate and world, and is a relatively small up-front cost that results in large benefits in the future. BICEP strongly urges you to maintain funding for these programs and offices.

Thank you for your consideration, and for your leadership.

Sincerely,

A handwritten signature in black ink, appearing to read "Anne Kelly". The signature is fluid and cursive.

Anne Kelly
Senior Director, Policy and BICEP Network
Ceres
On behalf of Ceres BICEP Network [Business for Innovative Climate & Energy Policy]

The Ceres BICEP Network comprises influential companies advocating for stronger climate and clean energy policies at the state and federal level in the U.S. As powerful champions of the accelerated transition to a low-carbon economy, Ceres BICEP Network members have weighed in when it has mattered most. For more information on the Ceres BICEP Network, [click here](#).



June 21, 2017

The Honorable Lamar Alexander, Chairman, Senate Energy & Water Appropriations Subcommittee
The Honorable Dianne Feinstein, Ranking Member, Senate Energy & Water Appropriations Subcommittee
The Honorable Mike Simpson, Chairman, House Energy & Water Appropriations Subcommittee
The Honorable Marcy Kaptur, Ranking Member, House Energy & Water Appropriations Subcommittee

Re: Maintaining Funding for DOE's Deployment of Alternative Fuels and Vehicles

Dear Chairman Alexander, Ranking Member Feinstein, Chairman Simpson, and Ranking Member Kaptur:

The Coalition for Renewable Natural Gas (RNG Coalition) thanks you for maintaining funding for the Department of Energy (DOE) Clean Cities alternative fuels and vehicle deployment program in FY 2017, and we strongly urge you to ensure adequate funding again in FY 2018.

RNG is an ultra-clean, domestically produced source of electricity, heat, and transportation fuel. Presently, the volume of renewable natural gas in our pipelines fuels 21% (by fuel volume) of U.S. medium and heavy duty trucks, busses and other vehicles that run on Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG).¹

The RNG Coalition is a non-profit industry association dedicated to the advancement of RNG as a clean and domestic fuel and energy source. We represent nearly 100 member companies and organizations that participate at all stages of biogas-to-Renewable CNG and LNG transportation fuel production and supply chains.

Like many coalitions, business leaders, local and state officials, and other stakeholders working to advance markets for cleaner transportation fuels and vehicles, we were dismayed to see that the White House budget proposes a total elimination of funding for Clean Cities as part of cutting the DOE Vehicle Technologies program from \$307 million to \$82 million (a 73% reduction). We are counting on your support to maintain funding for this critical program. By advancing markets for alternative fuels and vehicles that are primarily domestically produced, Clean Cities is helping to stabilize gasoline prices, decrease our reliance on foreign oil, and create American jobs.

To prevent the negative consequences to our clean technology and alternative vehicle industries that would occur from elimination of the DOE's Clean Cities Program, we join Clean Cities groups

¹ Based on a comparison of EPA's 2016 EMTS data and EIA's 2016 data in the 2017 Annual Energy Outlook.

form across the nation in requesting that you include the following report language in the Vehicle Technologies section of the Energy Efficiency and Renewable Energy Account in the FY 2018 Energy and Water appropriations bill:

“Within available funds, the Committee recommends \$50,000,000 for Outreach, Deployment and Analysis to support the Clean Cities Alternative Fuels and Vehicles Deployment Program. Within this amount, \$40,000,000 is provided for Deployment through the Clean Cities Program, including at least \$20,000,000 for competitive grants to support alternative fuel, infrastructure, and vehicle deployment activities. When issuing competitive grants, the Department is encouraged to focus on awards that range from \$500,000 to \$1,000,000 each and include at least one Clean Cities Coalition partner. The Department is encouraged to ensure balance in the award of funds to achieve varied aims in fostering broader adoption of clean vehicles and installation of supporting infrastructure. “

Despite the recent decrease in the cost of gasoline, prices in America remain subject to supply disruption that create volatility, which negatively impacts both business operating expenses and household budgets. We continue to send more than \$150 billion a year to OPEC and other foreign countries for oil. Meanwhile, China and other nations threaten to beat out the United States for leadership in advanced vehicle technologies and markets. As stated in the Administration's budget justification, “Vehicles move our national economy....Growing our economy requires transportation, and transportation requires energy, yet our dependence on oil for transportation remains a significant challenge.” More than 70 percent of the oil we import is used as our primary transportation fuel – as gasoline for our national fleet of 250 million cars and light trucks, or as diesel fuel for our 3.6 million heavy-duty trucks.

The DOE Clean Cities Program is the federal government's most effective initiative focused on increasing energy security through the deployment of alternative fuels, vehicles, and infrastructure that are primarily domestically produced. According to DOE annual reports, from 2006 through 2015 Clean Cities has leveraged \$207.3 million in program funding into another \$2.2 billion in state, local, and private investment in alternative fuels deployment projects. This is an overall leverage ratio of \$10.60 for every \$1 in the Clean Cities budget. These funds were used to deploy a diverse array of petroleum reducing fuels, vehicles and refueling stations that were based on specific state and local transportation needs. Clean Cities has developed projects that have reduced petroleum consumption by more than 8.5 billion gallons. The program is on track to decrease petroleum use by 2.5 billion gallons annually by 2020.

In addition to enhancing our energy security, clean transportation industries – including the RNG industry – are critical to our economic growth and global competitiveness.

- The U.S. is the number one producer of natural gas in the world, and American businesses and consumers continue to embrace natural gas vehicles. There are currently 153,000+ natural gas vehicles on America's roads, which are supported by 1,750 fueling stations connected by 1.5 million miles of natural gas pipelines. Projections indicate that the transportation sector will consume 1.2 trillion cubic feet of clean-burning, domestic natural gas by 2030 and that a significant portion of the light and heavy-duty vehicle markets could be powered by natural gas by 2050.
- Twenty-two (22) new RNG projects are presently under development. Because the average RNG project requires \$16 Million in development investment and creates 173 direct and indirect jobs, RNG is increasingly becoming a major job creator in communities across America. Without disruption to federal programs such as DOE Clean Cities that help to

support adoption of renewable fuels, we anticipate an additional \$352 million in project construction investment and 3,806 new direct and indirect jobs in 2018 alone.

In conclusion, we urge you to include the above report language in the FY 2018 Energy and Water Appropriations bill, which would ensure adequate funding for the deployment of alternative fuels and vehicles through the DOE Clean Cities program. Stability and predictability are needed in federal support for alternative fuels and advanced technology vehicles to allow long-term private sector planning and investment to occur efficiently. Now is the time for Congress to maintain critical investment in the deployment of clean, domestically produced fuels and vehicles.

Thank you for your consideration of this letter, and please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Marcus D. Gillette". The signature is fluid and cursive, with the first name being the most prominent.

Marcus D. Gillette
Director of Public and Government Affairs
Coalition for Renewable Natural Gas
Marcus@RNGCoalition.com

June 23, 2017

Mike Simpson, Chairman
 US House Committee on Appropriations
 Subcommittee on Energy and Water
 Development, and Related Agencies
 2084 Rayburn Bldg.
 Washington, D.C. 20515

Marcy Kaptur, Ranking Member
 US House Committee on Appropriations
 Subcommittee on Energy and Water
 Development, and Related Agencies
 2186 Rayburn Bldg.
 Washington, D.C. 20515

Dear Chairman Simpson and Ranking Member Kaptur:

As you contemplate the Fiscal Year 2018 budget, we write to you in support of increased funding levels to the US Army Corps of Engineers (USACE) to expedite the completion of congressionally authorized Everglades and South Florida ecosystem restoration projects and the rehabilitation of the Herbert Hoover Dike.

The Everglades is a national treasure, but manmade alterations, primarily by the USACE, have created significant environmental effects that must be remedied. Restoring the historic southerly flow of clean water from Lake Okeechobee to Florida Bay (Bay) is critical to ensure public safety, maintain proper salinity in the Bay and to reduce the necessity for, and the frequency of, releases to the Caloosahatchee and St. Lucie Rivers. In recent years, these releases to the east and west of Lake Okeechobee into the St. Lucie and Caloosahatchee Rivers have resulted in catastrophic algal blooms and seagrass die-offs that have dramatically impacted not only the environment, but the sportfishing and boating industries in south Florida.

Over 3 million of the nation's 46 million recreational anglers reside in or frequent Florida, with many focusing on the iconic fishing opportunities in the southern part of the state that has been most affected by the impacts of ongoing delays in Everglades restoration. In Florida, the Fishing Capital of the World, the sportfishing industry is a \$9.6 billion economic engine supporting over 128,000 jobs, making clean waters and abundant fisheries in the State of paramount importance to us.

Our industry is committed to expediting the restoration of the historic southern flow of freshwater through the Everglades into Florida Bay and the reduction of the damaging releases to our coastal estuaries. Everglades restoration needs to be completed more quickly, and this can only happen with additional federal funding. While the state of Florida has shown its commitment to restoration by establishing significant recurring funding and bonding options, its federal partner, the USACE, has been challenged in directing funds to these projects. Currently, the state of Florida is approximately \$1 billion ahead of the federal government in its expenditures on Everglades restoration under the established 50/50 cost share agreement.

Given the importance of the Everglades to our nation and our economy, we urge you to provide federal funding for restoration projects that have already been

authorized by Congress, including Tamiami Trail bridging, the Central Everglades Planning Project and repairs to the Herbert Hoover Dike so that they can be completed as quickly as possible to prevent further ecologic and economic damage.

We look forward to working with you to achieve timely restoration of this most unique ecosystem. Thank you for your consideration.

Sincerely,

American Sportfishing Association

Bass Anglers Sportsman Society

National Marine Manufacturers Association

Snook and Gamefish Association

Guy Harvey Ocean Foundation

National Professional Anglers Association

Theodore Roosevelt Conservation Partnership

International Gamefish Association

BoatUS

Captains for Clean Water

Bonefish Tarpon Trust

Congressional Sportsmens Foundation

Center for Sportfishing Policy

American Fish and Wildlife Association

Fishing League Worldwide

Marine Industries Association of Florida

Marine Retailers Association of the Americas

Coastal Conservation Association

Recreational Fishing Alliance



Steve Moyer
Vice President of Government Affairs

June 27, 2017

The Honorable Michael Simpson, Chairman
Subcommittee on Energy and Water Development, and Related Agencies
U.S. House of Representatives, Committee on Appropriations

The Honorable Marcy Kaptur, Ranking Member
Subcommittee on Energy and Water Development, and Related Agencies
U.S. House of Representatives, Committee on Appropriations

RE: Bureau of Reclamation FY18 Budget Request.

Dear Chairman Simpson, Ranking Member Kaptur, and Members of the Subcommittee,

I am writing on behalf of Trout Unlimited (TU) and its 300,000 members and supporters to express our views on Fiscal Year 2018 appropriations for programs within your jurisdiction which are of great interest to our members and essential to the success of our mission. We also wanted to thank you for the outstanding work you did on the FY 17 appropriations bill. It was much appreciated by western conservationists and agricultural producers alike.

TU looks forward to working with you and the Subcommittee to fund the Bureau of Reclamation's (BOR) many programs that are critical for protecting and restoring trout and salmon resources, while providing for irrigation, energy development, and other water uses.

TU has enjoyed productive partnerships with BOR to improve stream flows and habitat for trout and salmon. The following programs support these efforts, and help BOR accomplish its mission of managing water and related resources in an environmentally and economically sound manner.

System Conservation Pilot Program (SCPP):

TU FY18 Request: \$50m (as authorized by the WIIN Act)

The System Conservation Pilot Program (SCPP) is emerging as a critical tool for protecting water storage levels in the largest and most important federal reservoirs in the Colorado River Basin: Lakes Powell and Mead. SCPP supports trout fisheries in the upper basin, as well as conserving water in ways that benefit the entire Colorado River system – a novel goal that reflects

A mission to conserve, protect, & restore North America's coldwater fisheries and their watersheds.

National Office: 1777 N Kent St., Suite 100, Arlington, VA 22209
T: (703) 284-9406 F: (703) 284-9400 smoyer@tu.org www.tu.org

increased collaboration among all water use sectors. We support funding for additional projects that shore up the Colorado River system by creating system water that benefits Lakes Mead and Powell and believe we should prioritize investment in infrastructure and water use efficiency improvement projects that have the potential for longer-term benefits even if outside of the temporary nature of the SCPP. Any proposals that take farmland out of production, even on a temporary basis, must work for agriculture and help make agriculture more efficient and stronger for the future. Any demand management projects that are contemplated should be voluntary and compensated.

SCPP has produced very promising results so far. It was launched in FY14 with \$3 million in federal funds that was more than matched by \$9.5 million from large cities in both the Upper and Lower Basins. In FY15, another \$8.6 million in federal funds supported a similar and larger effort in the Lower Basin to protect at least 750,000 acre-feet of storage volumes at Lake Mead, with the bulk of the protection coming from water providers in the Lower Basin. Reclamation received another \$5 million for SCPP in FY16.

Over the past two years we have made tremendous progress in the Upper basin. Over the past two years TU has helped enroll many new producers in the program, which, if fully funded, would have provided more than 20,000-acre feet of water from willing ranchers, and farmers in Wyoming, Utah and Colorado. Adequate funding is needed in FY18 to scale up these kinds of programs in both the Upper and Lower Basins of the Colorado River without negatively impacting agricultural production and the rural economies and communities that are dependent on these farms and ranches.

Basin-Specific Funding

Yakima River Basin Water Enhancement Project

FY17 Annualized CR: \$25.8m

FY18 Administration Request: \$17.1m

TU FY18 Request: \$30m

TU strongly supports the Yakima River Basin Water Enhancement Project (YRBWEP). This multi-decade project aimed at meeting the needs of a diverse set of stakeholders in the Yakima basin will increase water storage, as well as install fish passage for steelhead and salmon, and guarantee greater minimum flows for these species. TU requests the appropriation of \$30m to the YRBWEP for FY18 to implement authorized components of the plan, including 12-months capital construction costs for the Cle Elum Fish passage, and Cle Elum Pool Raise, as well as cost share ongoing water conservation projects under YRBWEP, and to commence environmental planning work on the Keehelus to Kachess Conveyance Project, Kachess Drought Relief Pumping Plant, and the Tieton Fish Passage project.

The FY2018 federal cost share request of \$30 million would help balance significant investments of approximately \$161 million by the State of Washington since 2013 into the Yakima Basin Integrated Plan. Washington State and Yakima River Basin water users shall contribute, at minimum, 50% of the overall costs to implement the Integrated Plan. The Integrated Plan is estimated to cost approximately \$3.8 to 4.2 billion and take 30-years to complete. The Integrated Plan is segmented into three – 10 year periods or phases to authorize, manage and finance the plan.

Columbia and Snake River Salmon Recovery Project

FY17 Annualized CR: \$18m

FY18 Administration Request: \$19m

TU FY18 Request: \$19m

TU supports the \$19 million request for the Columbia and Snake River Recovery Project for FY18. This program helps facilitate the implementation of restoration activities mandated by the Federal Columbia River Power System biological opinions. TU has multiple cooperative agreements with the Columbia and Snake River Recovery Office to complete multi-year projects in the Methow, Wenatchee, Entiat, and Upper Salmon sub-basins that will increase stream flow and remove barriers to fish migration, helping endangered steelhead and salmon.

San Joaquin Restoration Fund

FY17 Annualized CR: \$52m

FY18 Administration Request: \$34m

TU FY18 Request: \$36m

TU respectfully requests \$36 million for the San Joaquin Restoration Fund for FY18. The San Joaquin settlement ended nearly 20 years of litigation over streamflows and salmon restoration in the San Joaquin River; the requested funds are necessary to keep the restoration agreement moving forward. Funding will allow continued progress toward salmon recovery and increased stability for affected water users, a critical investment considering California's ongoing drought crisis.

Colorado River Basin Salinity Control Project (Title II)

FY17 Annualized CR: \$8.4m

FY18 Administration Request: \$8.4m

TU FY18 Request: \$8.4m

TU respectfully requests the \$8.4 million for the Colorado River Basin Salinity Control Project (Title II) for FY18. The Salinity Control Program supports water quality improvement projects on both public and private lands - enhancing water quality for all users in the basin. A portion of these funds are used to invest in irrigation efficiencies on private land to improve streamflow and water

quality. TU is proposing to use funds from this basin-wide competitive grant program in the Henry's Fork of the Green River (WY) and Gunnison River (CO).

WaterSMART Program

Basin Studies

FY17 Annualized CR: \$5.2m

FY18 Administration Request: \$5.2m

TU FY18 Request: \$5.2m

TU supports the FY18 budget request for continued funding of \$5.2 million for Basin Studies under the WaterSMART program. TU has been an active participant in Basin Study efforts in the Colorado, Yakima, and Henry's Fork watersheds. These studies provide a tool for bringing together diverse interests in a basin to project long-term water supply needs and demands and proposing ways to address imbalances. Basin Studies develop a diverse set of management scenarios such as water conservation, changes in supply and demand, and climate modeling. The Basin Studies are a critical tool for the future long-term management of large river basins in an increasingly arid West.

WaterSMART Grants

FY17 Annualized CR: \$29m

FY18 Administration Request: \$23.4m

FY18 Request: \$30 million

TU respectively requests \$30 million to the WaterSMART Grants program for FY18. WaterSMART grants represent an innovative approach to prioritizing projects with water efficiency savings to help ensure on-the-ground conservation benefits, and complement the Basin Studies program by targeting funds to projects that address concerns raised in respective studies. For example, TU has worked with the agricultural community, Sun River Watershed Group, and other local stakeholders to secure multiple WaterSMART grants for the Sun River in Montana. The funds have been instrumental in helping to meet streamflow restoration needs while also updating irrigation infrastructure. The WaterSMART grants have helped producers move toward a modernized system that provides for both river health and ranch and farm operation needs.

Cooperative Watershed Management Program

FY17 Annualized CR: \$0.75m

FY18 Administration Request: \$1.75m

FY18 Request: \$1.75m

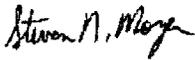
TU respectfully requests that you provide \$1.75 million for the Cooperative Watershed Management Program. This program supports the formation and development of locally-led

watershed groups and facilitates the development of multi-stakeholder watershed management projects. Funding for the Act will expedite the formation of successful watershed processes throughout the Colorado River Basin, and in other high-priority basins.

Conclusion

Thank you for considering our views and recommendations. Reclamation has been an outstanding partner in trout and salmon habitat conservation, and providing funding levels for the programs detailed above will help the TU/BOR partnership - and other productive partnerships - continue in FY18.

Sincerely,

A handwritten signature in black ink that reads "Steven N. Moyer". The signature is written in a cursive, slightly slanted style.

Steve Moyer



AMERICAN STATISTICAL ASSOCIATION
Promoting the Practice and Profession of Statistics®

732 North Washington Street, Alexandria, VA 22314-1943

(703) 684-1221 ■ www.amstat.org ■ asainfo@amstat.org

Facebook: www.facebook.com/AmstatNews Twitter: www.twitter.com/AmstatNews

July 10, 2017

The Honorable Lamar Alexander
Chairman
Appropriations Subcommittee on Energy
and Water Development
United States Senate
Washington, DC 20510

The Honorable Dianne Feinstein
Ranking Member
Appropriations Subcommittee on Energy
and Water Development
United States Senate
Washington, DC 20510

The Honorable Rodney Frelinghuysen
Chairman
Appropriations Committee
United States House of Representatives
Washington, DC 20515

The Honorable Nita Lowey
Ranking Member
Appropriations Committee
United States House of Representatives
Washington, DC 20515

Dear Chairman Alexander, Ranking Member Feinstein, Chairman Simpson, and Ranking Member Kaptur,

As president of the American Statistical Association, I write in support of the fiscal year 2018 (FY18) budget for the Energy Information Administration (EIA). I appreciate the FY17 levels provided by your committees for the EIA. For FY18, we urge a level of \$122 million. I recognize that difficult decisions must be made in the current environment and emphasize the importance of EIA data to our economy and security.

Energy issues are integrally tied to our economy and national security. Hundreds of billions of dollars ride on energy markets; investments in energy production and conservation; and investments in energy-consuming equipment, appliances, and vehicles. Our reliance on energy imports and the volatile nature of the global energy market make energy a security issue.

The EIA is the principal source of objective information to help us understand our needs and risks and guide our decisions. Policymakers, businesses, and regulators rely upon the EIA for data concerning domestic and global energy reserves, energy production, energy consumption, and energy efficiency. Also, the EIA has been a leader in making their data accessible to the public, including through innovative graphical displays exemplified by their new U.S. Energy Data Mapping System (<http://www.eia.gov/state/maps.cfm>).

Another indicator of EIA's importance is its broad data user community: private citizens, finance/consulting, energy sector, business, industry, education, government, and media. EIA is praised for its work, including this piece with the telling heading "Your tax dollars hard at

work," about EIA's new data portals: <https://energyathaas.wordpress.com/2014/04/27/your-tax-dollars-hard-at-work-eias-new-data-portals/>. The FY18 budget justification also contains an impressive list of recent accomplishments including improvements to the quality of its weekly petroleum balances, nearly real-time hourly electricity operating data for the Lower 48 states, and state-of-the-art dissemination tools that have greatly increased 24/7 information accessibility for EIA's customers.

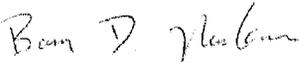
Given the importance of EIA data to our economy and security, we urge keeping the EIA budget at its FY17 level so that EIA can maintain its important work to provide data and analysis of such regional issues as electricity transmission infrastructure and modernization, nuclear generators, and petroleum supply information. A level of \$122 million would also enable EIA to maintain its research on the use of alternative data collection modes to provide more timely and subnational data more efficiently and cost effectively.

In my opinion, EIA data should be viewed as a form of business intelligence that informs national policies. We must support that intelligence given that its strategic importance and economic value is critical to our decision-making in navigating the world energy conditions.

Again, I understand the current federal budget environment calls for painful choices and thank you for your support of EIA in FY17 and previous years. Considering the value of reliable energy data, I also respectfully urge \$122 million for EIA in FY18.

Thank you for your consideration.

Sincerely,



Barry D. Nussbaum
President, American Statistical Association

CC:

The Honorable Mike Simpson, Chairman, Appropriations Subcommittee on Energy and Water Development, United States House of Representatives
The Honorable Marcy Kaptur, Ranking Member, Appropriations Subcommittee on Energy and Water Development, United States House of Representatives



July 17, 2017

The Honorable Rodney Frelinghuysen
Chairman
Committee on Appropriations
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Mike Simpson
Chairman
Subcommittee on Energy and Water
Development, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Nita Lowey
Ranking Member
Committee on Appropriations
U.S. House of Representatives
Washington, D.C. 20515

The Honorable Marcy Kaptur
Ranking Member
Subcommittee on Energy and Water
Development, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Frelinghuysen, Ranking Member Lowey, Chairman Simpson, and Ranking Member Kaptur:

On behalf of America's 19,000 cities and towns, I write to thank you for your leadership in passing an Energy and Water Development Appropriations Bill that preserves funding for city priorities like the Weatherization Assistance Program and State Energy Program that were targeted for elimination in the President's budget proposal.

At the same time, city leaders are concerned that the bill lacks robust funding for programs that have a tremendous impact on the lives of our most vulnerable citizens and shifts the cost of intergovernmental projects and services from the federal level to municipal governments. For many cities, particularly small and rural communities with a limited tax-base, the cost shift may be too great to be made up for with local revenue.

Cities are growing the job market and driving the U.S. economy. Cities are home to 86 percent of the nation's population, 88 percent of total real income, and 91 percent of real gross domestic product. Local governments invest \$7 trillion annually on services residents expect.

City leaders are at the forefront of efforts to encourage energy conservation, improve energy efficiency and invest in renewable energy in their communities. City-led initiatives have resulted in millions of dollars in energy savings, helping residents and businesses save on their energy bills, along with taxpayer savings from municipal government operations. Federal programs under the Office of Energy Efficiency and Renewable Energy, including the Weatherization Assistance Program and the State Energy Program, create jobs and grow the economy. Now is the wrong time for Congress to stall these advances by pulling back on critical investments in cities.

2017 OFFICERS

President
Matt Zone
Councilmember
Cleveland, Ohio

First Vice President
Mark Stodola
Mayor
Little Rock, Arkansas

Second Vice President
Karen Freeman-Wilson
Mayor
Gary, Indiana

Immediate Past President
Melodee Colbert-Keon
Councilmember
Joplin, Missouri

Chief Executive Officer/
Executive Director
Clarence E. Anthony

Deputy Executive Director
Antoinette A. Samuel

As the voice of cities in Washington, NLC appreciates the work of the committee to preserve the Weatherization Assistance Program, State Energy Program and other programs important to cities and towns by rejecting their proposed elimination. We are concerned, however, that the proposed \$1 billion cut to the Office of Energy Efficiency and Renewable Energy will hinder national and local efforts to increase energy savings and promote renewable energy development through programs such as the Better Buildings Challenge and SunShot. To advance the economic benefits and job creation these programs have created, robust funding is needed for all of these programs.

As the FY18 budget and appropriations process continues, we look forward to working with Members of Congress in both Chambers to raise the budget caps to a level sufficient for meeting the responsibilities that citizens expect from their elected representatives. Additionally, we urge every Member of Congress to seek the direct feedback of local elected officials in their home states and congressional districts. Please consider NLC a resource to that end by contacting Carolyn Berndt, NLC's Program Director for Sustainability, at 202-626-3101 or berndt@nlc.org.

Sincerely,



Clarence E. Anthony
CEO and Executive Director

July, 17, 2017

The Hon. Lamar Alexander
Chairman
Subcommittee on Energy and Water
Development
Committee on Appropriations
U.S. Senate
Washington, DC 20515

The Hon. Dianne Feinstein
Ranking Member
Subcommittee on Energy and Water
Development
Committee on Appropriations
U.S. Senate
Washington, DC 20515

The Hon. Mike Simpson
Chairman
Subcommittee on Energy and Water
Development, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

The Hon. Marcy Kaptur
Ranking Member
Subcommittee on Energy and Water
Development, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Simpson and Ranking Member Kaptur:

We write to request that Congress preserve the loan guarantee program established under Section 1703 of the Energy Policy Act of 2005 (EPAAct05). President Trump recently announced that nuclear energy is a critical priority, stating that "we will begin to revive and expand our nuclear energy sector." A federal loan guarantee program is one of several elements essential to ensure that nuclear energy is able to continue to play its vital role in the United States. Section 1703 provides the Department of Energy (DOE) the authority to issue loan guarantees for early commercial use of advanced energy technologies including nuclear energy technologies. Nuclear energy is a crucial element of a diverse "all of the above" energy portfolio.

Nuclear energy is critical infrastructure and is essential to the energy and national security of the United States. Our 99 commercial nuclear reactors generate 20 percent of U.S. electricity – and 60 percent of our clean air electricity – around the clock, providing unsurpassed stability and valuable fuel diversity to the grid while sustaining nearly half a million well-paying jobs. And U.S. exports and diplomatic relations have benefited from U.S. international leadership in nuclear technology – which is being challenged by countries like China and Russia.

The Section 1703 loan guarantee program is currently supporting construction of the next generation of nuclear reactors in the U.S. and the thousands of direct and indirect jobs associated with these projects. In addition, commitments have been made in support of new fuel cycle facilities and loan guarantee applications have been filed for projects including uprates and upgrades at existing facilities, construction of light water small modular reactors, and advanced non-light water reactors. These projects are in the early stages of development, and we expect that more projects in the future will seek support from the loan guarantee

Steve Kirsch, CEO, Token

Andrew Klein, Immediate Past President, American Nuclear Society

Michelle Marvier, Professor, Environmental Studies and Sciences, Santa Clara University

Alan Medsker, Coordinator, Environmental Progress - Illinois

Elizabeth Muller, Founder and Executive Director, Berkeley Earth

Richard Muller, Professor of Physics, UC Berkeley, Co-Founder, Berkeley Earth

Steven Pinker, Harvard University, Author of *Better Angels of Our Nature*

Paul Robbins, Director, Nelson Institute for Environmental Studies, University of Wisconsin-Madison

WITNESSES

	Page
Anthony, C. E	659
Azure, Floyd	166
Barragán, Hon. N. D	78
Bean, David	148
Brockbank, Derek.....	126, 629
Brossy, Jackson	159
Buelterman, Jason	121
Callahan, Kateri	247
Cameron, S. J	323
Canaca, J. S	279
Carter, Hon. E. L. "Buddy"	92
Castelli, B. T	198
Collins, Sheri	301
Comer, Hon. James	20
Cowell, Stephen	189
Crawford, Hon. E. A. "Rick"	83
Crist, Hon. Charlie	45
Drummond, W. K	268
Dunahoo, Sandy	309
Fecher, Amy	310
Foster, Hon. Bill	59
Frazier, Michael	141
Fuller, Nicki	293
Gillette, M. D	647
Gosar, Hon. P. A	40
Green, Hon. Gene	88
Guy, Dr. Elmer	174
Hei, Diane VanDe	638
Hepinstall, David	223
Huizenga, Hon. Bill	74
Jackson Lee, Hon. Sheila	109
Johnson, Hon. Mike	97
Johnson, Robert	261
Judy, Ray	208
Keenum, M. E	642
Kefer, Jennifer	636
Kelly, Anne	644
Kightlinger, Jeffrey	625
Kirsch, Steve	661
Koehler, Cynthia	638
Korsnick, Maria	180
Lamont, Doug	323
Lynch, R. S	287

	Page
Markowitz, Morry	239
Mast, Hon. B. J	32
Mikkelsen, Alan	323
Moyer, Steve	652
Nolan, Hon. R. M	1
Nussbaum, B. D	657
Panetta, Hon. Jimmy	24
Pavel, Joseph	153
Perry, Hon. Rick	409
Polis, Hon. Jared	66
Rahn, Hon. Pete	134
Rieber, Daniel	216
Robinette, K. J	200
Rooney, Hon. Francis	13
Semonite, Lieutenant General Todd	323
Spiropulu, Dr. Maria	230
Taylor, William "Dub"	254
Thoennessen, Michael	634
Tipton, Hon. S. R	52
Todd, A. H	608
Watson Coleman, Hon. Bonnie	117
Wilson, Hon. Joe	105