

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2025

HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS UNITED STATES SENATE ONE HUNDRED EIGHTEENTH CONGRESS

SECOND SESSION

ON

H.R. 8997/S. 4927

AN ACT MAKING APPROPRIATIONS FOR ENERGY AND WATER DEVELOPMENT FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2025, AND FOR OTHER PURPOSES

**Department of Defense—Civil
Department of Energy
Department of the Interior**

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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2025

WEDNESDAY, MAY 15, 2024

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Patty Murray (chair) presiding.

Present: Senators Murray, Durbin, Shaheen, Heinrich, Sinema, Kennedy, Murkowski, Hoeven, Hyde-Smith, and Britt.

DEPARTMENT OF DEFENSE—CIVIL

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS—CIVIL

STATEMENT OF HON. MICHAEL L. CONNOR, ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

OPENING STATEMENT OF CHAIR PATTY MURRAY

Chair MURRAY. This hearing of the Senate Appropriations Subcommittee on Energy and Water Development will please come to order.

We are here today to discuss President Biden's fiscal year 2025 budget request for the U.S. Army Corps of Engineers and Bureau of Reclamation.

I am pleased to welcome our witnesses today, who I will introduce shortly, to the subcommittee. And I am glad to be chairing a subcommittee that deals with so many issues that are incredibly important to folks back home in Washington State and all across the country.

How we manage our resources has tremendous implications for our economic strength and our national security. Likewise, how we manage our water resources directly affects families, and farmers, our food supply, and even our fish. And how well we manage our Nation's ports and harbors has major implications for our economy as well as local ecosystems. So I look forward to working with Ranking Member Kennedy, and all of our colleagues to make sure these issues get the attention and funding they deserve.

And today's hearing is an important part of that process. Now, I said from the start, I don't think we can make the investments our Nation truly needs under the constraints of the Fiscal Responsibility Act. I have listened as colleagues on the other side of the aisle have made the case for more defense funding.

I want to be clear, as we discuss additional resources to meet our country's needs, I will be insisting on parity between new resources for defense and nondefense, because bottom line, our country's strength, its competitiveness, and its future all depend on so many of the essential investments we make on the nondefense side of the ledger. Today's hearing offers a stark reminder of how important so many of those nondefense investments are. That is because water resources managed by the Bureau and the Corps alike, irrigate crops, allow those crops and other goods to be transported to consumers here at home and around the world, they help sustain keystone species like salmon in Washington State, provide water to over 31 million Americans, and even, literally, keep the lights on with hydroelectric power.

So when it comes to our Nation's competitiveness, this is something we cannot take for granted. For the sake of our economy as well as our environment, we need to protect and maintain our waterways for wildlife to thrive and for essential transportation to occur. We have to keep our water running, our ports bustling, our farms irrigated, and our fish thriving, and our electric grid reliable.

These are investments in safety as well. We cannot shortchange safety. We need to make sure communities are safe and prepared for extreme weather events amid the worsening climate crisis, with levees, and sea walls, and nature-based infrastructure to prevent flooding.

And let us not forget drought mitigation. We are seeing this issue get worse and worse with historic drought conditions in recent years. This is a challenge that ripples throughout our Nation, hurting farmers, threatening families and wildlife with wildfires, and undermining our economy.

So when we talk about investments for the year ahead make no mistake water is just too important to our families, and our economy, and our Nation to take for granted.

I am glad that despite tough funding caps, we were able to deliver critical resources for both the Bureau and the Corps in the fiscal year 2024 bill that Congress recently passed, including a historic funding level for the Harbor Maintenance Trust Fund to keep our Nation's ports and harbors in good condition.

Of course, I have been working hard to make sure Washington State ports get their fair share of that HMTF (Harbor Maintenance Trust Fund). For too long that was not the case. And even after I authored and passed legislation to fix that in 2020, I was frustrated to see the Army Corps Work Plan for fiscal year 2023 fall short. I raised this several times with Corps leadership, including at our hearing last year, and included language in our fiscal year 2024 bill on this matter. So I am pleased that we are finally seeing real progress.

The Work Plan the Army Corps released Monday shows a much-needed course correction. It implements the law as Congress intended it, which makes a meaningful difference for ports like the Port of Seattle and the Port of Tacoma to the tune of \$25—and \$29 million from the HMTF this year alone.

So I appreciate you taking my calls, Assistant Secretary, and working with me on this.

Now, in addition to the Army Corps work plan, I should also mention how President Biden's budget request shows how he understands how important these issues are. I was especially pleased to see this budget include \$500 million for the Howard Hanson Dam Fish Passage Project. Saving our salmon is a top priority for me, because salmon are a way of life in Washington State. This project will open up over 100 miles of prime habitat for salmon and has the potential to produce more salmon than any other project in our region.

That is why I have worked so hard in our past bills to secure funding to move that forward, and I want to make sure we deliver this historic funding in this budget request so we can see that project through. And I look forward to hearing more from our witnesses about this work, and more, shortly.

With that, I want to turn it over to my Ranking Member Kennedy. It is a delight to be working with you again on this.

STATEMENT OF SENATOR JOHN KENNEDY

Senator KENNEDY. Thank you, Madam Chair.

Madam Commissioner, and General, and Mr. Secretary, welcome.

The President has submitted a budget for our Corps of Engineers, \$7.2 billion. That is a lot of money in anyone's book. That is the good news, I guess. The bad news is that I was looking last night. It is 17 percent less than the Corps' current budget. That makes no sense to me. The Corps actually saves us money. Your flood control projects mitigate damage that we would otherwise have to pay for, including, but not limited to, through FEMA (Federal Emergency Management Agency). The navigational dredging that you do facilitates commerce which grows our economy, workers pay taxes like everybody else. If their wages are higher and there are more workers, they pay more in taxes. So do the businesses.

I don't want to belabor this point. I have got a lot of things to talk about today, but that is going to be my starting point, that this just makes no sense to me. We need a budget for the Corps of Engineers that looks like somebody designed it on purpose, and this budget doesn't do that.

And with that, I look forward to hearing your responses.

Chair MURRAY. Thank you, Ranking Member Kennedy.

I will now briefly introduce our panel: We have Michael Connor, Assistant Secretary of the Army for Civil Works; Lieutenant General Scott Spellmon, Chief of Engineers for the U.S. Army Corps of Engineers; and Camille Touton, Commissioner of the Bureau of Reclamation.

We will now proceed with witness testimony, from Assistant Secretary Connor. You have 5 minutes for your testimony.

SUMMARY STATEMENT OF HON. MICHAEL L. CONNOR

Mr. CONNOR. Thank you. Chair Murray, Ranking Member Kennedy, and distinguished Members, thank you for the opportunity to discuss the President's 2025 budget request for Army for Civil Works.

I have submitted a full statement for the record, which I will quickly summarize. First, my appreciation and thanks for the

strong bipartisan support for the Army Civil Works Program as represented in the 2024 appropriations bill. The 2025 budget request includes over \$7.2 billion for the Civil Works Program, with a focus on investments to facilitate waterborne transportation, reduce coastal and inland flood risks, and restore significant aquatic ecosystems.

These investments reinforce President Biden's ongoing commitment to protect, restore, and improve the Nation's water resources to strengthen our economy, protect people and property, and improve the environment.

Current and future water resources challenges are not like those of the past. Weather extremes are increasingly the norm, creating risk to communities, the economy, and natural systems. As a result, understanding vulnerabilities and increasing preparedness is paramount. This budget will spur innovation by investing in research and development and will help ensure we improve our capabilities to assess risk and aggressively confront these challenges. Our infrastructure investments, through this budget, will support community resilience to better address these extremes while tackling climate change and promoting equity for underserved communities and Tribal Nations.

With a focus on modernization and innovation, the budget continues to prioritize the highest performing work within the three main missions of the Civil Works' Program: commercial navigation, thereby supporting the Nation's supply chains; flood and storm damage reduction, protecting communities and building resilience; and aquatic ecosystem restoration, recognizing the important habitat, water quality, flood protection, and water supply functions of the Nation's watersheds keep healthy.

Now, with an enacted 2024 appropriations bill and robust funding, as I earlier mentioned, I want to address the serious needs that were ignored in our 2024 budget, and therefore critically important in fiscal year 2025. The 2025 budget includes \$6.4 million for the Office of the Assistant Secretary of the Army for Civil Works. Since 2009, my office has not received an appropriation larger than \$5 million, and some years less.

However, our costs, salary, services, rent, travel, supplies, have all continued to rise over the past 15 years. Using the latest CPI (Consumer Price Index), the \$5 million my office received in 2009 equates to over \$7.2 million in today's dollars. Nonetheless, funding remains flat even as our responsibilities grow. Full funding is critical for effective oversight of the Army Civil Works Program and to help us support timely and complete responses to your requests.

It is also critical to address the many new responsibilities added to the Civil Works' portfolio through numerous statutory provisions enacted in the past five Water Resources Development Acts. I can assure you this is not the Empire Building, merely paying for the positions already in place to conduct our business.

With my remaining time, I would like to highlight the Corps of Engineers' responsibilities in disaster and emergency response, a mission area with high visibility given recent events. Two months ago, I met with the Incident Command Team in Maui responding to 2023's devastating wildfires, and several weeks ago, I visited the Incident Command Center in Baltimore Harbor, working on the re-

covery and response efforts to the Francis Scott Key Bridge collapse disaster.

In both situations, the Corps is just one of several agencies charged with critical responsibilities. In Maui, we have operated within the FEMA Disaster Response Framework, using FEMA's resources to carry out our assigned missions. Our responsibilities, whether emergency power, debris removal, and/or critical—building-critical infrastructure, require us to be prepared, and maintain the skills, and have contracts in place that are necessary to carry out the mission.

With this preparation, the Corps is removing debris and setting the stage for rebuilding on over 1,600 properties in Maui that were devastated by wildfire. It also constructed a temporary, but I can assure you, a very impressive elementary school in 95 days for turnover to the local school district.

In Baltimore, we are not working within a FEMA framework but using our own resources to quickly deploy and continue clearing the Federal Navigation Channel serving the Port of Baltimore to restore full operations, even while supporting the now completed recovery efforts associated with the loss of life caused by the disaster.

One of our smaller accounts, the National Emergency Preparedness Program, was key to developing the existing contractual arrangement with Navy Supervisory Salvage that enabled the Corps to immediately post-disaster begin planning the actions necessary to clear the navigation channel. Thankfully, we received full-year 2024 funding in early March, just weeks before the disaster, providing Baltimore Harbor O&M (Operations and Maintenance) funds which have provided the resources to date to carry out channel clearing operations.

Once that mission is complete, those funds, along with any others used, will need to be restored to carry out other critical operations.

The Corps of Engineers is at its best when called upon to work with others within the Nation's Emergency and Disaster Response Frameworks. The resources that you, as appropriators, provide us on a timely basis are key to our, and thus the Nation's success in responding in times of crisis as well as preparing for future challenges.

Thank you for the time. I look forward to questions.
[The statement follows:]

PREPARED STATEMENT OF MR. MICHAEL L. CONNOR

Chair Murray, Ranking Member Kennedy, and distinguished members of the committee, thank you for the opportunity to be here today to discuss the President's Budget request for the Army Civil Works program.

The Fiscal Year 2025 Budget request includes over \$7.2 billion for the Army Civil Works program, with a focus on investments to facilitate waterborne transportation, reduce coastal and inland flood risks, and restore significant aquatic ecosystems. These investments reinforce President Biden's ongoing commitment to protect, restore, and improve the nation's water resources that will strengthen our economy, protect people and property, and restore key ecosystems. This Budget will also spur innovation by investing in research and development and ensuring we improve our capabilities to assess risk and aggressively confront the nation's water resource challenges in a manner that broadly supports community resilience, tackles climate change, and promotes equity for underserved and overburdened communities and Tribal Nations.

The water resources challenges of today and tomorrow are not like yesterdays. Weather extremes are increasingly the norm, creating risk to communities, the economy, and natural systems.

As a result, understanding vulnerabilities and increasing our preparedness is of paramount importance. For that reason, the Budget includes \$79 million for research and development to support constructing and maintaining critical infrastructure. These investments will help to improve capabilities in assessing risk, address emerging water resources challenges including climate change, and achieve significant cost savings in the Civil Works program.

With a focus on modernization and innovation, the Budget continues to prioritize the highest performing work within the three main missions of the Civil Works program:

- commercial navigation,
- flood and storm damage reduction, and
- aquatic ecosystem restoration.

The Budget also advances three key objectives: 1) decreasing climate risk for communities and increasing ecosystem resilience to climate change based on the best available science; 2) promoting environmental justice in underserved and overburdened communities and Tribal Nations in line with the Justice40 Initiative; and 3) strengthening the supply chain.

Flood and storm damage reduction is at the center of the Civil Works program's actions to support the Administration's goal of tackling the climate crisis and building community resilience. Accordingly, the Budget contains over \$1.5 billion for flood and storm damage reduction, including funding to provide technical and planning assistance to local communities to enable them to understand and better manage their flood risks. The Budget proposes to assist these local efforts, with an emphasis on non-structural approaches.

For priority two, the Budget supports the Administration's Justice40 Initiative to help underserved and overburdened communities address their water resources challenges—including funding for the Tribal Partnership Program. The Army is committed to helping to achieve the broader goals of the Administration regarding equity and environmental justice and will continue to improve outreach and access to Civil Works information and resources, including technical and planning assistance programs. The Army is committed to maximizing the reach of Civil Works projects to benefit underserved and overburdened communities and ensuring that updates to Civil Works policies and guidance will not result in a disproportionate negative impact on underserved and overburdened communities.

Through this Budget, the Administration also reaffirms its vision of facilitating safe, reliable and environmentally sustainable commercial navigation to improve the resilience of our nation's manufacturing supply chain. In doing so, the Budget will create good paying jobs that provide the free and fair chance to join a union and collectively bargain. In support of the Administration's commitment to our nation's coastal ports and inland waterways, the FY 2025 Budget includes over \$3 billion for the study, design, construction, operation and maintenance (O&M) of inland and coastal navigation projects. Of this amount, roughly \$1.7 billion is derived from the Harbor Maintenance Trust Fund. This total includes \$1 billion to operate and maintain the top 50 U.S. coastal ports, which handle around 90 percent of the nation's waterborne cargo that is shipped to or from the United States in foreign commerce. The FY25 Budget includes \$60 million, financed through the Harbor Maintenance Trust Fund, for donor and energy transfer ports. Also, of significant note, the Budget includes \$264 million to continue construction of the Sault Ste. Marie replacement lock to provide efficiency and redundancy for a critical trade route for iron ore in the Great Lakes region.

The Budget includes \$1.239 billion for the aquatic ecosystem restoration mission, including \$444 million for the South Florida Ecosystem Restoration program, which will enable significant progress in restoring America's Everglades and building climate resilience in South Florida. The Budget also includes, over \$75 million for the Columbia River Fish Mitigation program, and \$33 million for construction of a fish passage at Albeni Falls Dam, all to support restoration of salmon and other native fish species in the Northwest. In addition, the Budget includes \$500 million for a fish passage at the Howard Hanson Dam.

The Army seeks to increase support for aquatic ecosystem restoration projects, including those under Section 206 of the Continuing Authorities Program (CAP 206). The Budget includes \$13 million within the CAP 206 program for small aquatic ecosystem restoration projects to help protect wetlands that may be negatively impacted by the Supreme Court's *Sackett v. Environmental Protection Agency* decision.

Other significant initiatives include continuing the investment in the phased replacement of the Cape Cod Canal Bridges. The FY 2024 enacted appropriations included the \$350 million proposed in the FY 2024 Budget for the phased replacement of the Cape Cod Canal bridges, toward a commitment of \$600 million. The FY 2025 Budget continues this commitment of the phased replacement of the Sagamore and Bourne bridges by including \$5 million for design work associated with the rehabilitation of the Bourne Bridge.

In total, the FY 2025 Construction program is funded at more than \$2 billion, continuing the President's focus on enhancing the country's infrastructure. The majority of that amount is provided in the Construction account, but also \$29 million from the Harbor Maintenance Trust Fund, and more than \$49 million from the Mississippi River and Tributaries account. The Construction program uses objective, performance-based criteria to give priority to the projects with the highest economic, environmental, and safety returns.

Of course, in addition to construction projects, the Budget focuses on maintaining the key features of the vast water resources infrastructure that the Corps owns and manages. Specifically, the FY 2025 Budget funds the Operation and Maintenance program at over \$4.3 billion, consisting of nearly \$2.5 billion from the Operation and Maintenance account, nearly \$1.7 billion from the Harbor Maintenance Trust Fund, and nearly \$183 million from the Mississippi River and Tributaries account. For Operation and Maintenance, the Budget emphasizes maintaining and improving the performance of existing projects. The allocation of funding among projects for maintenance reflects a risk-informed approach that considers both project and project component conditions and the potential consequences of a failure. The Budget also gives priority to the maintenance of coastal ports and inland waterways with the highest commercial traffic.

As I wrap up, I'll note the FY 2025 Budget provides \$124 million for the Investigations program, consisting of nearly \$111 million from the Investigations account and over \$13 million from the Mississippi River and Tributaries account. This level of sustained investment is critical given the increasing demand by communities across the nation for resilience building. Within this \$124 million total, the Budget includes \$35.5 million for technical and planning assistance programs. These programs help local communities, including underserved and overburdened communities, identify and address their flood risks, including risks associated with climate change. The Budget also includes funding to continue studies intended to investigate climate resilience along the Great Lakes coast as well as in Central and Southern Florida.

Additionally, and extremely important, the FY 2025 Regulatory Program is funded at \$221 million to protect the nation's waters and wetlands and provide efficiency in permit processing. The Recreation program is funded at \$282 million to ensure the Corps—which operates and maintains a large percentage of Federal recreation areas—can continue to effectively serve the public's desire to experience the great outdoors.

Lastly, I would like to note that \$6.4 million is included for the Office of the Assistant Secretary of the Army for Civil Works. Since 2009, my office has never received an appropriation larger than \$5 million, and some years less. However, our costs—salaries and retirement, services and rent, and travel and supplies—have all continued to rise over the past 15 years. Using the latest U.S. government Consumer Price Index data (at a 44.6% cumulative rate of inflation), the \$5 million my office received in 2009 equates to over \$7.2 million in today's dollars. However, this funding has remained flat. Full funding is critical to provide effective oversight of the Army Civil Works program.

To summarize, the Budget makes critical investments in water resources that will benefit the American people and promote greater prosperity and economic growth for decades to come. From solving water resources challenges facing communities, to nurturing aquatic ecosystems, the Corps is delivering on its mission to serve the public.

I am very honored to implement the President's priorities for the Army Civil Works program and excited to be a part of a great team—serving our Nation.

Thank you for inviting me here today. I look forward to your questions.

Chair MURRAY. Thank you very much.
Lieutenant General Spellmon.

**STATEMENT OF LIEUTENANT GENERAL SCOTT A. SPELLMON, CHIEF
ENGINEERS FOR THE U.S. ARMY CORPS OF ENGINEERS**

General SPELLMON. Good morning, Chair Murray, Ranking Member Kennedy, and distinguished Members of the Subcommittee. I am honored to testify before you today and thank you for the opportunity to discuss the President's fiscal year 2025 budget requests for the U.S. Army Corps of Engineers Civil Works Program.

But before I begin my prepared remarks, I sincerely want to thank members of the committee for your ongoing support, as Mr. Connor mentioned, related to our Francis Scott Key Bridge response in Baltimore. Foremost, our thoughts remain with those who were impacted by the collapse of the bridge, and our condolences go out to the families who lost loved ones.

We, along with our many partners, continue to work around the clock to remove wreckage in an expeditious and safe manner to ultimately restore navigation to the Port of Baltimore. We remain on track to meet our commitment of restoring the full navigation channel by the end of this month.

But today, I look forward to discussing the status of important Corps projects and programs, as well as answering any questions the committee may have regarding our fiscal year 2025 budget request. I will start by saying that we greatly appreciate Congress' continued support of the Corps Civil Works Program. Recent appropriations have enabled significant, and I would say historic, investments in water resource projects around our country. And they have allowed us to further develop innovative approaches to address our most pressing challenges through focused research and development.

The fiscal year 2025 budget reflects a targeted approach to continue investment in our water resource infrastructure while also incorporating climate resilience into our commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration missions.

The budget also supports Assistant Secretary Connor's priorities for the Corps by strengthening our supply chains, increasing ecosystem resilience, promoting environmental justice in underserved communities and Tribal Nations, investing in R&D (Research and Development), and finally, sustaining and improving our relationships with our many partners. Our budget reflects an emphasis on work that provides the highest economic, environmental, and public safety returns to the Nation, and we continue to strive for bold, innovative actions to improve our performance and help us achieve our vision of engineering solutions for our Nation's toughest challenges.

Our teams remain hard at work seeking out new and better ways to mitigate or eliminate project risks so we can further strengthen the safety and security of communities across our country and its territories.

And this morning, I want to once more highlight the importance of research and development in this effort, whether it is flood risk management, drought, water supply, navigation, or ecosystem restoration, R&D is a critical effort in all that we do.

Many members of this committee are from coastal States where most of our Nation's largest cities are located, and I will just use

that as my brief example. Over the years, without investment in basic coastal engineering research, this type of land use today, having large cities on our coastlines, would not be possible, nor would the existence of our Nation's precious beaches and our coastal protections.

The lessons that we learn in our Corps laboratories and university laboratories, where we partner, are critical to getting the job done right out in the field. And this investment in basic research is even more important today as we look at the impacts of sea level rise and changing precipitation patterns that are very real, and our communities are already experiencing.

So I thank both Secretary Connor for his leadership, the Administration and Congress for recognizing this challenge, and significantly increasing our R&D investment as we move ahead. We have to build upon this momentum.

I will conclude by saying the Corps does not accomplish anything on its own. Delivering successful Civil Works projects is a shared responsibility. It is a team sport. We draw from our 249 years of engineering expertise and build upon our relationships with our non-Federal partners, project stakeholders, and certainly Congress, to enable us to succeed.

I look forward to continuing to work with this committee, with Congress, and the administration to address the Nation's critical water resource infrastructure needs.

And thank you again, Chair Murray, Ranking Member Kennedy, and Members of the Committee. I look forward to answering your questions.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL SCOTT A. SPELLMON

Chairman Murray, Ranking Member Kennedy, and members of the subcommittee, I am honored to testify before your committee today, along with the Honorable Michael Connor, Assistant Secretary of the Army for Civil Works, regarding the President's Fiscal Year 2025 (FY 2025) Budget (Budget) for the Army Civil Works Program.

Through the Civil Works program, the United States Army Corps of Engineers (Corps) works with other Federal agencies, and with state, Tribal, and local agencies, as well as others, to develop, manage, restore, and protect water resources, primarily through the study, construction, and operation and maintenance of water-related infrastructure projects. The Corps focuses on work that provides the highest economic, environmental, and public safety returns to the Nation. The Corps also regulates development in waters of the United States and works with other Federal agencies to help communities respond to, and recover from, floods and other natural disasters. The FY 2025 Budget invests in the Nation's water resources infrastructure, including at U.S. coastal ports, while incorporating climate resilience efforts into the Corps' commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration work.

The Corps uses its engineering expertise and its relationships with project sponsors and stakeholders to address some of the most pressing water resources challenges facing the Nation. I am committed to the Secretary's priorities for the Army Civil Works program, including decreasing climate risk for communities and increasing aquatic ecosystem resilience to climate change based on the best available science; promoting environmental justice in underserved and overburdened communities and Tribal Nations in line with the Justice40 Initiative; and strengthening the supply chain.

SUMMARY OF FISCAL YEAR 2025 BUDGET

The Civil Works program is performance-based and focuses on high-performing projects and programs within its three main water resources missions: commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration.

It uses a targeted approach to invest in our water resources and promote climate resiliency, which will benefit the Nation's economy, environment, and public safety—now and in the future.

The Budget includes \$7.22 billion in discretionary funding for Civil Works activities throughout the Nation.

INVESTIGATIONS

The Budget includes \$124 million for the Corps' Investigations program. The Corps uses these funds to evaluate water resources problems and opportunities, design projects within the three main Civil Works mission areas, and support related work. The Budget funds 63 individual efforts including feasibility studies, dam safety modification studies, preconstruction engineering and design (or PED), and dredged material management plans. The Budget funds 18 studies to completion. It also completes PED on four projects: the Valley Creek Flood Risk Management study in Alabama; the Kinzua Dam and Allegheny Reservoir Flood Risk Management study in Pennsylvania; the Arkansas River Corridor Aquatic Ecosystem Restoration study in Oklahoma; and the Lake Pontchartrain and Vicinity hurricane protection study in Louisiana.

CONSTRUCTION

The goal of the Army Civil Works program is to produce as much value as possible for the Nation from the available funds. We continue to take bold actions to improve our performance, and engineer solutions for the nation's toughest water resources engineering challenges. Projects are primarily funded based on their economic, environmental and safety returns. The selection process includes giving priority to investments, on a risk-informed basis, in dam safety assurance, seepage control, and static instability correction work at dams that the Corps owns and operates, and work to address significant risk to human safety, as well as constructing dredged material disposal facilities for high and moderate use segments of commercial deep-draft, shallow-draft, and inland waterways projects. We also give priority to work that will help disadvantaged communities address their flood risks, including climate change.

The Budget includes \$2.037 billion for the Construction program. This funding will ensure continued momentum on water resources infrastructure improvements across the Nation. The Budget funds construction on 20 projects comprised of three Commercial Navigation projects, nine Flood and Storm Damage Reduction projects, and eight Aquatic Ecosystem Restoration projects.

The three Commercial Navigation projects are: \$264 million for the Soo Lock Replacement Project in Sault Ste Marie, Michigan; \$25 million for the Port of Nome Modification Project in Alaska, and \$18 million for the Dredged Material Disposal Facility for the Calcasieu River and Pass Project in Louisiana.

For Flood and Storm Damage Reduction, the top-four funded Construction projects are: \$280 million for the Rough River Lake Dam Safety Project in Kentucky; \$49 million for the Lower Mississippi River Main Stem Project, which reduces flood risks in seven states; \$43.5 million for the West Sacramento Project in California; and \$38.5 million for the Pajaro River at Watsonville in California.

For Aquatic Ecosystem Restoration, the top three funded Construction projects are: \$500 million for construction of a fish passage facility at Howard A. Hanson Dam in Washington state; \$444 million for the South Florida Ecosystem Restoration Program to restore the Everglades; and \$75.2 million for the Columbia River Fish Mitigation program. The Budget also includes \$13 million in the Continuing Authorities Program (CAP 206) for small-scale aquatic ecosystem projects to help protect wetlands that may be negatively impacted by the Supreme Court's Sackett v. Environmental Protection Agency decision.

The two Construction projects budgeted for completion in 2025 are flood risk management projects: the Iao Stream Flood Control Project in Maui, Hawaii, and the Pipestem Lake Project in North Dakota.

OPERATION AND MAINTENANCE (O&M)

The O&M program supports completed works owned or operated by the Corps, including operation and maintenance of locks and dams along the inland waterways; maintenance dredging of inland and coastal Federal channels; operation and maintenance of multi-purpose dams and reservoirs for flood risk reduction and related purposes such as hydropower; monitoring of completed navigation and flood damage reduction projects; and management of Corps facilities and associated lands, including serving as a responsible steward of the natural resources on Corps lands.

The Budget provides a total of \$4.344 billion for the Operation and Maintenance program. Of that amount, the Budget provides \$935 million for specific projects to maintain and improve navigation on our inland waterways and gives priority to those waterways with the most commercial traffic. The Budget includes over \$1 billion to operate and maintain the top 50 U.S. coastal ports across the nation, which handle around 90 percent of the waterborne cargo that is shipped to or from the United States in foreign commerce. The Budget also includes \$60 million, financed through the Harbor Maintenance Trust Fund, for donor and energy transfer ports.

The Budget provides \$33 million for operation and maintenance investments to improve climate resilience and/or sustainability at existing Corps-owned projects, \$50 million to mitigate for adverse impacts from existing Corps-owned projects, and \$28 million to install the necessary refueling infrastructure to support zero-emission vehicles at existing Corps-owned projects. The Budget also includes the completion of 11 project master plans and 12 water control manuals.

RESEARCH AND DEVELOPMENT

As the Corps is working to address current challenges across the Civil Works missions, the Budget advances investments to tackle problems of the future and advance technological development. This Budget builds on the prior year's historic President's Budget request for R&D with an FY25 request of \$79 million investment in research and development activities, and an additional \$11 million in data collection and technology transition R&D support activities. This investment will allow the Corps' laboratories, along with partners in academia and industry, to continue addressing the critical knowledge gaps and technology needs such as: \$3 million to explore durability of novel composite materials in future civil works infrastructure; \$2.4M for Engineering With Nature activities to quantify engineering properties of Nature-Based Solutions; and \$10 M to advance Forecast-Informed Reservoir Operations, furthering our understanding of atmospheric river impacts on flood risk management and water supply and evaluate potential application to USACE reservoirs in other geographical locations.

REGULATORY PROGRAM

The Regulatory Program is committed to protecting the Nation's aquatic resources and navigation capacity, while allowing reasonable development through fair and balanced decisions. The Corps evaluates permit applications for construction activities that occur in or affect the Nation's waters, including wetlands. The Corps continues to streamline the permit processes to eliminate duplicative reviews and expedite permit decisions for infrastructure projects while continuing to protect the environment. The Budget provides \$221 million for this program, which is the necessary level of funding to enable the Corps to protect and preserve these water resources.

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

The FY25 Budget provides \$200 million for the Formerly Utilized Sites Remedial Action Program (FUSRAP). This funding would continue ongoing investigation and cleanup in eight states at 20 sites contaminated as a result of the nation's early atomic weapons development program. FUSRAP focuses on protecting human health, public safety and the environment at these sites, contaminated with low-level radioactive materials, throughout the investigation and cleanup phases.

EMERGENCY MANAGEMENT

The Nation continues to face extreme weather events including hurricanes, fires, drought, and flooding. Some of these have significantly impacted communities and the economy. Over the past year, as part of the Federal response team working with Federal Emergency Management Agency, the Corps provided disaster assistance in a number of states and U.S. Territories. The Budget provides \$45 million for preparedness and training of Corps staff to enable them to assist communities during a flood, hurricane, or other natural disasters. This is \$5 million more than last year's Budget level. The Corps will use these funds to hire additional emergency management professional staff, provide more training for its planning and response teams and subject matter experts, properly maintain and upgrade its ENGLINK automated information system, and ensure that the Public Law 84-99 program has sufficient advanced contracting capabilities.

WATER INFRASTRUCTURE FINANCE PROGRAM

The Corps Water Infrastructure Financing Program (CWIFP) enables investment in infrastructure projects that enhance community resilience to flooding. Through

CWIFP, the Corps will accelerate non-Federal investments in water resources infrastructure by providing long-term loans to creditworthy borrowers. The Budget provides \$7 million, including \$5 million for administrative expenses and \$2 million for credit subsidy costs related to non-Federal dam safety projects.

CONCLUSION

The FY 2025 President's Budget for the Army Civil Works Program represents a continuing, fiscally prudent investment in the Nation's water resources infrastructure and restoration of aquatic ecosystems. The Army is committed to a performance-based Civil Works program, based on innovative, resilient, and sustainable risk-informed solutions.

The U.S. Army Corps of Engineers is a world-class organization offering one of the most diverse mission sets in the Federal government—delivering vital engineering solutions to address water resources challenges. We are committed to a performance-based Civil Works program, based on innovative, resilient, and sustainable risk-informed solutions.

Thank you, Chairman Murray, Ranking Member Kennedy, and members of subcommittee. This concludes my statement. I look forward to answering any questions you and other members of the subcommittee may have.

Chair MURRAY. Thank you very much.
Finally, Commissioner Touton.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENT OF HON. CAMILLE CALIMLIM TOUTON, COMMISSIONER

Ms. TOUTON. Good morning. My name is Camille Calimlim Touton, the Commissioner of the Bureau of Reclamation.

Thank you, Chair Murray, Ranking Member Kennedy, and Members of the Subcommittee, for the opportunity to discuss the President's budget request for the Bureau of Reclamation. We are grateful for your bipartisan support and for our working relationship with the subcommittee.

The Bureau of Reclamation is the largest deliverer and manager of water in the Nation and is the second-largest producer of hydropower. We have 189 projects across the American West and help to feed the Nation and the world through 10 million acres of irrigated agriculture, provide water to millions of Americans, and meet our trust responsibility to sovereign nations while sustaining ecosystems across the western landscape.

The need to secure, maintain, and modernize our Nation's infrastructure is an administration priority, and we have a once-in-a-generation opportunity to utilize our fiscal year 2025 \$1.6 billion budget request, with the Bipartisan Infrastructure Law and Inflation Reduction Act.

The cyclical nature of Western hydrology, as we have seen from the last 3 years, highlights the need for immediate actions as well as thoughtful planning and on-the-ground work to make both our infrastructure and operational decisions more resilient to withstand future water resource scarcity and variability.

Our 2025 budget priorities reflect a commitment to drought planning and response activities to promote water security. This approach is illustrated by the signing of a Record of Decision last week to protect the near-term stability and sustainability of the Colorado River System, with historic conservation of 3 million acre-feet in collaboration with our partners, made possible by the President's Investing in America agenda, we staved off the immediate threat and stabilized the system to protect water deliveries in the ecosystem, and power production.

Our focus is now on the future. For the entire West, we are guided by the best available science and engineering to make informed decisions together. The stability of our infrastructure and our commitment to transparency remains our highest priorities. Reclamation's dams and reservoirs, water conveyance systems, and hydropower facilities serve as the water and power infrastructure backbone of the American West.

As with all infrastructure, these features are aging and in need of critical maintenance to prepare for the future. Our fiscal year 2025 budget includes \$74.8 million for extraordinary maintenance, with an announcement for our fiscal year 2025 funding—2024 Bipartisan Infrastructure Law funding, imminently. This includes \$2.5 million for the Milk River Project in Montana, and over \$2 million for the installation of a surge tank at the Mill Creek Plant in Oregon as part of the Dallas project.

For New Mexico, our request also includes over \$6 million for irrigation infrastructure and rehabilitation for the Rio Grande Pueblos. Reclamation's WaterSMART Program also provided nearly \$10 million in bill funding to the North Unit Irrigation District for fish screen replacement at Bend Headworks on the main stem of the Deschutes River.

We must also address our infrastructure needs while considering the needs of rural and underserved communities. Reclamation is establishing and rebuilding water infrastructure for underserved populations by ensuring that clean drinking water is provided to communities. Our request includes \$58.5 million for rural water projects, including almost \$25 million for North Dakota's Garrison Diversion Unit.

It leverages \$1 billion in Bipartisan Infrastructure Law funding to accelerate the completion of these long-needed projects, and it has enabled us to complete the Fort Peck-Dry Prairie Project in Montana later this year.

The Department remains committed to upholding our trust responsibilities to Tribal Nations. Over the past 3 years, Interior has allocated \$2.43 billion available through the bill to address Indian Water Rights settlements. And in addition to these investments, the request for Reclamation in fiscal year 2025 includes \$181 million to support the White Mountain Apache Tribe's Water Settlement Agreement.

The administration also proposes legislation to expand the Indian Water Rights Settlement Completion Fund, a proposal that would provide \$2.8 billion in mandatory funding over 10 years to help ensure community commitments are honored, as well as funding for operation and maintenance costs.

We are committed to working with you, and the subcommittee, and our partners across the American West in carrying out our mission. And our fiscal year 2025 budget supports these actions.

Again, I thank the subcommittee. I am happy to answer your questions.

[The statement follows:]

PREPARED STATEMENT OF CAMILLE CALIMLIM TOUTON

Thank you, Chair Murray, Ranking Member Kennedy, and members of the Subcommittee for the opportunity to discuss with you the President's Fiscal Year (FY) 2025 Budget for the Bureau of Reclamation. I am Camille Calimlim Touton, Commissioner for the Bureau of Reclamation.

Reclamation manages water for agriculture, municipal and industrial use, the environment, power production, and provides flood control and recreation for millions of people. We are also the second largest producer of hydropower in the United States and operate 53 hydroelectric powerplants that annually produced, on average, 40 billion kilowatt-hours for the last 10 years. Reclamation's project and programs serve as the water and power infrastructure backbone of the American West, constituting an important driver of economic growth in hundreds of basins throughout the Western States. Reclamation's activities support economic activity valued at \$34.1 billion, and support approximately 450,700 jobs.¹ Reclamation delivers 10 trillion gallons of water to millions of people each year and provides water for irrigation of 10 million farmland acres, which yields approximately 25 percent of the Nation's fruit and nut crops, and 60 percent of the vegetable harvest.

Reclamation's fundamental work to modernize and maintain infrastructure, conserve natural resources, use science and research to inform decisionmaking, serve rural, Tribal, and underserved populations, and stay as nimble as possible in re-

¹ U.S. Department of the Interior Economic Contributions Report—Fiscal Year 2021.

sponse to the requirements of drought and aridification—position us to meet the Biden-Harris Administration’s core tenets. The Bureau of Reclamation’s 2025 budget provides the foundation to meet our mission and remains committed to working with a wide range of partners, including water and power customers, Tribes, State and local officials, and non-governmental organizations.

Reclamation is requesting a net total of \$1,543,321,000 in Federal discretionary appropriations, which is anticipated to be augmented by almost \$2.5 billion in other Federal and non-Federal funds for FY 2025. Of the total, \$1,443,527,000 is for the Water and Related Resources account, which is Reclamation’s largest account, \$66,794,000 is for the Policy and Administration account, and \$33,000,000 is for the California Bay Delta account. A total of \$55,656,000 is budgeted for the Central Valley Project Restoration Fund.

Reclamation is committed to efficient and effective implementation of the Infrastructure Investments and Jobs Act, also known as the Bipartisan Infrastructure Law (BIL), which was enacted as Public Law 117–58 on November 15, 2021. Title IX of the BIL, Western Water Infrastructure, authorized \$8.3 billion to be appropriated to Water and Related Resources in \$1.66 billion annual installments from FY 2022–FY 2026, making a once-in-a-generation investment in the Nation’s infrastructure and economic competitiveness. This landmark investment will rebuild America’s critical infrastructure, tackle the climate crisis, advance environmental justice, and drive the creation of good-paying union jobs. By addressing long overdue improvements and strengthening our resilience to the changing climate, this investment in our communities across the country will grow the economy sustainably and equitably for decades to come.

Reclamation has been putting these resources to work in communities with focus on areas where the greatest impact can be realized. Since President Biden signed the BIL, Reclamation has selected 420 distinct projects for funding, totaling more than \$2.9 billion. The Spend Plan that sets out FY 2025 allocations of this funding was submitted to Congress at the same time as this FY 2025 request as required and is available at <https://www.usbr.gov/bil/2022-spendplan.html>. The Spend Plan allocates funding at the program level, and subsequent addenda to the Plan allocate programmatic funds to the project level for certain programs.

Reclamation is also committed to efficient and effective implementation of The Inflation Reduction Act (IRA), Public Law 117–169, which was enacted on Aug. 16, 2022. Title V, Subtitle B, Part 3 of the law, entitled “Drought Response and Preparedness,” makes available \$4.587 billion to mitigate drought in Reclamation States; to plan, design and construct domestic water supply projects for disadvantaged communities or households that do not have reliable access to domestic water supplies; to design and implement projects to cover water conveyance facilities with solar panels; and to provide emergency drought relief for Tribes. The programs and projects funded under the IRA will help increase water conservation, improve water efficiency across western basins experiencing long-term drought, and prevent the Colorado River System’s reservoirs from falling to critically low elevations. Reclamation is actively engaged implementing the law and has already directed funds to Colorado River water delivery contract or entitlement holders for activities that mitigate drought in the short term. A total of 23 Lower Basin agreements have been executed in Arizona and California, serving to conserve up to 1,567,668 acre-feet of water through 2026. An additional 104,427 acre-feet of system conservation in the Upper Basin have been executed using IRA funding. Information on plans, developments and funding will be available at <https://www.usbr.gov/inflation-reduction-act>.

Modernizing and Maintaining Infrastructure: Reclamation’s water and power projects throughout the western United States provide water supplies for agricultural, municipal, and industrial purposes. Reclamation’s projects also provide energy produced by hydropower facilities and maintain ecosystems that support fish and wildlife, hunting, fishing, and other recreation, as well as rural economies.

Activities to Support Underserved Communities, Tribal Programs & Tribal Water Rights Settlements: Reclamation tackles the challenges of underserved communities through investments in Tribal water rights settlements, continuation of the Native American Affairs technical assistance program, rural water projects, and investments in specific projects for underserved communities through programs such as WaterSMART. The BIL and IRA appropriations invest substantial portions of its funding to underserved populations, rural, and Tribal communities. Reclamation is committed to investing public dollars equitably, including through the Justice40 Initiative, a government-wide effort toward a goal that 40 percent of the overall benefits from Federal investments in climate and clean energy flow to disadvantaged communities.

Section 70101 of the BIL established the Indian Water Rights Settlement Completion Fund (Completion Fund), making \$2.5 billion available to the Secretary of the

Interior to satisfy Tribal settlement obligations as authorized by Congress prior to enactment of the BIL. In FY 2022 through FY 2024, the Secretary of Interior allocated \$2.434 billion of those funds, \$815.4 million of which supported Reclamation's Tribal settlement implementation actions. The Department expects to allocate the remaining \$65.9 million in funding from the Completion Fund in FY 2025; more detail can be found in the Permanents chapter of the FY 2025 Reclamation budget request. In addition to the Completion Fund, FY 2025 represents the sixth year of Reclamation Water Settlements Fund (RWSF) allocations, which provides \$120 million in annual mandatory authority for Reclamation Indian water rights settlements. The RWSF is authorized as an interest-bearing account; and making use of the accrued interest, Reclamation anticipates \$142 million being available in FY 2025. Funding made available by previous mandatory authorities, such as that authorized in the Claims Resolution Act, remain available for settlement implementation, while the ongoing operations and maintenance requirements of the Arizona Water Settlement Act are expected to continue to be supported within the Lower Colorado River Basin Development Fund.

The 2025 President's Budget request continues previous proposals to provide mandatory funding for Indian Water Rights Settlements. The 2024 President's Budget proposed legislation to provide mandatory funding for Indian Water Rights Settlements to cover the costs of existing and future water rights settlements and to address the ongoing Operation, Maintenance, and Repair requirements associated with four enacted Indian Water Rights Settlements managed by Reclamation. The proposal would provide \$2.8 billion: \$250.0 million annually over 10 years for existing and future water rights settlements and \$34.0 million a year over 10 years for requirements associated with the Ak Chin Indian Water Rights Settlement Project, the Animas-La Plata Project (Colorado Ute Settlement), the Columbia and Snake River Salmon Recovery Project (Nez Perce Settlement), and the Navajo-Gallup Water Supply Project. Funds would be deposited into the Indian Water Rights Settlement Completion Fund established by the BIL and be available to Reclamation for implementation.

In addition to supporting the mandatory funding proposals, the FY 2025 discretionary request includes \$181 million for the White Mountain Apache Tribe (WMAT) Water Rights Quantification Act of 2010. Public Law 117-342, enacted January 5, 2023, which amended the White Mountain legislation, increasing the authorization of the WMAT Cost Overrun Subaccount from \$11 million to \$541 million and extending enforceability from April 2023 to December 2027. Funding will support the design, construction, and eventual operations and maintenance of a rural water system to provide clean, potable water.

The FY 2025 discretionary request also includes \$29.5 million for the 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; \$9 million of this amount will support Tribal drought assistance efforts in FY 2025, while \$500,000 will support Departmental and Reclamation efforts for Tribal Co-Stewardship activities. This funding will also strengthen Department-wide capabilities 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. Reclamation is committed to increasing opportunities for Tribes to develop, manage, and protect their water and related resources. The Native American Affairs Program is a collaborative, coordinated, integrated function in Reclamation, which performs activities that support the opportunities.

Reclamation's Rural Water program, under which many activities support Tribal needs, addresses important needs in rural communities for clean, reliable, safe drinking water; the FY 2025 request includes \$58.5 million to support investments made through BIL to ensure construction, operations, and maintenance of the existing authorized projects can proceed as efficiently as possible. Funding also supports Reclamation efforts for Tribal Nations by supporting many activities across the Bureau, including the Yakima River Basin Water Enhancement Project, the Klamath Project, and the Lahontan Basin project, among others.

Finally, the WaterSMART Program prioritizes funding under its competitive grant programs for disadvantaged and underserved communities. The WaterSMART Program aims to address water supply issues and improve water management through partnerships with communities, States, Tribes, municipalities, and agricultural stakeholders.

Conservation and Climate Resilience: The climate crisis is challenging Reclamation's ability to both produce energy and sustain reliable water delivery. The Nation faces undeniable realities that water supplies for agriculture, fisheries, ecosystems, industry, cities, and energy are confronting stability challenges due to climate

change. Reclamation's projects address the Administration's conservation and climate resilience priorities through funding requests for the WaterSMART program, funding to secure water supply to wildlife refuges, and proactive efforts through providing sound climate science, research and development, and clean energy. To address these challenges, Reclamation has implemented its Climate Change Adaptation Strategy, which affirms Reclamation will use leading science and engineering to adapt climate-based situations across the West.

The WaterSMART Program serves as a contributor to Reclamation's/Interior's Water Conservation Priority Goal. Since 2010, projects funded under contributing programs, including WaterSMART Grants, Title XVI (Water Recycling and Reuse Program), California Bay-Delta Program, Yakima River Basin Water Enhancement Project, and Desalination construction projects have achieved a total of 1,745,157 acre-feet water savings.

Through WaterSMART, Reclamation works cooperatively with States, Tribes, and local entities as they plan for and implement actions to address current and future water shortages due to a number of factors including drought, degraded water quality, increased demands for water and energy from growing populations, environmental water requirements, and the potential for decreased water supply availability due to climate change. This includes cost-shared grants for planning, design, and construction of water management improvement projects; water reclamation and reuse projects; watershed resilience projects; the Basin Study Program; and drought planning and implementation actions to proactively address water shortages.

Reclamation's FY 2025 budget for WaterSMART also includes \$500,000 for the Aquatic Ecosystem Restoration Program. Through this program, Reclamation provides funding for fish passage improvements and aquatic habitat enhancement, including removal of dams or other aging infrastructure if such projects are supported by a broad multi-stakeholder group, and if the project maintains water security for all involved. This program aligns with the Administration's priorities for climate change and climate resiliency. Reclamation was also appropriated \$250 million for aquatic ecosystem restoration and protection projects in the BIL. The FY 2025 request includes \$65.6 million for the WaterSMART Program.

Climate Science: Reclamation's FY 2025 budget for Research and Development (R&D) programs includes \$22.6 million for the Science and Technology Program, and \$7.0 million for Desalination and Water Purification Research—both of which focus on Reclamation's mission of water and power deliveries. Climate change adaptation is a focus of Reclamation's R&D programs, which invests in the production of climate change science, information and tools that benefit adaptation, and by yielding climate-resilient solutions to benefit management of water infrastructure, hydropower, environmental compliance, and water management.

The Desalination and Water Purification Research program addresses drought and water scarcity impacts caused by climate change by investing in desalination and water treatment technology development and demonstrations for the purpose of more effectively converting unusable waters to useable water supplies. The Science and Technology program invests in innovation to address the full range of technical issues confronting Reclamation water and hydropower managers and includes the Snow Water Supply Forecasting Program that aims to improve water supply forecasts through enhanced snow monitoring and water management to address the impacts of drought and a changing climate.

Dam Safety: At the time of publication, Reclamation manages 490 dams throughout the 17 Western States. Reclamation's Dam Safety Program has identified 364 high and significant hazard dams at 242 facilities, which form the core of the program. Through constant monitoring and assessment, Reclamation strives to achieve the best use of its limited resources to ensure dam safety and maintain our ability to store and divert water and to generate hydropower.

The Dam Safety Program helps ensure the safety and reliability of Reclamation dams to protect the downstream public. Approximately 50 percent of Reclamation's dams were built between 1900 and 1950, and the majority of the dams were built before adoption of currently used, state-of-the-art design and construction practices. Reclamation continuously evaluates dams and monitors performance to ensure that risks do not exceed the Federal Guidelines for Dam Safety Risk Management and the Public Protection Guidelines. The Dam Safety Program represents a major funding need over the next 10 years, driven largely by necessary repairs at B.F. Sisk Dam in California. The B.F. Sisk Dam is a key component of the Central Valley Project, providing 2 million acre-feet of water storage south of the California Sacramento-San Joaquin River Delta. Reclamation is modifying the dam to reduce the risk of potential failure resulting from potential overtopping in response to a seismic event, using the most current science and technology to develop an adaptive and re-

silient infrastructure. In addition to B.F. Sisk, Reclamation has identified 12 projects with anticipated modification needs through 2030, as well as 5 additional projects that will be assessed for potential risk reduction efforts starting in 2024. The FY 2025 request includes \$182.6 million to support corrective actions at dams, \$118 million of which is anticipated to support modifications at B.F. Sisk.

The proposed budget also requests \$74.8 million for specific Extraordinary Maintenance (XM) activities across Reclamation in FY 2025. This request is central to mission objectives of operating and maintaining projects to ensure delivery of water and power benefits.

Reclamation's XM request relies on condition assessments, condition/performance metrics, technological research and deployment, and strategic collaboration to better inform and improve the management of its assets and deal with its infrastructure maintenance challenges. Reclamation was also appropriated \$3.2 billion in the BIL to repair aging infrastructure.

Renewable energy: Reclamation owns 78 hydroelectric power plants. Reclamation operates 53 of those plants to generate approximately 14 percent of the hydroelectric power produced in the United States. Each year on average, Reclamation generates approximately 40 million megawatt hours of electricity and collects over \$1.0 billion in gross power revenues for the Federal Government.

Reclamation's FY 2025 budget request includes \$4.5 million to increase Reclamation hydropower capabilities and value, contributing to Administration clean energy and climate change initiatives and enhancing water conservation and climate resilience within the power program. Reclamation's Power Resources Office oversees power operations and maintenance, electric reliability compliance, and strategic energy initiatives.

Environmental Responsibilities: Reclamation remains committed to meeting our environmental responsibilities through a variety of project examples throughout the West, such as the Central Valley Project and the Middle Rio Grande Collaborative Program. The FY 2025 budget also funds Reclamation's Endangered Species Act recovery programs and other programs that contribute towards these efforts, such as the Columbia/Snake River Salmon Recovery Program, the San Juan River Recovery Implementation Program, the Upper Colorado Recovery Implementation Program, and the Multi-Species Conservation Program within the Lower Colorado River Operations Program, among others.

The investments described in Reclamation's FY 2025 budget, in combination with BIL and IRA implementation efforts will ensure that Reclamation can continue to provide reliable water and power to the American West. Water management, improving and modernizing infrastructure, using sound science to support critical decisionmaking, finding opportunities to expand capacity, reducing conflict, and meeting environmental responsibilities are all addressed in this FY 2025 budget request. Reclamation continues to look at ways to plan more efficiently for future challenges faced in water resources management and to improve the way it does business.

CENTRAL UTAH PROJECT COMPLETION ACT (CUPCA)

The Department's 2025 CUPCA budget of \$17.0 million continues progress of prior appropriations, supporting construction of the Utah Lake Drainage Basin Water Delivery System along with associated fish and wildlife conservation measures. As authorized, the completion of the Utah Lake System pipelines will deliver 60,000 acre-feet of municipal and industrial water to Salt Lake and Utah Counties. The completed project will provide increased water security, helping communities adapt to and increase their resiliency under changing climate conditions.

The request provides funding for the construction of the Spanish Fork—Santaquin Pipeline component of the Utah Lake System; the recovery of threatened and endangered species; the implementation of mitigation efforts for impacts to fish, wildlife, and recreation; and the implementation of water conservation projects. One of the goals of the project is the recovery of the June sucker fish, a critical element of listed species recovery efforts.

The 2025 budget includes \$5.2 million for the Central Utah Water Conservancy District to administer planning and project construction activities; \$1.5 million for water conservation; \$4.4 million for fish and wildlife conservation activities funded through the CUPCA program office; and \$1.9 million for program administration. In addition, the budget includes \$4.0 million for mitigation and conservation activities funded through the Utah Reclamation Mitigation and Conservation Commission.

Thank you for the opportunity to summarize the President's FY 2025 Budget Request for the Bureau of Reclamation.

Chair MURRAY. Thank you very much to all of you. We will now begin a round of 5-minute questions. So I ask all of our colleagues to keep track of your clock and stay within those 5 minutes.

Assistant Secretary Connor and General Spellmon, I know you have both mentioned in your opening remarks, and have been to see the Key Bridge cleanup efforts, and I really want to thank you for the Corps' immediate and sustained response to the collapse of the Key Bridge.

As we have previously discussed, it is important that the Corps has the funding needed to clean up the Key Bridge and to reopen the Port of Baltimore. I know that the Corps is working to finalize a cost estimate, and is using excess funds for immediate needs, but there seems to be difficulty in identifying the old funds that are available. So can you tell me how much funding is needed for the Key Bridge cleanup, how much you are able to reprogram, and your plan to cover the remaining need? Secretary Connor.

Mr. CONNOR. Thank you, Senator Murray. And I will turn to General Spellmon real quick for some elaboration. First, this is, I don't have a firm fixed cost estimate at this point in time. This is unprecedented, complex, unique work that we are doing, so we are monitoring the spend rate right now.

Currently, we have obligated around \$36 to \$37 million in the recovery efforts. By the end of this week, I think we are issuing another contract installment this week, so we will be at \$48 million that we have obligated by the end of this week, and we are about 50 percent complete with the work that is being done. So that provides some parameters.

We have also been using the Baltimore Harbor O&M Funding account, of which we had about \$53 million coming into this year plus the 2024 Work Plan. So that is the source of the funds right now. We have almost exhausted that based on the numbers I have just given you, and we have identified funds that we can do an emergency reprogramming on. We have identified funds, unallocated Bipartisan Infrastructure O&M money that we had access to that we hadn't yet distributed, and we have identified, as a fallback, in fact, we have got some other reprogramming that we can do. And then finally, as we—

Chair MURRAY. Do you know how much you are able to reprogram, do you have—

Mr. CONNOR. We have done about \$20 million right now, and I think we are looking at about another \$20 million as a potential source for reprogramming. And then, as a fallback, if we need, to ensure that we have got the resources necessary, we identified in the fiscal year 2024 Work Plan, the Baltimore Harbor Donor and Energy Transfer Ports' money, so we want to, you know, make use of that for its intended purpose. It is a fallback in case we need it.

So, we think with those resources and that contingency, that we will be well-positioned to carry out this mission. And just the last point I would make is we are taking from other accounts and needs. We will account for that. We will make sure you all understand that, so those funds can be replenished.

General Spellmon.

General SPELLMON. Senator Murray, I would just say, that is correct. We are halfway done with the work in the channel. The big cost drivers up front were the mobilization, 11 large cranes that we brought to the Port of Baltimore, all the way from New York, New Jersey, from tools all the way from Galveston, Texas. The cost uncertainty that we have, moving forward, really is: How deep do we have to go to get the remaining wreckage out of the channel.

In the one-half of the channel, the north side of the channel that is open today, in some cases, we had to go down 60 feet to get all the pavement and steel out. So we have a little bit of uncertainty on the south side of the channel.

The vessel is still in the way. Hopefully, that will be moved this week, and we will be able to bring down the uncertainty even more. I would just also add, we are looking for savings at every opportunity. One example is we have a lot of mixed material coming up, mud mixed with concrete, mixed with steel. For us to process that in the State of Maryland, that was an estimate to the tune of about \$40 million. We are going to transport that to New Jersey, where we have an existing facility that can deal with it at less than half the price, for about \$16 million. So we will keep you and every member of the committee informed, ma'am, and work to bring this—open this channel, at the lowest cost possible.

Chair MURRAY. Thank you. Let me ask one other question before my time is out. The State Department and actually numerous government agencies are negotiating a modernized treaty for the Columbia River. I have been watching this process very closely. I know everyone is working really hard, but Commissioner Touton and Assistant Secretary Connor, we are all hopeful for an agreement that provides stability. But the fact is, we are not there yet.

If there is no agreement by September, the Corps and Reclamation Bureau will have to change how they operate facilities in the Basin. Are you engaging with the tribes, and BPA (Bonneville Power Administration), and public utilities about potential changes to operations as we get closer to fiscal year 2025?

Mr. CONNOR. Yes. Sorry. I am going to jump in, Commissioner. Yes, we are engaging with all stakeholders. And yes, you are correct, we are not there yet with the agreement, we are working around the clock to try and change those circumstances. But without changed circumstances, without an agreement, operations will need to change when the Treaty Flood Control Provisions expire in September of this year. So we did a preliminary round of outreach to tribes, stakeholders, and members of the Congressional delegations last fall. Based on that, we took back that input. We are finishing some technical work, modeling so we can do another round coming into June, of briefings, and then public outreach because we have got to plan for that inevitability now.

Commissioner.

Ms. TOUTON. The answer for us also, Madam Chair, is yes, we are engaged with the irrigators, with the power users, and with the sovereign nations, care, and support.

Chair MURRAY. I appreciate it. It is really important that all the stakeholders in the region are included in these discussions about the potential changes that are coming. So, I appreciate that, and I want to stay informed.

Senator KENNEDY. Thank you, Madam Chair.

General, as you know, the pumps in our new storm protection system in New Orleans are corroding, and I know the Corps is working on it. Thank you for that. Who did we buy the pumps from?

General SPELLMON. It was a joint venture, a contractor.

Senator KENNEDY. Who was it?

General SPELLMON. Oh, sir, I will get you the specific names of the joint venture.

Senator KENNEDY. Well, are they going to stand behind their product?

General SPELLMON. Sir, we reached a settlement agreement with the joint venture, and we will begin that work after hurricane season. The interim fixes on the remaining four pumps in the system will be complete by the 1st of June, so we will have every pump available for this hurricane season. Then we will go to work on the long-term repairs.

Senator KENNEDY. You said you reached a settlement with your joint venture partner. I assume that is the pump manufacturer.

General SPELLMON. Yes, sir.

Senator KENNEDY. How much money are they putting up?

General SPELLMON. Sir, I can get you—I don't have those details here.

Senator KENNEDY. Would you? I mean, they need to stand behind their project. This project is brand new, and the pumps are corroding. And I really would like to not — see more about the settlement that you worked out with them.

General SPELLMON. Okay. Yes, sir. We are going to deliver on a 35-year design life. That is our commitment to you.

Senator KENNEDY. Yes, sir. I want to ask you about another project, General; I know you are familiar with it. That is the Elevator—Grain Elevator project in Wallace, Louisiana, by Greenfield, Louisiana. It is a \$225 million project. It is not a petrochemical plant. It is a grain elevator project. It will export grain. It is going to create about 100 new jobs, good jobs, about \$75,000 a piece.

The community wants it. The Planning and Zoning Commission in the community just approved the rezoning, but we have reached a point in this country where it takes longer to go to medical school—or it takes longer to get a permit for a project than it does to go to medical school.

When are we going to make a decision? The project needs a permit from the Corps. I am not telling you what decision to make. This company has already spent \$25 million, and they are going on, what, a couple of years. It is fish or cut bait time. Can you tell me when we are going to have a decision from the Corps?

General SPELLMON. Yes, sir. So soon, this is a controversial permit. There are parties for and against this particular project.

Senator KENNEDY. I know.

General SPELLMON. So the current friction that we are working through, sir, is adherence to the National Historic Preservation Act, specifically Section 106, on six historic properties that are in the region. So we have got the information we needed from all of our consulting parties. Colonel Jones is going through that now. He will make the decision, likely very soon, on whether or not that

needs to be elevated to the Keeper of the Registry of—the National Register for a decision. We expect to have that decision very soon.

Senator KENNEDY. Can I ask your question, General? This is the Corps' call, is it not? I mean, if the Historic Preservation folks, they are entitled to input, but they don't have veto power, do they?

General SPELLMON. Sir, I don't know, whether or not it gets elevated, I believe is Colonel Jones' call.

Senator KENNEDY. Yes. It is the Corps' call. And I know there are some people who don't want it. I understand that, and they are entitled to their opinion. But at some point, the Corps has got to make a decision, and you are not going to make everybody happy here. But time is money, and that is all I am asking is that you go ahead and make a decision.

Give me a quick update. Do I have any time left?

Thank you, Senator Hoeven. I love Hoeven.

Can you give me a quick update on the Morganza to the Gulf of Mexico project?

General SPELLMON. Yes, sir. Yesterday, we completed the initial NEPA (National Environmental Policy Act) work, we signed the finding of No Significant Impact, and we completed the plans and specs for what we call Reach A, so that is the 5-mile gap on the southwest side of this 98-mile system. We will get that contract out for solicitation next and intend to award a construction contract in July.

Senator KENNEDY. Okay. Now, I have got 35 seconds, Senator Hoeven tells me. A quick update on the St. Tammany Parish, Louisiana, Feasibility Study.

General SPELLMON. Yes, sir. I will take that Chief's report briefing from the New Orleans District on the 28 of May. We will sign that, and we will get that to Congress for their consideration in WRDA (Water Resources Development Act) 2024.

Senator KENNEDY. Okay. Thank you all very much.

Chair MURRAY. You have (unmic'd).

Senator KENNEDY. I know. But I am—Senator Hoeven can have my time.

Chair MURRAY. Senator Heinrich.

Senator HEINRICH. Thank you, Madam Chair.

Commissioner Touton, the El Vado Dam rehabilitation project in New Mexico is now 3 years behind schedule. Reclamation actually announced a stop-work notice in March, last year the loss of water storage in El Vado was the primary reason that the Rio Grande actually ran dry in the Albuquerque stretch for the first time in nearly 40 years. What is Reclamation doing to get the repairs at El Vado Dam moving?

Ms. TOUTON. Good morning, Senator. As you know, El Vado Dam was constructed in the 1930s. It is one of the few structures that is a steel faceplate dam on an earthen infrastructure. So, as we are looking to upgrade that to this century's criteria, we have run into some challenges with that project.

And so, what we are doing now is looking at what we can have as a safe reservoir restriction to be able to store as much water as possible. We are working very closely with the districts, but we are also working with our sister agency, specifically with how we can store water, pump our water in Abiquiu Reservoir.

Senator HEINRICH. And what is the status of being able to store that water in Abiquiu Reservoir?

Ms. TOUTON. We will be able to know more, and I can follow up in the record for you on that.

Senator HEINRICH. What is the timeline for actually getting El Vado finished?

Ms. TOUTON. Unfortunately, Senator, it is a little longer than we anticipated, given the challenges that we are seeing.

Senator HEINRICH. And what does that look like?

Ms. TOUTON. I can provide a more detailed timeline for you for the record, but it probably is a year or so.

Senator HEINRICH. Are we talking months or years?

Ms. TOUTON. Closer to a year.

Senator HEINRICH. A year?

Ms. TOUTON. I will follow up for the record, Senator.

Senator HEINRICH. Okay. So on another issue that I am not particularly happy to raise today, you know that my commitment to deliver for the Eastern New Mexico Rural Water Project has never wavered, and we made major progress, thanks to the Bipartisan Infrastructure Law. But Reclamation's budget line item for this is \$60,000, which suggests to me that your commitment is wavering.

I have to ask you: Will Reclamation honor its promise to provide the remaining funding for the Eastern New Mexico Rural Water Project so that it can actually be completed on time?

Ms. TOUTON. We are committed to this project, Senator. In the last 3 years, we have provided \$302 million to this project, including \$231 million from the Bipartisan Infrastructure Law. I was just there last fall, around the Clovis Air Force Base area, and look forward to continuing to meet the commitment to deliver water to those communities.

Senator HEINRICH. The progress has been great in recent years. I am just trying to make sense of a budget line item that seems to be missing a zero. We look to leverage additional funding from the Bipartisan Infrastructure Law, to be able to make our commitments to that Rural Water Project, and others.

Senator HEINRICH. I look forward to that.

Ms. TOUTON. Thank you.

Senator HEINRICH. Between Reclamation and the Corps, 20 of the 24 dams that are operated in New Mexico right now are classified as high-hazard potential.

Maybe I will start with Secretary Connor. What are your timelines for assessing and completing the repairs that are necessary on these structures to just maintain public safety? Your mic, Mr. Secretary.

Mr. CONNOR. Apologies, Senator. If I could, on the operational side, refer it to General Spellmon on the status of this network?

Senator HEINRICH. General.

General SPELLMON. Senator Heinrich, thank you for the question. I am responsible for 745 dams in the country. Nine of them are in New Mexico. Our data is different. I don't have any in New Mexico that are high or very high risk. I have got one that meets all dam safety guidelines, two at low risk, and two at moderate.

Senator HEINRICH. Okay. We will share our data with you just to be sure.

And with regard to Reclamation?

Ms. TOUTON. We are tracking the same, we have nine Reclamation dams. We talked about El Vado already, but it would be good to compare notes on the facilities, and we will provide timelines appropriately, Senator.

Senator HEINRICH. Great. I look forward to that. Since I have 27 seconds left, Secretary Connor, talk to me about the Army Corps' plans for removing Jetty Jacks in the Rio Grande, especially in the Middle Rio Grande stretch where we know that there are severe issues with respect to public safety. Every time we have a Bosque fire, or General, if you want to jump in on this; it is a real challenge for our firefighters to deal with those Jetty Jacks, which are all connected with wires as well. So they represent a very severe impediment to our firefighters being able to operate in those areas.

General SPELLMON. Yes, sir, wildfire response and important for environmental restoration. I would argue, sir, we have done this work before in the State. Our authority and our funding limited us to the Albuquerque area. We are absolutely capable of expanding this effort, and we can work with you on the additional authority and funding needed to take this more to the Middle Rio Grande.

Senator HEINRICH. Great. And I look forward to working with you on that. It is a fairly severe problem for boaters as well because they are now stretched in the actual channel of the river, and then a very severe problem for our firefighters.

Chair MURRAY. Senator Hoeven.

Senator HOEVEN. Thank you, Madam Chairman.

Secretary Connor, to quote a very wise and esteemed gentleman, "It takes longer to get an EIS (Environmental Impact Statement) done these days than it does to go through medical school", and that seems to be the case because we have the Dakota Access Pipeline Project that has now been operating, without a problem, without incident, for 6 years, moving more than half a million barrels of the lightest, sweetest crude we produce in this Nation from the State of North Dakota, including from the three affiliated Tribes, Mandan, Hidatsa, and Arikara Nation, much coming from that source, to markets, you know, out in the eastern part of the country and so forth.

Oil that we don't have to get from OPEC (Organization of the Petroleum Exporting Countries), or Russia, or Venezuela, or anyone else because we produce it right here at home. And this is a pipeline with the latest, greatest technologies and safeguards, probably exceeding any in the country. And so we have been waiting for a final EIS now for 6 years while it is operated safely. And thank goodness, General Spellmon, it has been able to operate because the country very much needs that energy. When can we expect a resolution, and final approval, of the project through this EIS project—process, excuse me?

Mr. CONNOR. Senator Hoeven, thank you for the question. And quite frankly, the process has taken quite a long time. I am responsible for some of that. In the aftermath of coming into this position, I requested the Corps to go back and do more work with respect to spill—risk assessment, as well as spill response, to look at the Tribal Treaty Rights closer, and then finally to look at how we are evaluating greenhouse gas emissions.

So we have moved forward with that. We got the draft Environmental Impact Statement out on the street. As you know, last year, and we have got, still, a very significant volume of comments, and very substantive comments. I have been representing to you and others in the delegation, and the Governor that we would complete this work by the end of this calendar year, and unfortunately, I think it is going to take a little bit longer at this point in time, to ensure that we do this work thoroughly, respond to the comments, and build a record to make this a defensible piece of work, and we don't have to do it over again.

As you know, there has been a lot of litigation, and that we need to complete that work. So I am looking at—we have moved probably into 2025, I am working with the team to assess what specifically needs to be done, and to come up with a firmer time line. And I will get that information back to you, Senator.

Senator HOEVEN. You will commit to keep our office fully informed as you go through the process, as well as the State of North Dakota and the three Affiliated Tribes?

Mr. CONNOR. Absolutely, sir.

Senator HOEVEN. Thank you. General Spellmon, did you have anything to add to that process, sir?

General SPELLMON. Sir, I don't have anything else to add.

Senator HOEVEN. Okay. Secretary, also, are you working to expand the WIFIA (Water Infrastructure Finance and Innovation Act) loan process to non-Federal levees? As you know, we have worked very hard to give you that capability along with our Ranking Member. It is an incredible tool. EPA (Environmental Protection Agency) has used it very successfully. The Corps started to use it. One of the first projects was the Red River Valley Water Supply Project, at north of a \$3 billion project, incredible tool. Are you going to use it for non-Federal levees, which would be of huge benefit, I think, for the Corps?

Mr. CONNOR. Senator Hoeven, you and I are in complete sync on this. You have used this very effectively in Fargo-Moorhead, quite frankly, to add to the public-private partnership there. So thank you for that. I am working diligently to get our—we are calling it now the CWIFP, Corps Water Infrastructure Financing Program, CWIFP program, up and going. We have got the rule in place. We solicited proposals. We have those proposals, and now we want to take the next step of providing full applications.

I am trying to get that done as quickly as possible, within the next month, because this is non-Federal investments in key infrastructure across the country. So now, with the 2024 Work Plan and the expansion to levees, non-Federal levees, we wanted to do the same. I think we are going to have to go through amending our rule to include that, because right now it is just non-Federal dams rehabilitation.

Senator HOEVEN. Right.

Mr. CONNOR. We want to include the levees, make use of the resources provided. This is a good program, and we will work on it expeditiously.

Senator HOEVEN. I would think both for our Chair and Ranking Member in their States, there would be a lot of utility, just across the country as well. I mean, this is an incredible tool for you all.

General Spellmon, did you want to add on that? And then also, as you know, we need comprehensive protection on the SRS (Savannah River Site), and we have to fix those dead loops. You can't have stinking dead loops in the middle of a town, it isn't—they stink, and they look terrible. And you all need to help us fix it.

General SPELLMON. Yes, sir. So on the Oxbow Lakes in Minot, sir, we have got the request from the City, we are putting a workshop together with our St. Paul District, and we are going to bring some of our best research scientists up from our labs in Vicksburg. We are going to have that workshop in August, and I will report out to you at the end of that, sir, on our way ahead.

Senator HOEVEN. Thank you, sir. Thank you, Madam Chair.

Chair MURRAY. Senator Shaheen.

Senator SHAHEEN. Thank you. Thank you all very much for being here. I am a big fan of the Army Corps. You have been very helpful to us in New Hampshire. We have several small harbors, and you have been very responsive as we have tried to deal with dredging in those small harbors, where shoaling has been a consistent problem. And one of the reasons that you have been able to do that is because of the funding for small remote subsistence harbors.

Can you speak—Assistant Secretary Connor, maybe you could speak to the impact of funding for these small harbors on local communities where so much of the economy, in those communities, is tied to the harbor?

Mr. CONNOR. Yes, Senator. I can't think of something I hear more about when I am out making visits than the importance of these harbors, whether it be on the East Coast, whether it be in Alaska, Chesapeake Bay. So I know the reliance that communities have on the work that we can do to ensure that these harbors can continue operations.

And so from that standpoint, with the WRDA 2020 provision that targeted 15 percent of our Harbor Maintenance Trust Fund funds going for small harbors and then the follow-up provisions in WRDA 2022. The good news is, while there is still a very high demand out there, is that we have increased our budget requests consistent with the targets of the 15 percent. And we have exceeded in some cases, barely met it in others, but the trajectory has been in the right direction. So we recognize the importance, appreciate the leadership from Congress directing us in this area.

Senator SHAHEEN. Well, thank you, and I agree the trajectory is going in the right direction, but it is going very slowly in the right direction. And Congress has consistently noted that the administration's criteria for navigation maintenance projects, disadvantages small, remote, or subsistence harbors and waterways, and so how does the Army Corps account for needs at these small harbors, given that?

And I know we have a huge backlog for ports and harbors, small ports and harbors across the country. So how are we going to get to that backlog and actually address the challenges that communities are facing; either one of you?

General SPELLMON. Yes, Senator. First, thank you. So I am responsible for 577 of these navigation channels, and 440 of them meet the criteria for small, low-use harbors. And we greatly appreciate the language that has allowed increased draws on the Harbor

Maintenance Trust Fund, and the targets that Congress has set out for us for the increased investment.

As Mr. Connor said, we are exceeding. Like this year, we will exceed those targets. But you are right, there is 440 of them, and the demand is greater than the need, and we just have to keep pressing on—stay on this important work. We realize how important these are to localities and the regions where they are located.

Senator SHAHEEN. And so would it be helpful to you to have Congress direct that a higher percentage of the funding goes to those small harbors?

General SPELLMON. Senator, we will certainly follow the direction of Congress.

Senator SHAHEEN. That was a very diplomatic response. One of the things that we are struggling with across the country is the impacts of climate change. What is the Corps doing to think long-term about the investments that we need to make to address existing waterways, and how we respond to climate change?

Mr. CONNOR. I think this is a question that both of us would like to tackle.

General SPELLMON. (Nods)

Mr. CONNOR. But I will start first. I think a lot of things in recognition, so you know, we have—Bipartisan Infrastructure Law ramped up investments, prioritized resilient-type investments, so we got to initiate projects and continue projects that we think were critical from a safety standpoint, and a risk standpoint, integrating climate change, so investments right now is part of that equation. The Corps has been doing—

Senator SHAHEEN. Give me some examples.

Mr. CONNOR. Examples, you know, North Slope of Alaska, where, you know, the accelerated wave action, the lack of sea ice accelerates, you know, the impact on the coast. And so that is actually disaster supplemental money that we have got now, but then we followed that up with investments to do coastal protection work there in Alaska, that is a perfect example where climate change has really been focused; Norfolk, one of the most at-risk communities from sea level rise, very significant investment to get that coastal storm risk management project up and going. So I could go on. There riverine examples in the Arid West, in Little Colorado, in Arizona, where we have made similar investments.

But also, we are building the tools, and this is, you know, kind of below the radar screen, but you know, the Corps is looking at different tools to measure hydrology changes, flow and stages on our riverine systems, as well as the constant updating of our sea level models, ensuring that we integrate that into our planning processes as we develop new projects, quite frankly.

And then, you know, where we can, because of the costs involved, integrate engineering with nature, so that we can work with nature as opposed to fighting nature in a lot of these examples.

If you could, General Spellmon, that is—

General SPELLMON. Yes, Senator, I would just say, to add to everything Mr. Connor just said, I want to thank this committee for the increased investment that you are making in our research and development programs. Back in the early-'80s, we invested about

2.5 percent of our Civil Works budget into R&D. Three years ago, we weren't at 2.5 percent, we were like at 0.2 percent.

So these last two budgets, you have increased our R&D budget five-fold, and that is going to very important work on coastal projects, it is going to important work on our inland projects. Examples like forecast-informed reservoir operations, or aquifer storage and recovery wells in Florida, or water quality R&D testing that we are doing in a number of locations around the country. I think that it gets—in response to your question: What can we do long-term? And it is in the laboratory.

Senator SHAHEEN. Right. Thank you. Thank you both.

Chair MURRAY. Senator Hyde-Smith.

Senator HYDE-SMITH. Thank you, Chair Murray and Ranking Member Kennedy, and thank you to our witnesses for being here today.

We have a short period of time to ask questions, but Secretary Connor and General Spellmon, I want to cover three topics, if I can, during this questioning time, or the next round: The Arkabutla Dam, and the Yazoo Backwater Area Project, which I really appreciate everybody's work on that, and then, if we could get to some more Mississippi River tributaries questions.

But Arkabutla Dam, for Secretary Connor and General Spellmon. As you know, Arkabutla Lake is an authorized Mississippi River and Tributaries Flood Control Project in Northwest Mississippi, Tate and DeSoto Counties; that was completed in 1943. The lake encompasses about 57,000 acres and provides flood protection for more than 19,000 Mississippians. A depression was found near the base of the dam last year, igniting major concerns if left untreated. A Corps risk assessment summary stated that if Arkabutla Dam breached or failed, flood waters would be deep and swift enough to damage and destroy homes, buildings, roads, bridges, and power, and water supplies, and in their words, even cause loss of life.

I understand the Corps is taking a deep look at the problem, but also that the lake would need to be lowered enough for the engineers to make an assessment, which means releasing more water into the Coldwater River, potentially more than ever before, and flooding tens of thousands of acres of farmland. This could be a multi-year, multi-million dollar endeavor.

My questions for you are, will you prioritize addressing this problem as quickly as possible? Farmers alone have already invested hundreds of millions of dollars putting crops in the ground this year, which would be wiped away with a bad turn of events. Should the White House submit any type of emergency supplemental appropriations request to Congress in the near future, before the Arkabutla Dam issue is resolved, would you commit to ensuring this project is part of the conversation? If you ask folks who live in that area, they would certainly tell you this is a high-risk emergency scenario.

Mr. Connor: Senator, I would tell you public safety is our number one priority. So the Vicksburg District, they are currently implementing what we call interim risk reduction measures. You have described some of them, to take the pressure off of the dam. Yes, lowering the lake level. We are also installing additional relief wells. We are increasing surveillance, both with tools and with

human eyes, and we will continue our active communications with the community.

Simultaneously, with these risk reduction measures, we are also in design looking at—we call it a Dam Safety Modification Study—what is the long-term fix. So I will know more on cost, and to inform a supplemental discussion as we advance in the Dam Safety Modification Study.

General SPELLMON. Senator Hyde-Smith, I would just add that with respect, I know there is other discussions going on about disaster supplemental, emergency supplemental. We will be very prepared to participate in those discussions based on needs, risk, and ongoing expenditures that we have to deal with emergencies.

Senator HYDE-SMITH. Thank you, because it is critical for my State, and certainly in that area right now. And question two is about the Yazoo Backwater Area Project that we have spent many, many, many hours on, and the status of the environmental review. And again, I am so grateful to everyone at the Corps who has been involved in addressing the flooding affecting the Yazoo Backwater Area. A solution to this problem is long overdue.

I mean, we are talking decades here. But I understand the following, and please correct me if I am wrong. The Corps last year signed a Memorandum of Collaboration with EPA and other supporting Federal agencies to address the flood risk in this area. A new preferred alternative has been proposed, agreed upon by all Federal partners, supported by local interests, and a draft Supplemental Environmental Impact Study is expected in the near future, and the goal for a final EIS to be published this fall, and God willing, a Record of Decision to be signed.

My questions for you are: Are we still on track? And do you agree that the people trying to live, raise families, put food on the table, and do business in the Yazoo Backwater Area have the right to this federally-authorized flood protection? And would you agree that pumping stations are not a new concept?

Mr. CONNOR. Senator, as you know, I have been out there with you, and I have been out there a total of four or five times, I believe, working on this issue. So with respect to the information you provided, yes, I think it was 2022 when we signed our Memorandum of Collaboration at EPA, included Fish and Wildlife Service. So Federal agencies are working in alignment on this, which hasn't always been the case too. We have a new water management proposal, including pumps, how we operate those pumps, adaptive management, and nonstructural measures that we are putting together as part of the Environmental Impact Statement process.

So we are on track to move forward with the draft EIS, hopefully release that in the next 30 to 45 days, get that on the street and take comment. We expect there will be a lot of interest in that, but the goal is to, by late fall, end of the calendar year, have this process concluded.

So I would agree, you know, I have listened to the stories, we can't replicate the 2019 situation that occurred there. It is very important that we continue to work on this project, and that we have backwater pumps in other parts of the Mississippi River where we have completed that work.

Senator HYDE-SMITH. Great. Thank you for your answer. I am good with that.

Chair MURRAY. Thank you. Senator Britt.

Senator BRITT. Thank you, Madame Chairwoman. First, I want to appreciate—tell each of you that I appreciate you being here, and being in front of this committee today. I also see several Alabamians in the—here in hearing, and I want to say, welcome. Glad you are here, and thank you for all that you do for our great State.

Mr. Connor, and Lieutenant General Spellmon, I would first like to follow up on what we discussed at last year's hearing. We discussed different ways that the port, like the Port of Mobile, should be able to use their port energy funds. I was going through the work plan that you released earlier this week, and read the section identifying the expanded uses and activities for these port and their energy funds.

I would like to thank you both for following through on your commitment to reexamining the capabilities for ports to use these funds for channel, berth and other dredged material, management activities. I would also like to take this time to thank Brigadier General Hibner's team with the South Atlantic Division. And specifically, Colonel Chapman's team at the Mobile District for their actions to gather the necessary funding to rapidly begin and soon complete the repairs to the Lock in Demopolis, Alabama. I have really been blown away by everyone's willingness to work together to achieve that goal and get the Lock back open.

Colonel Chapman's team has been very responsive both to myself and my team over the last few months, following the Lock's failure, and it is exactly the way that this should operate.

Mr. Connor or Lieutenant General Spellmon, I understand that traffic is set to return to the Demopolis Lock within the next 2 weeks. Do you all foresee any impediments to that? And with the Lock reopening, I want to see if you feel like it will be on time?

General SPELLMON. Great question, Senator. We are on track to complete all of our work by the 30 of May, 30 of this month.

Senator BRITT. Excellent. That is wonderful news. It is great when we can do things on time. I think it saves money, saves energy, and it is certainly vitally important to the economics of that entire region and beyond. So thank you so much. It is great news to hear.

I also want to speak about another project, the Mobile Harbor Deepening Project, which I understand is on schedule for completion March 30 of 2025, so just under a year.

Last year, I think, Mr. Connor, I think you visited the Port of Mobile immediately prior to this hearing. You told me you believe the project was going to be completed on time. Question for both of you here: Do you still expect that project to be completed on time?

General SPELLMON. Senator, the last contract will be awarded next month, and we are on track to complete this work in March of 2025.

Senator BRITT. That is wonderful. I have noticed, obviously, a theme and have discussed this with Colonel Chapman, but fully funding major projects at the beginning results in projects being completed on time and raises the likelihood that projects remain on

budget or potentially, in some cases, under budget. As of today, the Mobile Harbor Ship Channel, widening and deepening project, which was fully funded at the start by the Federal Government, which obviously some in the media irresponsibly and falsely reported otherwise, but it is both on time and on budget.

On this, in 2023, for the first time in years, Chair Murray and Vice Chair Collins led the Senate Appropriations Committee in public markups, and advanced all 12 bills by July 27. I am grateful for both of their leadership in making this a priority.

Unfortunately, it took 174 days, though, after the fiscal year to get all 12 appropriations bills signed into law. And it was actually 236 days since this appropriations committee actually did their work.

Mr. Connor, and Lieutenant General Spellmon, do endless continuing resolutions raise the cost—and some people know them as CRs (Continuing Resolutions)—but do they raise the cost and length of the timeline for major projects? And would a return to more regular order, this body doing its job on time for the American people, allow the Corps to be more responsible stewards of taxpayer dollars?

Mr. CONNOR. Senator Britt, thank you for the question. Yes, the continuing resolutions process makes it very hard to complete the work that we are trying to accomplish. As a threshold matter, I would just acknowledge, but full funding is obviously most optimum. Very significant funding for blocks of work like Howard Hanson Dam, which we need to do, obviously creates significant efficiencies and allows us to move through the most complex aspects of our work.

And CRs are the worst part of that spectrum of how we fund things. We have those projects that aren't fully funded, which are typically base plus option type contracts, and then we start chasing options as to whether we can pick them up or not, if we are in continuing resolutions. If we don't pick them up, they get rebid. Chances are that costs will be significantly higher and that labor will go elsewhere.

Senator BRITT. Madam Chairman, would you allow me just one more minute?

I am so grateful for you saying that. I mean, these women have led this committee in a remarkable way, and it is ultimately the hardworking Americans that pay the price when the body does not do its work, when Congress does not pass these bills on time. So I appreciate you speaking directly to that, because when you rebid something, everybody knows that the price does not go down; it goes up. So not only do you not have the predictability you need, it ultimately costs the taxpayer more. Two things I just wanted to make sure that I mention before I conclude: First, is the Wilson Lock in Florence, Alabama. It lost buoyancy and sank to the bottom of the reservoir. I understand that TVA (Tennessee Valley Authority) is pursuing internal solutions, but I think it is extremely important that we work together and examine all possible routes for a permanent repair to the guide wall.

And then second, the Selma Flood Risk Mitigation Project, it would construct a wall along the bank of the Alabama River. We all know that Selma is not just a crown jewel of Alabama; it is a

crown jewel with historic nature for our entire country, and so making sure that we prevent the river from further eroding the bank and causing historic buildings to fall into the water.

This project is very important to me. It is also very important to Congresswoman Sewell. And the floods threaten a nationally registered historic district. And we look forward to working with you all on making sure that we get this right. Thank you.

And thank you, Madam Chair Murray.

Chair MURRAY. Thank you, Senator Britt. We will now do a second round for anyone who wishes to ask additional questions.

And I will start; Assistant Secretary Connor, with you. This subcommittee requires quarterly execution reports from each agency. Both your office and the Corps indicated there is no system that can provide that information, yet we have other agencies, like the Department of Energy, that are able to provide that information to us. These reports are really critical to this subcommittee. They really ensure that the Corps is executing funding in accordance with the law, and that we are putting limited funding to the best uses. Can you explain how you are working to update the Corps' budget and execution software to address this issue?

Mr. CONNOR. I will start, Senator Murray. We don't have any, right now moving forward, system in place to provide all the relevant information. I think you know, with respect to the budget and execution reports that you expect and that you need to do your work, we have now got into a rhythm, and we have had internal discussions about how we can get the information to you on time.

It would certainly be facilitated better if we had the system that delivered that information out immediately. It still requires some analysis, and it is complex in the sense that our 902 limits continue to change year to year with inflation figures, and some of the information will be hard to just put in a system itself. So we need to do a deeper dive. I know the Corps has done a lot of work on their information systems, mostly related to project execution, and see if we can't somehow in the future meld the needs with the information system we have got, because we are not doing any significant changes at this point in time, even while getting you the information.

General SPELLMON. You know, Senator Murray, I would be happy to visit with the Department of Energy and see what system they are using so we can get you timely reports. To be frank, today I could not invest in that IT system, and the reason is, if you go back 15 years, the Corps had a \$30 billion construction program, and we were funded for oversight for about 1,460 people.

Today, the workload is three times that. We are a \$92 billion program, and I have fewer—I am funded for fewer people to provide that oversight. So finding dollars to invest into an IT system, it would be challenging for us at the moment. But again, I will follow up with the Department of Energy and see how they are doing—

Chair MURRAY. Would you just be willing to work with our subcommittee to make sure we get those systems in place?

General SPELLMON. Yes, and absolutely.

Chair MURRAY. Thank you. Commissioner Touton, the Yakima Basin is experiencing the second year of drought conditions and re-

duced water allocations. Thankfully, the Yakima Basin, Integrated Plan Partners have proposed drought mitigation and resiliency projects critical to conserving and managing the Yakima River Basin's natural resources, their water supply, and economic, and environmental well-being.

Those projects can help mitigate drought effects this year and in the future. And I understand the Inflation Reduction Act provided funding that can quickly get those projects underway. How is Reclamation executing the remaining IRA (Inflation Reduction Act) funds? And are those funds available for basins that are currently experiencing drought, like the Yakima Basin?

Ms. TOUTON. Thank you, Senator. The Yakima Basin Project is the model across the West for how you deal with climate change and aridification while dealing with agricultural sovereign nations and the ecosystem. Our budget includes \$35.5 million for the Water Enhancement Project.

And as regarding your question on the Inflation Reduction Act, we made our first announcement for other basins: \$60 million in the Rio Grande, New Mexico. And we look forward to working with you to help the Yakima Basin get through this year, and for the future.

Chair MURRAY. I appreciate that. Finally, General Spellmon, Congress has consistently, almost annually, since 2018, provided supplemental funding to address natural disasters. In 2018, Congress provided \$15 billion in a supplemental for the Corps to construct critical flood projects. However, we understand there is now more than \$10 billion in additional need to complete what was started. It is important we finish what we start, and that is impossible when total project costs continue to increase drastically, which is why fiscal year 2024, this committee provided dedicated funds to start addressing some of the critical failure points such as underdeveloped project design, and a failure to do periodic cost updates.

In addition to this Committee's actions, what is the Corps doing right now to address cost overruns and incorporate lessons learned to correct those issues?

General SPELLMON. Senator, a number of things. First, I will share with you, we are not alone. The Federal—the people that build for the Federal Government are dealing with this. People that are building for States and private industry, everyone is dealing with cost increases, primarily in labor, the labor market, that is the number one cost driver on our projects.

We are doing a number of things. First, we are hiring more cost engineers. A year ago, I had 350 of them on our staff. Today, I have 463, and we are working to hire the remaining 27. For the size program I have a need for about 500. We are almost there. We are changing the way that we report costs and our estimates to the administration and to Congress. We are going to tell you what design maturity it is. Is it a 10 percent design, a 20 percent design, what assumptions went into that, and what the range of costs could be looking at the potential construction timeline for the project.

We are meeting routinely with industry, specifically the Associated General Contractors of America, who represents all of the construction trades. We are meeting with the economist so we under-

stand more specifically the regional impacts of materials and labor. And the last one, we are working hard to get industry involved more early and contractor involvement type acquisition strategies in our project so we get more industry feedback in all that we are doing. We are committed to this, and we are committed to greater transparency with you.

Chair MURRAY. Okay. I appreciate that. And if you can share with our committee any steps that we can take in fiscal year 2025 to help address those issues, particularly related to increased design maturity, I would appreciate it. Thank you.

Senator Kennedy.

Senator KENNEDY. I defer to Senator Durbin.

Chair MURRAY. Senator Durbin.

Senator DURBIN. Thank you, Senator Kennedy. I appreciate that very much.

Assistant Secretary Connor, it is good to see you again, and your colleagues. The Great Lakes contain 21 percent of the world's fresh water. One out of every ten Americans rely on the Great Lakes for drinking water, from an economic standpoint, the Great Lakes support 311,000 jobs across a variety of industries, \$8.8 billion in wages.

For years, we have worked to move the Brandon Road Interbasin Project at the Brandon Road Lock and Dam near Joliet. This project is critical to preventing an invasive species of carp from reaching the Great Lakes. For over 10 years, I have dedicated a large part of my public service to that "damn fish". We all know the importance of keeping this fish out of the Great Lakes. They already have shifted the ecological balance of the Mississippi River significantly.

I have helped secure more than \$272 million for this project, but as I understand it, the funding will not become available until an agreement is reached between the Army Corps of Engineers and my State of Illinois.

This is a regional issue, not just our State, concerned about it. The State of Michigan has shown a remarkable commitment to solving this problem with us, and I want to thank them. I commend you for the role that you played in moving toward construction, but before we can get to this step, there needs to be a project partnership agreement between the local sponsor, the State of Illinois, and the Army Corps. What will happen on June 30 if a project partnership agreement between the Army Corps of Engineers and the State of Illinois is not signed?

Mr. CONNOR. Senator, thank you for the question. The prospect for increased costs associated with the project if we don't get the PPA (Power Purchase Agreement) in place by the end of June of this year, and that is primarily because we need to coordinate some of the work that we need to do on Brandon Road with the closure on the Illinois Waterway for maintenance work that we do. So we get efficiencies out of that if we combine that construction activity.

So that is why we have articulated the end of June is incredibly important. Thank you very much for all you have done to help work through the issues, and I am happy to elaborate more on where we are trying to get to PPA if you would like.

Senator DURBIN. I understand you received a letter from the Governor of Illinois asking questions about the project. Have you responded to that letter?

Mr. CONNOR. I have responded by talking to the Governor directly. The Governor requested that we sign an incremental PPA for a phase of this project. We don't think that this project can be broken down into phases that are usable increments. We need to complete the whole project. So I wanted to talk to the Governor about that directly before sending him a letter. We talked through some of the State's concerns with respect to ensuring cost certainty, long-term O&R. We had a good conversation.

I still need to respond to him for the record, I don't believe we can sign an incremental PPA. We can work on items associated with that cost certainty and OM&R, and I also think it is important that we bring Michigan into the discussions, which I know is happening at the local level, but I think that is important for us to be able to try and hit that PPA June 30.

Senator DURBIN. And once again, thank Michigan, the Governor, and both Senators, my colleagues, have really gone overboard trying to help us, and I want to thank them for this. Do you think the ball is in the Corps' court at this point? Or is Illinois waiting on a response from you?

Mr. CONNOR. I think the Governor is waiting for a response from me. We have been in contact with his team. After he and I talked, I would like to get that response out to lay the foundation for the next set of steps we need to take to get to a final PPA.

Senator DURBIN. With June 30 deadline looming. Can you give me your assurance that you will look into this matter as soon as perhaps today?

Mr. CONNOR. Yes; absolutely, sir.

Senator DURBIN. Thank you very much. I also want to thank the Corps for their efforts on the Quincy Bay. That means a lot to me and to the people in that community, so thank you for moving forward on that.

I see my time is just about up, but I want to ask the last question about the infamous Bubbly Creek in Chicago. Will you commit to expediting interagency discussions with the EPA to ensure there is no further delay in the restoration of this area?

Mr. CONNOR. Yes, sir. We would like to get this project up and going as quickly as we can. And I know this issue, particularly as it relates to hazardous, toxic, and radioactive waste, the HTRW issue, is one that we have got to work through with all the agencies, so we are committed to that.

Senator DURBIN. Thank you very much. Thank you, Madam Chair.

Chair MURRAY. Thank you. Senator Kennedy.

Senator KENNEDY. General, in my opening comments, I talked about how, in my judgment, the Corps of Engineers and its projects actually save us money. Do you think I am right about that?

General SPELLMON. Sir, you are absolutely correct.

Senator KENNEDY. Okay. I am a big fan, by the way, of the Corps, like Senator Shaheen, like all of us. I just worry about how we fund you. The President's budget, I know it is not your budget, you have got to claim it. But I get it, you wouldn't do it the same

way it was thrust upon you, but let us take the Inland Waterways Trust Fund. How do we fund that?

General SPELLMON. Yes, sir. So this is a tax on transporters, on our inland waterway system, and those funds are collected into the specific fund.

Senator KENNEDY. But we don't spend all the money, we collect the tax from people, but we don't—and we say it is for inland waterways, but we don't spend all the money on inland waterways, do we?

General SPELLMON. We don't.

Senator KENNEDY. We spend it elsewhere in the budget, right?

Mr. CONNOR. Can I jump in on that?

Senator KENNEDY. Sure.

Mr. CONNOR. With respect to, I looked a lot at this issue as we were finalizing the work plan, Senator. We have a \$300 million account right now within the Inland Waterway Trust Fund, and we generally get about \$100- to \$120 million worth of revenue. We had the opportunity to make a choice based on the work plan of whether or not we went into the trust fund this year. I chose not to do that. We had the opportunity to use repurposed Bipartisan Infrastructure Law, so—and the reason I wanted to do—

Senator KENNEDY. Yes, sir. But before we get too far down in the weeds, we do this with the Harbor Maintenance Trust Fund as well. We tax people who are using these waterways, and then we don't spend the money on the waterways. Isn't that an accurate description?

Mr. CONNOR. We have not used all the funds provided, that is correct, sir.

Senator KENNEDY. Okay. General, tell me when we can expect a Corps decision on the Greenfield Project we talked about earlier.

General SPELLMON. Yes, sir. I just spoke to Colonel Jones just this morning on that. I expect we will have that decision within the next few days.

Senator KENNEDY. Okay, and that will be a final decision?

General SPELLMON. That would be a decision on whether or not we need to elevate to the Keeper of the National Register the issue associated with the six historic properties. The final decision, sir, will come later in the—

Senator KENNEDY. But suppose you elevate it to the Historic Preservation community, if you will, call them, you still have the final decision, right?

General SPELLMON. That is correct.

Senator KENNEDY. The Historic Preservation folks give you their advice, but their advice is not dispositive; is that right?

General SPELLMON. Sir, I am sorry, I may have misunderstood your earlier question. I don't know the answer to that. I only have one repetition where we had to elevate to the Keeper. I will take that, sir, and follow up with you.

Senator KENNEDY. Yes. But here is what I am trying to understand. Whose decision is it? Is it you—is it the Corps? Or is it the Historic Preservation people?

General SPELLMON. Yes, that is the part I don't—the final decision on the permit, the overall permit is with the Corps. The spe-

cific issue with the National Historic Preservation Act, I would have to follow up. I don't know.

Senator KENNEDY. Well, it is your decision. I mean, that is my understanding of the law. Historic Preservation folks offer their input to the Corps, but the Corps either issues the permit or it doesn't. And you have the authority to say, I agree with the Historic Preservation people or I don't. And what I am asking is when do you think we will get a final decision? I mean, what if the Historic Preservation folks say, this is going to take us 3 or 4 years? Now we have not only finished medical school, we finished an internship, and a residency, and the subspecialty.

So how long are you going to give the Historic Preservation folks to make a decision? It is not like they haven't been part of this. They have been part of this from day one.

General SPELLMON. Right.

Senator KENNEDY. And then I want this project moving.

General SPELLMON. So Senator, I have only had one repetition where we had to elevate to the Keeper of the National Register, and it didn't—

Senator KENNEDY. I am trying to understand the time.

General SPELLMON [continuing]. Take 6 years. It took a few weeks.

Senator KENNEDY. Okay. So you think that the Historic Preservation folks, you are going to elevate it to them, and then they are going to have to give you an answer in a few weeks?

General SPELLMON. So the decision to elevate has not been made yet, that is the—

Senator KENNEDY. Yesh. But you are going to elevate. That is my prediction. You know, let me put on—put my, you know, I just see an elevation in my future. You know, after you elevate, how long are they going to take?

General SPELLMON. Sir, I don't know how long they are going to take.

Senator KENNEDY. How long are you going to give them?

General SPELLMON. Sir, I don't know those answers.

Senator KENNEDY. We have to make a decision. We have not only finished med school here, we finished law school and going after a Ph.D. These permits just shouldn't take that long, General. This controversy is not going away. And I am not telling you how to make the call, but you got to make a call here. Just like on Senator Hoeven's pipeline; 6 years, you know, that is not acceptable. I am—

Thanks, Madam Chair.

Chair MURRAY. Thank you, Senator Hoeven.

Senator HOEVEN. I want to thank the Ranking Member for his comments, and he always expresses it very well, but it is important. We have got to move these projects. They are just critically important for the country, critically important infrastructure for all our States and for the country.

Commissioner Touton, speaking of that, you have been actually remarkably helpful in getting—advancing ENDAW, and the Eastern North Dakota Alternate Water Supply Project which actually will provide water supply, not only to Eastern North Dakota but Western Minnesota as well. A lot of folks over there in the Red

River Valley of the north, and you have done a—provided a timely process for the Record of Decision. We thank you for that, but now we have to, you know, get to the actual funding piece.

And so my first question is, are you committed to helping us get that funded? And then second, your recommendations on how we advance this project in a timely way?

Ms. TOUTON. It is nice to see you, Senator Hoeven. The first time we visited North Dakota was to see the water source, and we were together again last year to be able to see the communities we would serve. So, we are committed to this. We are at a point of hitting a ceiling within the project. I know we are working with you and with other projects that may face similar situations, and look forward to continuing that conversation.

Senator HOEVEN. Your work on this has been critical. You have been out to our State twice. Will you commit to work closely with our staff, now to continue to advance this so that we can get it done on time?

Ms. TOUTON. Absolutely, Senator.

Senator HOEVEN. Thank you, Commissioner.

General Spellmon, I wanted to follow up with you on a couple things that I didn't get a chance to earlier. One is that you are doing Missouri River test flows and you are doing these pulses for, I think, pallid sturgeon, and various species. But you also have a lot of folks in Eastern Montana, and obviously Northwestern North Dakota that are affected by this, in essence, flooding that you do. And so I want to know if you are making sure that our folks up there in Northwest North Dakota are fully informed, and that you are taking any steps to mitigate flooding that you actually may be causing for, you know, fish, and so forth, at the expense of people.

General SPELLMON. No, sir. We are meeting our requirements under the Endangered Species Act. We are not interested in inducing flooding on anyone. We have physical monitors out in the field, and if we get any reports that there is induced flooding we will off ramp the test. So that off ramp is already built in. No, you are correct. In fact, the test this year is simply replicating the flow that we had from plain snowpack last year, just this year, we have additional instrumentation and monitors in the field.

Senator HOEVEN. Okay. And then shifting gears a little bit, Lake Sakakawea, as well as the other Mainstem reservoirs are huge, and they are multi-purpose, one of which is recreation. What steps can we take to develop partnerships between the Corps and local stakeholders who are willing to step up to ensure that recreational facilities are well-maintained and enhanced?

General SPELLMON. Sir, we are open to any ideas that would increase investment in recreation facilities across the country. I just think that private—public-private partnerships is another avenue, and it is a great idea.

Senator HOEVEN. And you will emphasize that to your folks on the ground that they should be looking for those opportunities, and working with our local stakeholders?

General SPELLMON. Yes. Yes, sir.

Senator HOEVEN. Thank you, General. And then the last is the Dam Safety Modification Project for Garrison Dam which is a huge project, fiscal year 2025 there is \$32 million for design on it. You

know, schedule and scope. I know some of your folks have talked about coming out this summer and actually going out to the dam with us, and describing for the public what it is you are going to do. But I know it is a massive undertaking. So could you, please, describe exactly how?

General SPELLMON. Yes, sir, it is. But those dollars are design and construction so \$27 of that \$32 will actually go to advancing the design. There is \$4 million we want to put immediately to construction, it is the right abutment drain.

Senator HOEVEN. Yes.

General SPELLMON. It is work we can get after right away.

Senator HOEVEN. There was some erosion I think on it.

General SPELLMON. Yes, sir. And then also we are doing some work in the laboratory on this as well. There is three modeling efforts going on, there is some anchor testing that we need to do, and there is also some material tests in the lab that we want to conduct. We want to build this right the first time, but a very important project for us.

Senator HOEVEN. Okay. So Secretary Connor; and I want to thank both of you for your leadership on these really important projects. You know, we need your help on them to complete them. Thank you.

Thank you, Madam Chair.

Chair MURRAY. Thank you. Senator Sinema.

Senator SINEMA. Thank you Chairwoman Murray, and Ranking Member Kennedy; and thank you to our witnesses for being here today.

As you all know, there is nothing more important to my home State of Arizona than our water resources. My constituents and I take our responsibility as water managers extremely seriously, and I appreciate the support of your agencies in achieving this mission over the years.

As Arizona, the Colorado River Basin, and the West face an unprecedented drought crisis. Now is the time to put aside partisan and geographic divisions to act with determination and creativity to address this crisis. Public relations campaigns that are focused on finger-pointing and zero-sum outcomes leave everyone worse off. With a booming economy driving the energy transition, Arizona cannot bear the full weight of future reductions as we look forward to post-2026 operations of the Colorado River.

As you all know, I have worked hard to provide funding and policy solutions in multiple pieces of historic legislation, and I look forward to discussing this critical issue with you all today as we go forward.

First, Commissioner Touton, as I alluded to in my statement, I continue to be concerned about the trajectory of post-2026 negotiations for the Colorado River. Can you provide an update on the Basin-wide negotiations?

Ms. TOUTON. Thank you, Senator. We are currently in the alternative development stage. We have received several proposals from the Upper Basin States, the Lower Basin States, as well as the NGOs (Non-Governmental Organization), and some tribal elements, skills alternatives. We are currently in conversations with

all of our partners in being able to model those alternatives to show the impacts.

Senator SINEMA. As you know, we are almost halfway through the year, and nearly 2 years since the Inflation Reduction Act, and the Historic Drought Funding I secured has become law. As we have discussed in the past, the purpose of this funding is to address crisis needs and to help communities defer the impacts of potential drought-driven water delivery reductions. Can you provide a specific timeline for when bucket two funding decisions will be announced?

Ms. TOUTON. Yes, Senator. I think you will be pleased that we will be making those announcements here in the coming weeks.

Senator SINEMA. What do you mean by weeks?

Ms. TOUTON. I look forward to following up with you, Senator.

Senator SINEMA. I would like to get a follow-up on that.

Ms. TOUTON. Absolutely.

Senator SINEMA. As you know, it could be 2 or it could be 20. I am hoping for the 2.

Ms. TOUTON. It will be this summer, Senator.

Senator SINEMA. Wonderful, thank you. The drought in the Colorado River Basin is now extending beyond its 20 year. The Lower Colorado River Basin was in a Tier 2A shortage for 2023. As you know, the States in the Lower Basin had to reduce their Colorado over-supplies by 617,000 acre-feet per year. As we know, Arizona took the majority of these cuts. Over the last several decades, however, there remain additional deliveries to Mexico over and above the quantity of water required by the Treaty of 1944.

And while I appreciate that the Bureau has worked to address some of these flows of Colorado River water to Mexico, my understanding is that there was over 170,000 acre-feet of water delivered to Mexico above our treaty obligations, due to the high salinity infrastructure needs, and other issues. What is Reclamation doing to address these over-deliveries?

Ms. TOUTON. 2023 was a good hydrologic year for us. It also showed us that we need more flexibility downstream of Hoover on how we can capture some flows. So, we are actually in the process of looking at infrastructure below Hoover Dam to see how we can work through our operational flexibilities to be able to capture some of this water during these types of years.

Senator SINEMA. The Federal Government's trust responsibilities to deliver water to our tribal communities, of course, is one of our most important duties, and I was proud to pass into law, at the end of last Congress, amendments to the White Mountain Apache Tribe's and Water Rights Quantification Act that extended the enforcement date and expanded the authorized funding available to deliver clean water to this community.

The President's budget requests \$181 million for the settlement in fiscal year 2025; can you explain how this funding will be used to implement the settlement?

Ms. TOUTON. Absolutely. The \$181 million within the President's budget request is for the planning, design, and construction of Minor Flat Dam as part of that settlement. And we look to be able to meet that enforceability date through these three next fiscal years to be able to hit the 2027 date that you provided us, Senator.

Senator SINEMA. Thank you. I am also concerned about the long-term viability of the river outlet works at the Glen Canyon Dam. How does the Bureau's budget request seek to address damage that has been sustained to the river outlet works?

Ms. TOUTON. The Glen Canyon Dam remains operable, and there are no short-term risks to deliveries within the system. What we saw was evidence of cavitation, we are already working through fixing the lining within that canal within the next year. But we are also looking at long-term solutions, including what this looks like in operations for post-2026.

Senator SINEMA. Thank you. I see that my time is nearly expired. Commissioner, I would like to follow up on the issue around the water overflow to Mexico.

Ms. TOUTON. Absolutely.

Senator SINEMA. As you know, every time we send too much water to Mexico, that is less that Arizona has, and of course, that creates more stress within the Seven States for our post-2026 Agreement.

Ms. TOUTON. I look forward to following up, and thanks to your constituents' leadership, we have been able to conserve 1.7 of the 3 million acre-feet as part of the Inflation Reduction Act. Lake Mead is higher today than it was in May 2021.

Senator SINEMA. Thank you, Commissioner. As you know, Arizona is very proud of the work it has done. Not only have we borne the brunt of the cuts so far, but we have also demonstrated leadership, and an understanding that all Seven States must work together to solve this crisis.

Madam Chair, if I may, I just would like to close my questioning by reminding Fellow States that our region will either survive or fail together; and so I call on the other Six States to join Arizona in this leadership to find a long-term solution that benefits the entire region, not putting one State against each other. Thank you.

Chair MURRAY. Thank you. Senator Murkowski.

Senator MURKOWSKI. Thank you, Madam Chair. And thank you all for being here this morning.

We have had an opportunity over the past year to engage on a couple of different issues in my State, certainly Homer, the Barrow coastal erosion, and I want to thank you for a pretty pragmatic approach to working with me and my team, and your focus on the Alaska projects and partnership going forward. I think the more we can be open and communicating well with one another, the better off we are going to be.

I am pleased to see funding for the Port of Nome construction, and the Homer GI both included in the 2024 Work Plan, as well as the fiscal year 2025 budget request. As you know, these are very high priorities, particularly the Port of Nome, due to its national security significance.

But that being said, there has been a lot of advocacy to ensure that both of these projects stay on track. So I am a little bit concerned going into the 2025 process and beyond that we are going to appropriately prioritize these in the budget process. Concerning Nome, particularly, this kind of seems to be a case study in rhetoric versus reality with our Nation's challenge to match the

projects of national security and economic significance with the processes that we have at our disposal, and how to fund them.

We know that the Port of Nome is a Civil Works project, Senator Sullivan and I have been talking to a lot of our national security officials and flag officers, both directly, and in person, and off the record, as we underscore the strategic and national security imperative into the Arctic region. A lot of dual-use benefits for both commercial and naval security interest in the Arctic, where we have seen investment really lacking. And I think both of you would agree with that.

And yet, while we have got some unanimity on the value of the project, we can't seem to get the same level of enthusiasm or gusto when it comes to funding it. This year's budget request of \$25 million is the first regular order construction request for the project, notwithstanding, Nome's previous award of \$250 million for construction, which was due, of course, to hydro.

So at \$25 million, it is absolutely essential. I think we all know it is far from the cost to complete. So we are looking at a project that is going to be in the range of \$500 million. And so I look at the \$25 million request and don't see this as adequate to meet the project's requirement. Maybe it is because the project is not a great fit for the National Economic Development funding formula under which it was authorized.

So I am using my time here to suggest that it is time that the Corps work with Congress to figure out some creative ways to adequately fund this project, and perhaps some others that recognizes the national security benefits as well as the economic benefits. So I am hoping that we are going to see future budget requests that will make very meaningful progress on fully funding the project's construction costs.

So I am hoping that maybe you can give me a little more optimism here with a budget request number in fiscal year 2026 that reflects the cost to complete the project. But also, I would like to have your assurance that for future budget requests, you will treat the projects authorized under this authority, like Nome, consistent with the provision in Title 33, Section 2242(c), of the U.S. Code.

So in other words, making sure that it is given equivalent budget consideration and priority as projects recommended solely by national economic development benefits.

A long statement there, but you know where I am going with this. We have got to figure out what the funding plan is going to be for a port like Nome given the national security imperative, because if we are going to do \$25 million every funding cycle, the Arctic is never going to be addressed. We need a Deepwater Arctic Port.

General SPELLMON. Yes, Senator. So I think I will try to give you some insurance here. This is more sequencing than in terms of a budget issue. So with the \$250 million that came to us in the Bipartisan Infrastructure Law, and the \$25 million in this budget, that is going to allow us to award what we are calling the phase one, the West Breakwater Extension. We need to get that in place before we can start the work on the actual harbor deepening. We can express that capability as early as 2025 that is about a \$95

million job. And then the final phase of this is the new East Causeway, we estimate about \$151 million.

But we have what we need to get this first work done. Then we are going to work on the budget for the deepening, and then the remaining work to complete the project.

Senator MURKOWSKI. Secretary Connor.

Mr. CONNOR. Yes. If I could just add on the bigger picture question that you raised in your comment, I would agree, this is not a great NED (National Economic Development) fit in our traditional analyses. But yet we did get it in the budget, which I think represents progress. And it is for a lot of the reasons that you have just identified.

And we are working on, you know, expanding the range of what we view the benefits of our projects are. My predecessor put in place something called Comprehensive Benefits, asked the Corps to look at comprehensive benefits as we are planning projects and to integrate that, and assess that as part of our Chiefs' reports that we are putting together.

We are trying to take that to the next step now, and to look at institutionalizing that approach through our principal requirements and guidelines that maximize our look at benefits. This is net public benefits. It doesn't specifically address national security, but we are moving in this direction to recognize that we can't, you know, purely just look at NED benefit-cost and assessing the value of these projects. So we want to continue. I think there is appetite for that from all quarters of people invested in the Corps' projects, and we will continue to work in the way that you suggested here.

Senator MURKOWSKI. Well, let us keep—again, we have got to have open lines of communication here, and we can't have everybody holding their breath waiting for the next funding cycle, hoping that we are going to get enough for that next phase. So I would really like to keep close on this project as well as some of the others we are working on. Thank you.

Thank you, Madam Chair.

Chair MURRAY. Thank you. That will end our hearing today. And I want to thank our witnesses, and all of my colleagues for participating in today's hearing. I look forward to working together on this year's appropriations bill to make sure we are providing the Army Corps and the Bureau the resources they need.

ADDITIONAL COMMITTEE QUESTIONS

I will keep the hearing record open for 1 week. Committee Members who would like to submit written questions for the record should do so by 5 p.m., Wednesday, May 22. We appreciate the Army Corps and Bureau responding to them in a reasonable amount of time.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. MICHAEL L. CONNOR

QUESTIONS SUBMITTED BY SENATOR TAMMY BALDWIN

Question. The Army Corps' budget request includes \$264.13 million to continue construction of a new navigation lock at the Corps' Soo Lock facility in Michigan's

upper peninsula. Is the requested amount, and the remaining prior year appropriations, adequate to exercise all of that project's contract options that are scheduled to expire by the end of FY25? If not, how much funding would be required in FY25 to pay for all of those contract options?

Answer. The Corps awarded Option 3 of Phase 3 of this project in September 2024. Three options are scheduled to expire in FY 2025—Options 4, 5, and 6 of Phase 3. The Corps expects to be able to exercise all three of these options within the funding level requested in the Budget.

QUESTIONS SUBMITTED BY SENATOR KYRSTEN SINEMA

Question. The Army Corps plays a vital role in many parts of the nation to help develop water resources for public use, provide flood control, and other critical functions. However, this has not historically been the case in Arizona and much of the West. As the Corps looks forward in the 2025 budget and beyond, what additional authorities and resources would be most helpful in addressing the unique needs of drought-prone areas of the West? Specifically, how can the Congress better align the missions of the Corps and the Bureau of Reclamation to address the drought risks facing tens of millions of citizens in fast growing areas like Arizona?

Answer. As I stated in a July 28, 2022 memorandum on drought resilience, the Corps is helping states and local communities to adapt to the significant changes in hydrology brought on by climate change. We have many efforts underway to assist drought-prone areas. For example, the Corps has funded drought resiliency and water augmentation efforts in Arizona under the Arizona environmental infrastructure program. It is working with the Gila River Indian Community in Arizona on a renewable energy and water conservation project through the Corps Tribal Partnership Program. The Corps also works with the Bureau of Reclamation (Reclamation) to address drought conditions, for example, through changes to the operation of the Corps reservoirs that store water that Reclamation supplies to its authorized projects.

The Corps does not require additional drought-related authorities at this time. Our recent authorities in this area include Section 1116 of WRDA 2016, as amended, and Section 1118 of WRDA 2016, as amended (43 U.S.C. 390b-2). Section 1116 provides for the evaluation of water conservation measures in areas affected by drought, such as in the State of Arizona. Section 1118 authorizes the Corps to receive non-Federal funds to evaluate the operation of flood control storage at Reclamation reservoirs to ascertain whether such flood control storage may be adjusted to accommodate water conservation without harming flood control benefits. Section 8106(b) of WRDA 2022 authorizes the Corps to add water supply or water conservation as an objective in any feasibility study, where requested by the non-Federal sponsor. Section 8108 of WRDA 2022 authorizes the Corps to pursue managed aquifer recharge to address drought, water resiliency, and aquifer depletion at its authorized water resources development projects and through its feasibility studies.

The Corps also works with Reclamation and other Federal agencies on the Forecast Informed Reservoir Operations program, which is developing techniques to use data from watershed monitoring and modern weather and water forecasting methods to inform decisions by water managers on when to retain or release water from reservoirs, which should improve their ability to manage water, both in wet years and under drought conditions. A pilot effort at Prado Dam in California, for example, showed that the use of these techniques could conserve more storm water in a time of drought, making it available for later use.

Question. Please provide an update on the Rio de Flag and Winslow Levee projects, and assurance that the Corps will see the projects through to completion?

Answer. The Rio de Flag, Arizona project is under construction. The Corps plans to award the next construction contract for work on the lower Rio de Flag—Stage 1 segment. Before the Corps can advertise that work, the non-Federal sponsor (NFS) must secure all related real estate interests, including certain rights-of-way from the Burlington Northern Santa Fe Railroad (BNSF). Due to delays in reaching agreement with BNSF, the Corps anticipates that the project schedule will slip. The Corps is also working to develop a revised total project cost estimate, and expects that the estimated total project cost will increase.

The Little Colorado River at Winslow, Arizona project is in the pre-construction engineering and design phase. The initial surveys, which are scheduled to be complete by September 2024, will help the Corps to update the topographic maps for the project. The Corps also expects to award a Geotech Investigation Drilling Contract in August 2024. This work will assist in establishing current site conditions and soil characteristics, which will enable the Corps to design the project levees.

SUBCOMMITTEE RECESS

Chair MURRAY. Thank you very much to our witnesses today.
We stand adjourned.

[Whereupon, at 11:36 a.m., Wednesday, May 15, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2025

WEDNESDAY, MAY 22, 2024

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Patty Murray (chair) presiding.

Present: Senators Murray, Shaheen, Coons, Heinrich, Kennedy, Murkowski, and Hoeven.

DEPARTMENT OF ENERGY

OFFICE OF THE SECRETARY

**STATEMENT OF THE HON. JENNIFER GRANHOLM, SECRETARY
ACCOMPANIED BY THE HON. JILL HRUBY, UNDER SECRETARY, NATIONAL NUCLEAR SECURITY ADMINISTRATION**

OPENING STATEMENT OF CHAIR PATTY MURRAY

Chair MURRAY. Good morning. This hearing of the Senate Appropriations Subcommittee on Energy and Water Development will please come to order.

We are here today to discuss President Biden's fiscal year 2025 budget request for the Department of Energy, including the National Nuclear Security Administration. DOE's (Department of Energy) work has a direct bearing on our national security, our international competitiveness, and our ability to tackle the climate crisis. The investments we make at DOE protect our energy grid, drive down our dependence on foreign energy, drive down energy prices and drive forward innovation and clean energy, and so much more. At the Pacific Northwest Lab in Washington State, we are always seeing how these investments fuel cutting-edge research, but this is a constant race against the clock that is the climate crisis and against our competitors. We cannot cut investments without ceding ground. We have to make sure breakthroughs in AI, (Artificial Intelligence) quantum computing, clean energy, and so much else are happening here in America. And while we are at it, we have to make sure the jobs that follow are staying in America, too.

But it is not just our economy that is at stake in the Department's work. It is our national security as well. For one thing, the climate crisis is more than a rolling series of devastating weather disasters. It is also an economic threat and a national security

threat, as our generals have warned us. Then, of course, DOE's management of our nuclear activities has enormous stakes for our national security. And for the sake of our families, we have to take a balanced approach where we are investing not just in weapons, but in non-proliferation work and environmental cleanup efforts. So while I appreciate the targeted increases in the President's budget for nondefense programs, like improving our grid and existing energy infrastructure, developing and deploying new energy technologies, lowering emissions, and tackling the climate crisis, and funding our scientific research enterprise, I have to say I want to see a better balance than increasing nuclear weapon activities by 4 percent to nearly \$20 billion, while decreasing nuclear non-proliferation and cleanup by 4-and-a-half percent and over 2 percent, respectively.

Now, we proved last year that when we set partisanship aside, we are capable of working through these issues in a productive way. We wrote solid bipartisan bills for fiscal year 2024 under some really tough top lines, and I even made sure we included historic funding for the Hanford nuclear cleanup in Washington State. That was huge progress, and I am pleased to see that this budget request includes funding to meet the obligations in the holistic agreement between the Department of Energy, EPA (Environmental Protection Agency), and the Washington State Department of Ecology, because we do have a moral and legal responsibility to do right by our Hanford workers and the Tri-Cities communities, and I will not rest until we have lived up to that. I hope we can once again make good bipartisan progress on that issue and many others, and I will remind my colleagues, the only way we are going to make that happen is by working together in good faith. And unfortunately, House Republicans are already once again planning to ignore the bipartisan deal they cut last year on top lines, and now push through drastic spending cuts to non-defense that are going nowhere. But just like last year, we can choose a different path here in the Senate, a bipartisan one.

I know there are members on both sides who are concerned about how these tight caps will undermine our Nation's strength. And as I have said from the start, I share those concerns and have made clear that any additional resources must be provided equally between the defense and nondefense sides of the ledger because as we will talk a lot about today, both play a vital role in securing our Nation's future. Our measure of success should be what does it take to stay ahead of competitors like China and lead the industries of the future. What does it take to keep our economy strong, create jobs, and lower prices, and what does it take to keep our Nation safe? In other words, what does it take to actually meet the challenges we have before us. And hearings like this are a crucial opportunity to help answer those questions, so I look forward to discussing these issues today with our witnesses and working with Ranking Member Kennedy and our colleagues to deliver the resources DOE needs to keep us on the forefront of innovation and progress and to keep America safe.

With that, I will turn it over to my Ranking Member Kennedy.

STATEMENT OF SENATOR JOHN KENNEDY

Senator KENNEDY. Thank you Madam Chair, and thank you, Madam Secretary and Madam Secretary, for being here. I want to apologize in advance. I have got a couple of other committees going, so I am going to be in and out. I would like to hear you talk today about a couple of things.

First, Madam Secretary, I am very disappointed in the administration's decision to place a moratorium on LNG (Liquefied natural gas) permits. I do not see how that is going to further the goal of climate change. I do see how that is going to hurt America's energy independence, but, equally important, it is going to hurt our friends in Europe. It is going to help our enemies, like Qatar. It looks political to me, and I am hoping you will be able to address that. I would also like to talk today about whether the administration would consider—so far, it has not—it has considered it, but it has not done it—advancing plutonium pit production. We have done better, but it is still not enough. I am disappointed that the administration has not emphasized nuclear energy funding. I do not understand how we are going to achieve carbon neutrality without advanced small modular nuclear reactors, and the administration does not seem to want to talk too much about the benefits—of course there costs as well—but the benefits of nuclear energy. It seems to have worked out well in countries like France, which sees its energy future including a big role for nuclear energy. So those are the kinds of things that we—I am hoping we can talk about today.

But I want to end my remarks, Secretary Granholm, with a more general thought. I consider you to be one of the most intelligent and accomplished appointees by President Biden. That does not mean I agree with all the positions that you have taken. I do not know to what extent you have taken those positions because you believe them or because you have been directed to take them by the White House, but I also feel like in our debate over energy transition, we are missing a major piece of the puzzle. And that is an explanation to the American people about what we are doing, why we are doing it, the costs of doing it, and the benefits and the tradeoffs, and I think you and your Department should take on that responsibility. Let me try to get to be more specific.

There is a gentleman by the name of Dr. Bjorn Lomborg. I am not saying that he has all the answers, but he is a visiting professor at Stanford. He is head of a think tank in Europe called the Copenhagen Consensus. He is basically a climate change economist, and in peer review studies, he predicts, for example, that in order for us to be carbon neutral in not just the United States, in the world by 2050 and to maintain it through 2100, it will cost about 1 percent of the world's—not America's, but the world's GDP (Gross Domestic Product). Now, that does not sound like much until you reduce it to raw dollars. That is \$27 trillion a year. That is the cost. He raises the question of whether we should spend that \$27 trillion or take a portion of it and instead use it to combat the effects of climate change, which he estimates we could do successfully worldwide for a trillion dollars a year. Now, you may not agree with his numbers or his analysis, but a cost-benefit analysis

is worth pursuing instead of just throwing a bunch of money at the problem.

For example, he raises the question—he believes that in order for China to become a carbon neutral by 2050 and maintain its carbon neutrality by—through 2100, it will cost China a trillion dollars a year. China is not spending a trillion dollars a year. China, in fact, has increased its carbon emissions 300 percent by 1990. He raises the question—it is a fair question—what happens if China does not cooperate? What is the impact on world carbon neutrality? If it does not cooperate, is America wasting all its money? He raises the question about Russia. He thinks that it would—Russia needs to start spending today \$400 to \$500 billion a year and spend that amount every year between now and 2100 to achieve carbon neutrality. That is about 3 times what Russia spends on its military. Does anyone in this room honestly believe that President Putin tomorrow is going to stand up and say, well, I am going to stop spending money on my military and start spending it on CO₂ emissions? And Professor Lomborg raises the question of, well, what happens if they do not? What happens if India does not cooperate? Developing countries, they want the same things as us, they want to be able to eat and live indoors and their children to have better lives. Are we going to have to pay developing countries to—for their energy transition, particularly when it is cheaper for them to advance their societies using fossil fuels?

These are the kind of questions that need to be hit head on, and we are not doing it, and this administration, with all due respect, has not done it. All we are doing is throwing money at a problem. And I asked, I think it was your deputy secretary, Madam Secretary, about a year or so ago. I said, if the United States Government achieves carbon neutrality by 2050 and we spend the money to do it, how much will that lower world temperatures or how much will that decrease the increase in world temperatures. He said, I cannot guarantee you that it will lower temperatures at all because it depends on other countries. And I think that needs to be addressed head on, and I think you are the person to do it. I do not know if the White House will let you, but the world is yearning for this.

I am going on too long, I am sorry, Madam Chair, but people are starting to figure out that they are going to have to pay for this. We see it in Germany right now. I mean, Germany said, well, we are just going to require everybody to convert to heat pumps. Now all of a sudden, people say, well, you mean I have got to go buy a \$15,000 heat pump, and so they are pushing back. And in order to have people buy into an energy transition, they have got to understand that there is an overarching plan. I am sorry for going on so long, Madam Chair.

Chair MURRAY. No worries. Thank you. Thank you, Ranking Member Kennedy. I will now briefly introduce our panel. We have Jennifer Granholm, Secretary of the Department of Energy, and Jill Hruby, undersecretary for nuclear security and administrator of the National Nuclear Security Administration. We will now proceed with your—witness testimony from Secretary Granholm. You have 5 minutes for your testimony.

SUMMARY STATEMENT OF HON. JENNIFER GRANHOLM

Secretary GRANHOLM. Great. Thank you so much. I look forward to having this conversation with all of you. So nice to be here. Chair Murray, Ranking Member Kennedy, and all the members of the subcommittee, honored to be here to discuss the President's budget request for 2025. Honored to be here alongside Jill Hruby, who has been leading our NNSA (National Nuclear Security Administration) in an extraordinary way.

Three years ago, I joined this administration believing that if America could come together around a national energy strategy, we could restore manufacturing, we could create jobs, we could address the climate crisis, and we could become energy independent and secure, and today, we are doing just that. America is back. Thanks to Congress' efforts and the President's vision, we are executing a focused, deliberate strategy that positions our businesses to dominate, our workers to compete, and our communities to thrive, and it is working.

Since the passage of the Bipartisan Infrastructure Law, for example, companies have announced more than 600 new or expanded just the clean energy manufacturing plants on American soil; nearly \$200 billion in planned investment for batteries for electric vehicles, solar, wind, nuclear, and more; tens of thousands of jobs being created from Anchorage to Albuquerque, from Baton Rouge to Baltimore, from Washington to Wisconsin, and everywhere in between, thanks to the Bipartisan Infrastructure Law and the Inflation Reduction Act. Sustaining such growth, though, requires us to complement that historic funding with durable, long-term investments, so we are grateful for a fiscal year 2024 bill that appropriated more than \$50 billion for the Department, and the President's request for fiscal year 2025 will empower us to make even greater progress.

Our commercialization tools are giving American businesses the confidence to capitalize on this moment while deepening our energy security, but deepening our energy security is an ongoing project, and we need to fund it year over year. I know the subcommittee shares this imperative. Thank you for the \$2.7 billion, for example, to build a domestic uranium strategy, industry as well as Congress' efforts to ban Russian uranium imports, which the President recently signed into law, and now we can get to work on building the domestic supply chain for civil nuclear fuel. The President's budget calls for significant appropriations for our demonstration and deployment programs, including our Office of Manufacturing and Energy Supply Chains, and our Grid Deployment Office so we can make the same progress along the energy economy.

So DOE is making sure that every community can benefit from reliable, affordable, clean energy and efficiency technologies. We are leveraging dedicated funding from the infrastructure law for our Interagency Working Group on Coal and Power Plant Communities. I have seen firsthand how this program gives communities the gift of rebirth. It instills pride for the workers who defined America's energy past and will help to power its future. We are also planning for the future by doubling down on R&D (Research & Development). With an \$8.6 billion request for basic science research and \$3 billion for applied R&D, we will make sure that each

new generation of energy technologies is more innovative than the last from industrial decarbonization solutions to geothermal to fusion.

We are also requesting \$2 billion for critical and emerging technologies, like AI (Artificial Intelligence) and quantum. Both are key to economic competitiveness and defense, and DOE is uniquely positioned to drive them forward. And, of course, the budget also includes an historic \$25 billion for NNSA. The growing cooperation between Russia and China and Iran and North Korea has created a more dynamic, less predictable international environment. Increased saber rattling and aggression against our allies and cyberattacks reinforce the imperative to maintain a safe, secure, and effective nuclear deterrent. The President's request would give the NNSA the means to deliver and adapt in the face of these evolving threats, and it would advance NNSA's wider priorities around arms control and nonproliferation and counterterrorism and the safe use of civil nuclear power, as well as naval nuclear propulsion.

Thanks to the bipartisan assistance we have received from Congress, America is back. We are the envy of the world. We cannot afford to lose our momentum. It depends on your continued support. So thank you for the opportunity to address you today, and I look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF JENNIFER M. GRANHOLM

Chair Murray, Ranking Member Kennedy, and Members of the Committee, it is an honor to appear before you today to discuss the President's Fiscal Year (FY) 2025 Budget request for the Department of Energy ("the Department" or "DOE").

I want to begin by thanking you all for your work to negotiate and pass an FY 2024 bill that provides critically important appropriations to the Department of Energy. Thanks in no small part to the leaders on this Committee, we have proved to the American people that we can deliver results in an era of fiscal restraint. I am grateful to this Committee and your colleagues throughout Congress for supporting an agency that accomplishes so much for this country.

It is the honor of a lifetime to serve the American people as the 16th Secretary of Energy. The DOE workforce, from headquarters staff to scientists and engineers at the National Labs, is made up of dedicated and driven individuals that are working hard to advance the energy, economic, and national security of the United States. Through transformative science and technological solutions, we are making significant progress to address some of our Nation's most pressing challenges.

The Department is committed to advancing this Administration's energy, climate, and nuclear security and nonproliferation goals. I want to thank Congress for the ongoing, bipartisan support for the Department of Energy and I look forward to working closely with the Committee as you consider the FY 2025 budget for DOE.

BUDGET TOPLINE

DOE proposes \$51 billion in budget authority for FY 2025. This Budget makes historic investments that will help the country lay the foundation to build a clean energy economy, invest in the American people, and ensure the U.S. reaches net-zero emissions by 2050.

This Budget delivers results for the American people by creating jobs and investing in innovation for the energy economy; expanding cutting-edge research at National Laboratories; investing in critical and emerging technologies; advancing critical climate goals including industrial decarbonization; building the clean innovation pipeline; building, maintaining, and modernizing critical national security infrastructure; preventing adversaries from acquiring nuclear weapons; reducing health and environmental hazards for at-risk communities; and bolstering the cybersecurity and resilience of the energy sector. In addition, we have worked hard to focus our budget request on strategic investments, while maintaining our commitment to fiscal responsibility.

Making the United States the leading nation for investing in clean energy.

We are working to create a workforce for the future with the creation of high-quality, good-paying jobs. As we continue to power through this evolutionary period in our history, the Department is focusing on onshoring and reshoring supply chains and turning America back into a manufacturing powerhouse.

The Budget invests \$1.6 billion to support clean energy workforce and infrastructure projects across the Nation, including: \$385 million to weatherize and retrofit homes of low-income Americans; \$95 million to electrify Tribal homes, provide technical assistance to advance Tribal energy projects, and transition Tribal colleges and universities to renewable energy; \$113 million for the Office of Manufacturing and Energy Supply Chains to strengthen domestic clean energy supply chains, and \$102 million to support utilities and State and local governments in building a grid that is more secure, reliable, resilient, and able to integrate electricity from clean energy sources. These investments, which complement and bolster the historic funding in the Bipartisan Infrastructure Law (BIL), the CHIPS and Science Act, and the Inflation Reduction Act (IRA), create good-paying jobs while driving progress toward the Administration's climate goals, including a 100% carbon pollution-free electricity sector by 2035. Sustaining our early success requires long-term investments in annual appropriations that complement and bolster the historic funding in BIL and IRA.

The Budget provides dedicated funding for the Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization to facilitate a whole-of-government approach to workforce training, community engagement, and identification of Federal resources to spur economic revitalization in the hard-hit energy communities that have powered the Nation for generations.

The Budget includes \$24.1 million for the Office of Technology Transitions to focus on expanding the commercial impact of the Department of Energy's research investments and \$3 million for the Foundation for Energy Security and Innovation that OTT is helping steward.

Ensuring investments provide economic and clean energy benefits in the communities that have been left behind.

We are ensuring that our economy does not neglect historically disadvantaged communities and instead works with them to guarantee an equitable transition. The Office of State and Community Energy Programs includes \$385 million for the Weatherization Assistance Program to weatherize low-income homes. Weatherization programs work with local contractors and trades to improve home performance, which boosts local employment and creates new job opportunities, while uplifting America's most vulnerable families by reducing their annual energy costs by approximately \$372 per household. Among the many benefits associated with weatherization, low-income households experience improved health, safety, and comfort, save money on their monthly energy bills, and reduce their overall impact on the environment by using fewer natural resources.

Similarly, the State Energy Program is requesting \$70 million in FY 2025 for technical assistance to states, territories, and the District of Columbia to enhance energy security, advance state-led energy initiatives, and increase the affordability of energy. This request would provide funding for the Weatherization Assistance Program to support approximately 40,000 residential energy retrofits for low-income households.

The Budget includes \$8.2 billion for the Environmental Management program, reflecting this Administration's strong commitment to clean up and protect communities that supported defense production programs and government-sponsored nuclear energy research, including \$3.1 billion to continue cleanup progress at the Hanford site in Washington. As the largest environmental cleanup program in the world, Environmental Management plays a key role in cleaning the environment, contributing to national security priorities, investing in the future and aiding community efforts to build strong economies, growing jobs, and preparing for a clean energy future. This investment will enable the Department of Energy to treat radioactive tank waste, take down contaminated buildings, ship and dispose legacy waste and clean soil and groundwater.

The Budget also includes \$205 million for the Office of Legacy Management to protect human health and the environment by providing long-term management solutions at over 100 World War II and Cold War era sites where the Federal government operated, researched, produced, and tested nuclear weapons and/or conducted scientific and engineering research. The Administration will ensure the investments for the cleanup of legacy pollution and long-term stewardship of these sites align with the Justice40 Initiative to benefit disadvantaged communities.

With cutting-edge R&D, supporting industry so that each future generation of clean energy technology will be more innovative than the last.

The Budget provides an investment of \$8.6 billion for the Office of Science, advancing toward the authorized level in the CHIPS and Science Act to support cutting-edge research at DOE's 17 National Laboratories and partner universities to build and operate world-class scientific user facilities. These investments support identifying and accelerating novel technologies for clean energy solutions, improving predictability of climate trends and extremes using high performance computing, providing new computing insight through quantum information, expanding innovation in microelectronics, and positioning the United States to meet the demand for isotopes. Within funding for Science, the Budget provides over \$800 million to advance the basic research needed to solve fundamental science and technology gaps towards the development of fusion power as a clean energy source in the U.S using diverse set of tools and strategic approaches.

The Budget provides a historic investment of \$1.9 billion in advancing critical and emerging technologies, including biotechnology and biomanufacturing, quantum information sciences, and artificial intelligence (AI) and machine learning. This investment strengthens U.S. leadership in science, technology, and innovation and plays a central role in the Department's national security mission. Included in this investment is \$455 million for supporting the advancement of AI technologies and the development of foundational models to support new applications in science, energy, and national security. DOE's AI-related activities include fundamental research and development of AI and use of AI tools to explore machine learning, while assuring the safety, security and robustness of AI systems. DOE will also apply AI technologies to the stockpile stewardship mission and to early detection of foreign nuclear proliferation activities.

The Budget provides \$5 million to fund the recently established Office of Critical and Emerging Technologies (CET) that will coordinate efforts, support AI governance, and provide oversight across the Department. CET will develop a strategic outlook for these technologies, working with and through other DOE offices, enabling DOE leadership, as well as interagency, congressional, and external partners, to maximize the impact of DOE capabilities and investments in these key areas of national importance.

ADVANCES CRITICAL CLIMATE GOALS

The Budget includes \$10.6 billion in DOE climate and clean energy research, development, demonstration, and deployment programs, including over \$1 billion to improve technologies to cut pollution from industrial facilities, nearly \$900 million to commercialize technologies like sustainable aviation fuel and zero-emission trucks to cut emissions from the transportation sector, and over \$2.4 billion—a majority of which is included in the Energy Efficiency and Renewable Energy (EERE) Program—to improve carbon-free electricity generation, transmission, distribution, and storage technologies for reliability, resilience, and decarbonization. Specifically, within the EERE Program, the budget includes \$502 million for Vehicle Technologies Office, \$280 million for Bioenergy Technologies Office, \$318 million for Solar Energy Technologies Office, \$199 million for Wind Energy Technologies Office, \$179 million for Hydrogen and Fuel Cell Technologies Office, and over \$500 million for Advanced Materials/Manufacturing and Industrial Efficiency and Decarbonation Offices. In addition, the Budget invests in advancing climate modeling within the Biological and Environmental Research Program in the Office of Science. Overall, this funding advances efforts crucial for achieving the goal of a 50- to 52-percent reduction from 2005 levels of economy wide net greenhouse gas pollution in 2030 and economy wide net-zero emissions no later than 2050, while also reducing energy bills for American families.

ACCELERATES INDUSTRIAL DECARBONIZATION

Addressing the climate crisis requires rapid decarbonization across energy use sectors. The industrial sector contributes about a quarter of U.S. greenhouse gas emissions and is a major opportunity for significant reductions. By investing more than \$965.8 million in discretionary DOE industrial decarbonization activities, the Budget reflects the importance of supporting U.S. industrial decarbonization through innovation, targeted investment, and technical assistance. The Budget supports funding for Industrial Emissions and Technology coordination to drive adoption of industrial decarbonization solutions and expanded research and development efforts across DOE.

MAKES HISTORICAL INVESTMENTS TO STRENGTHEN THE NATION'S NUCLEAR SECURITY
AND PROTECT THE NATION FROM WEAPONS OF MASS DESTRUCTION TERRORISM

The National Nuclear Security Administration (NNSA) is doing extraordinary work to meet the challenges of today's ever-changing geopolitical landscape. NNSA helps to provide the cornerstone of our national defense by maintaining a safe, secure, reliable, and effective deterrent, while simultaneously working with key allies and partners on our shared nonproliferation goals. From powering the nuclear Navy to investing in infrastructure revitalization and modernization efforts, such as the Uranium Processing Facility at Y-12 and plutonium modernization efforts at Savannah River and Los Alamos, NNSA successfully meets a difficult and varied mission space. NNSA's efforts to reduce nuclear risks in Ukraine following Russia's further invasion over 2 years ago provide just one example of the essential mission NNSA is responsible for and executes with the utmost expertise and capability.

The Budget provides a historic investment of \$25 billion in the Nation's nuclear security enterprise to implement the President's National Defense Strategy and the Nuclear Posture Review (NPR), including \$19.9 billion for Weapons Activities, which represents more than an \$800 million increase over FY 2024 enacted levels. This funding will modernize the Nation's nuclear deterrent and keep the American people safe. The Budget supports a safe, secure, reliable, and effective nuclear stockpile and makes necessary investments to reduce global nuclear threats, provide safe and effective integrated nuclear propulsion systems for the U.S. Navy, and modernize the Department of Energy's Nuclear Security Enterprise, including recapitalizing essential scientific and production facilities.

The Budget provides robust support for key modernization priorities, including Plutonium Modernization efforts that will strengthen NNSA's ability to produce no fewer than 80 plutonium pits per year at Los Alamos and Savannah River as close to 2030 as possible.

The Budget enhances DOE capabilities to prevent and respond to Weapons of Mass Destruction terrorist attacks by non-state actors at home and abroad. It also supports DOE's long-standing effort to advance nuclear and radioactive material security, enhancing U.S. security, health, and economic interests. In addition, the Budget continues investments to develop the next generation of arms control technologies, including space-based monitoring and verification, and experts to help mitigate against emerging and evolving national security risks.

Stockpile Management

The Budget proposes \$5.1 billion in FY 2025 for Stockpile Management to maintain a safe, secure, reliable, and effective nuclear weapons stockpile through stockpile modernization, stockpile sustainment, weapons dismantlement and disposition, production operations, and nuclear enterprise assurance. The Budget includes \$2.8 billion for six major modernization projects that extend the lifetime of the nation's nuclear stockpile while addressing required updates, replacing aging/obsolete components to ensure continued service life, and enhancing security and safety features.

Production Modernization

The Budget includes \$5.9 billion for Production Modernization to support production capabilities for nuclear weapons components critical to weapon performance, including primaries, secondaries, radiation cases, and non-nuclear components. Included within this budget total is \$2.9 billion for plutonium modernization to fund the equipment, facilities, and personnel required to reestablish the Nation's capability to produce 80 plutonium pits per year.

Stockpile Research, Technology, and Engineering

The Budget incorporates \$3.2 billion for Stockpile Research, Technology, and Engineering to provide the scientific foundation for stockpile decisions and actions; develop the personnel required to support the current and future stockpile; and provide the capabilities, tools, and components needed to support all missions. The funding includes \$683 million for the Inertial Confinement Fusion program to support facilities such as the National Ignition Facility and the Z facility in High-Energy-Density and ignition science experimental activities. The Budget also provides \$880 million for Advanced Simulation and Computing, which is supporting NNSA's exascale high-performance computing capability.

Infrastructure and Operations

The Budget proposes \$3.3 billion for Infrastructure and Operations to maintain, operate, and modernize the NNSA infrastructure in a safe and secure manner that supports program execution while maximizes return on investment and reduces enterprise risk. The FY 2025 Request provides funding for activities to enable pluto-

mium pit production, expand capacity at the Kansas City National Security Campus (KCNSC), and address infrastructure modernization throughout the complex. The budget also includes \$881 million in Maintenance and Repair for predictive, preventive, and corrective maintenance activities to maintain facilities, property, assets, systems, roads, and vital safety systems.

RESTORES AMERICAN LEADERSHIP IN ARMS CONTROL AND NONPROLIFERATION

The Budget includes \$2.5 billion for Defense Nuclear Nonproliferation to enhance the Nation's ability to prevent adversaries from acquiring nuclear weapons or weapons-usable materials, technology, and expertise; counter efforts to acquire such weapons or materials; and respond to nuclear or radiological incidents and accidents domestically and abroad. By limiting the number of nuclear-capable states and preventing terrorist access to materials and technology that can threaten the U.S. and allies, NNSA plays a critical role in enhancing global stability and constrains the range of potential threats facing the nation, our allies, and partners.

POWERS THE NUCLEAR NAVY

The Budget includes \$2.1 billion for DOE's Naval Nuclear Propulsion Program to ensure safe and reliable operation of reactor plants in nuclear-powered submarines and aircraft carriers. The Budget prioritizes infrastructure modernization and investments to develop, refine, and deliver new technologies to the Navy and maintain America's advantage over its adversaries. The Budget continues to support the Columbia-Class Reactor System Development and recapitalizing spent fuel handling and examination capabilities at the aging Expended Core Facility in Idaho.

CONCLUSION

I have been humbled and encouraged by our progress so far; this budget will help us accelerate developing a workforce for the future with the creation of high-quality, good-paying jobs. We are ensuring that our economy does not neglect historically disadvantaged communities and instead work with them to guarantee an equitable transition. As we continue to power through this evolutionary period in our history, the Department is focusing on onshoring and reshoring supply chains and turning America back into a manufacturing powerhouse. I want to again thank the Committee for its ongoing and bipartisan support for the DOE mission.

Thank you for the opportunity to be here today. I am happy to answer your questions.

Chair MURRAY. Thank you very much. We will now begin a round of 5-minute questions for our panel. I ask my colleagues to keep track of your clock and try and stay within those 5 minutes.

Secretary Granholm, I fought really hard to make sure the fiscal year 2024 bill provided record funding for the Hanford site in Washington State, so I want to reiterate how pleased I am that the DOE, Washington State Department of Ecology, and EPA have reached this holistic agreement now for the management of Hanford's tank waste. I understand the fiscal year 2025 budget request has incorporated now that holistic agreement. We know the future holds some pretty steep increases to maintain compliance. How do you plan to meet the obligations that they just agreed to in that holistic agreement, particularly for the high-level waste facility?

Secretary GRANHOLM. Yes. Thank you for that. I mean, the good news is that the agreement incorporates with timelines the movement forward on the high-level waste treatment via direct feed. The agreement also makes sure we have got a strong path for out-of-state grout disposal, for example, the construction of additional million dollar capacity for tank waste storage as well. We are excited to see this agreement, and we are excited to help fund it this year, obviously, to make that request. Thank you so much for your leadership in that. We also recognize we are going to need additional funding in years ahead if we are really to live up to the

agreement and the path that is set forward, so we look forward to working with you on that for next year's budget.

Chair MURRAY. Well, it will be work, and I appreciate your consistency.

Secretary GRANHOLM. Yes.

Chair MURRAY. I have heard concerns from the Tri-Cities community about DOE's Cleanup to Clean Energy Initiative, which will use underutilized Hanford land for clean energy projects. What is your Department doing to incorporate feedback from the community into that initiative?

Secretary GRANHOLM. Yes. We have a number of Cleanup to Clean Energy sites because, of course, the legacy waste management issues that we have—or responsibilities that we have. We have met with the Tri-Cities, and we are going to continue to meet with the Tri-Cities. We know and we are in constant contact with them about what they would like to see happen with the land. We know that there is an opportunity to have a partnership between what they would like to see on economic development and on powering that economic development with clean energy. The land has such potential for obviously solar, and we are excited about that.

You know, we have been meeting with the Tribes as well as the community on this. We think it is really important in all of these sites that the communities are hand-in-glove with us on it, and we will continue, obviously, to meet with the Tri-Cities area. Tomorrow, for example, we are meeting in Savannah River at that site with the community. We have informational meetings. We have direct meetings with the communities that are adjacent—and the Tribes that are adjacent to make sure we have their input. So we will continue working with the community at Hanford—

Chair MURRAY. Okay.

Secretary GRANHOLM [continuing]. And the other site.

Chair MURRAY. Really important to do as we—

Secretary GRANHOLM. Yes.

Chair MURRAY [continuing]. Make decisions on that, so thank you. Secretary Granholm, your budget request increases funding for the Office of Science to over \$8.58 billion, coming on the heels of our fiscal year 2024 bill that provided \$8.24 billion. This funding is important for our competitiveness, providing support to our world-class national labs, and boosting scientific research, including at the Pacific Northwest National Lab. That research really drives domestic innovation across a lot of different fields—biologic and environmental research, AI, machine learning, quantum computing, clean energy technology—and I really believe that that kind of funding is really critical for our future. How does your budget request support innovation across critical emerging technologies like clean energy and AI?

Secretary GRANHOLM. So yes, on the basic research and development side, on the earlier part of the spectrum, we think that quantum, AI, fusion, all of these advanced technologies have to be funded because we are facing global competition. We are number one. We are not going to lose that spot, and that is why the support from Congress to be able to fund that basic research is so important. The 17 national labs are our jewels, as you know. You have

got one in your state. The tools that are in those labs are essential for us to continue to move forward. The exascale computers, for example——

Chair MURRAY. Mm-hmm.

Secretary GRANHOLM [continuing]. We continue to be number one. We have the top two exascale computers in the world, and we want to continue to have that, and those are obviously important for AI as well.

So on the earlier side of the spectrum, super important. You move across the spectrum from demonstration to deployment, those are also important for us to be in the lead. We are not in the lead on deployment, but we can be, and that is why continuing to move across the spectrum is important. As you are aware, we have these joint strategy teams inside of the Department to make sure that both the research and development as well as the demonstration and deployment are all speaking to one another so that we are deploying with an eye to the future. And all of that is part of the strategy of how we reorganized the Department of Energy under—after the BIL (Bipartisan Infrastructure Law)—and after BIL and IRA (Inflation Reduction Act) were passed.

Chair MURRAY. Okay. Thank you. We know that China is investing heavily in scientific infrastructure. It is really critical that we keep pace.

Secretary GRANHOLM. Really critical.

Chair MURRAY. Senator Kennedy.

Senator KENNEDY. I decided to stay. Okay. All right. Thank you, Madam Chair. Secretary Granholm, do you believe that the world can achieve carbon neutrality by 2050 without nuclear energy playing a substantial, substantial role?

Secretary GRANHOLM. I do not.

Senator KENNEDY. Okay. I agree with you. I want to go back to the—my thesis that I hope I articulated it reasonably well about we do not have an overarching plan or analysis for achieving CO₂. In my opinion, we are just throwing money at it. Let's suppose Professor Lomborg is right: \$27 trillion a year—that is worldwide—to achieve carbon neutrality and maintain it through 2100. Let's assume America's share, we produce 15 percent CO₂ emissions. That makes our share about \$4 trillion a year. That is, I do not know, 8 to 10 percent of our GDP. It does not sound like much when you talk about it that way, but it is still \$4 trillion a year every year. That is money we cannot spend on healthcare or feeding people, housing. What happens if we start spending \$4 trillion a year each year for every year through just 2050, and China does not do its part, or Russia does not do its part, or India does not do its part, or Vietnam or Thailand? How much is our money going to reduce world temperatures or the increase in world temperatures?

Secretary GRANHOLM. Mm-hmm.

Senator KENNEDY. The answer is zero, is it not?

Secretary GRANHOLM. No, I do not think it is zero, but I do know that this is why we have global——

Senator KENNEDY. How much is it? But how much is it?

Secretary GRANHOLM. This is why we have all 190 countries signed on to get to net zero by 2050——

Senator KENNEDY. I know they have signed on, and excuse me for interrupting.

Secretary GRANHOLM [continuing]. And countries are moving in that direction, sir.

Senator KENNEDY. But they are not doing—I am asking you, and I hope they do it, okay, if it turns out that the scientists are right. I am not saying they are or they are not. It is just that the whole topic has become so politicized, but we do not have—we never talk about what happens if they do not and what is the likelihood that they will. Let me ask you again. If we spend \$4 trillion a year every year until 2050 to achieve carbon neutrality in the United States, and President Putin and President Xi and Prime Minister Modi say, mmm, I do not think so. I think I am going to spend that on my—on domestic needs in my countries, how much are we going to reduce world temperatures?

Secretary GRANHOLM. With respect, I am not going to buy into the hypothetical because they have said—I do not know about Putin, but the President of China and Prime Minister Modi have all made commitments—

Senator KENNEDY. Uh-huh.

Secretary GRANHOLM [continuing]. To move in this direction and are spending money to move in this direction. But the better question is or a parallel question would be, what happens if we do not? If we don't—

Senator KENNEDY. Well, I am interested in my question, though.

Secretary GRANHOLM. Well—

Senator KENNEDY. You are good, and I—but I do not want you to change the subject.

Secretary GRANHOLM. It is the same subject.

Senator KENNEDY. Have you ever known President Xi to lie?

Secretary GRANHOLM. Well, I am not—I am telling you what it is in the plan—

Senator KENNEDY. He lies on occasion, does he not?

Secretary GRANHOLM [continuing]. And what we have seen in terms of their spending. They have spent about \$400 billion a year so far—that was, I think in 2023—on renewable energies. They are spending.

Senator KENNEDY. What about Russia?

Secretary GRANHOLM. They are spending.

Senator KENNEDY. What about Russia?

Secretary GRANHOLM. They are spending. Russia, I—

Senator KENNEDY. You honestly believe that—

Secretary GRANHOLM [continuing]. Do not have the information on Russia.

Senator KENNEDY [continuing]. President Putin—

Secretary GRANHOLM. They are not very transparent.

Senator KENNEDY. But do—

Secretary GRANHOLM. But all of these countries have signed onto the goal, and my point is, if we do not, sir, if we do not, we will be spending globally \$38 trillion a year to clean up after the extreme weather events that are happening because of climate change.

Senator KENNEDY. Yes, but you use that figure, but I have seen no basis for it.

Secretary GRANHOLM. It is——

Senator KENNEDY. Professor——

Secretary GRANHOLM. I can send you that.

Senator KENNEDY. Professor Lomborg says it is—it is much less than that, but here's my point. Do we just start spending the \$4 trillion a year and spend it blindly every year like clockwork, or it is—at what point, if China is not pulling its load, or Russia or Vietnam or Sub-Sahara Africa, at what point do we say—what model do we have in place to say, whoa, wait a minute, we are wasting our money because they are not spending theirs?

Secretary GRANHOLM. I believe that the United States and its leadership in this world, as well as our allies, are not going to throw in the towel, that this is too important in terms of our world, in terms of climate change going into the future, and the devastating impact it is having right now, much less——

Senator KENNEDY. I am out of time, but do you trust—look me in the eye—do you trust Vladimir Putin——

Secretary GRANHOLM. No, I do not trust him.

Senator KENNEDY [continuing]. Or President Xi Jinping to do anything other than what is in their best political interest——

Secretary GRANHOLM. Of course.

Senator KENNEDY [continuing]. And the power that they achieve in the world? Do you really believe that?

Secretary GRANHOLM. And in China's interest, it is in their interest to move down this path because they are experiencing extreme heatwaves and death as a result of climate change, and this is why they are spending what they are. And this is why they want to dominate these clean energy technologies because they see an economic advantage for them to be leading in this. So no, I do not trust what they say, but we will verify.

Senator KENNEDY. But you are willing—well, I have gone over. I am sorry, Madam Chair. Thank you, Madam Secretary. Thank you, Madam Secretary. I will try to come back or not.

Chair MURRAY. All right. Thank you. Senator Shaheen.

Senator SHAHEEN. Well, thank you both for being here. I can reassure Senator Kennedy a little bit on Vietnam because I was just there, and I can tell you that we met with the second top-ranking official in Vietnam, and everybody we met with was very clear they were getting to, clean energy by 2050, and that is their goal. So, they talked about their concerns, significant concerns, both they and in the Philippines, about climate change and the impact that it is having there. So thank you for the work that you are doing.

One of the best ways to address our energy needs is through energy efficiency, and energy saving performance contracting has been very effective. I used it when I was governor extensively. It saved taxpayers money, and it also saved thousands of pounds of pollution. Under the Bipartisan Infrastructure Law, we have made it possible—more possible for the Federal Government to use performance contracting. Can you talk about how you view that, how much that is going to be part of your recommendations, and also what DOE is thinking about in terms of trying to help States and municipalities use performance contracting?

Secretary GRANHOLM. Yes. Performance contracting is just such a no-brainer. It is something that we are using. Our FEMP unit

is pushing this across the Federal Government and certainly inside. The funding that was given, we just—FEMP just did a competitive grant which it is with the AFFECT funding that, thank you very much, Congress supplied. Eighty-five percent of the awardees from that grant went to performance contracting, so we believe in it. It is a win-win, and we would like to see more of it.

Senator SHAHEEN. And do you have any estimates on how much money we are going to be able to save the Federal Government by using performance contracting? And then also, if you could speak to what can be done through DOE to help States and municipalities?

Secretary GRANHOLM. Yes. Well, I will say the State energy offices we work with all the time in providing technical assistance as well as grant funding. In terms of the actual percentage of what has been saved, I am going to get back to you on that—

Senator SHAHEEN. That would be great.

Secretary GRANHOLM [continuing]. Or the percentage or the actual numbers—

Senator SHAHEEN. Thank you.

Secretary GRANHOLM [continuing]. Because I do not have that in my notes here.

Senator SHAHEEN. Great.

Under Secretary Hruby, Russia is no longer participating in the New Start Treaty and have been rattling sabers about their nuclear weapons during the war in Ukraine and also the concern about weaponizing space with nuclear weapons. So can you talk about how we are talking to our allies and partners about our own nuclear deterrent and how we are reassuring them that what we are doing is safe?

Ms. HRUBY. Yes. Thank you for this question. It is—you know, the approach that we have taken in the Department of Energy and NNSA over the—this administration is since we are not talking to our adversaries, let's double down on talking to our allies and partners, and have done that. We have spent a lot of time in NATO (North Atlantic Treaty Organization) and Asia, with our partners around the world, and there is an increased knowledge and an increased interest in everything that we are doing, and our weapons program and our nuclear deterrence program writ large, including our non-pro.

And they are—you know, the world is making huge—I mean, we are making huge contributions to Ukraine. So is the rest of the world. Some of that we are doing in complete cooperation—much of it we are doing in complete cooperation to make sure we are covering the nuclear threat. And I would just say that, you know, we have continued—this is not—this environment is creating a great deal of cooperation, and we will have a lot to do to continue to reassure. But at this point, I think we have really increased our communication, and there is much better understanding of nuclear deterrence. I say the nuclear IQ is higher than it has been in a long time in both NATO and with our allies in Asia.

Senator SHAHEEN. Well, one of those partnerships is around AUKUS with Australia and the United Kingdom. How is NNSA involved in the nuclear technology that is going to be critical to AUKUS?

Ms. HRUBY. Yes, in two different ways. So in the NNSA, we do have an element of Naval Reactors. The Naval Reactors has a DOD part and a DOE part. We in the NNSA operate laboratories that design fuels for reactors. And the way the AUKUS agreement will work is those submarines that will be provided to Australia will have a completely sealed nuclear reactor. The materials will not be able to be removed. It will be, you know, the same—have the performance like our reactors, completely sealed, very good reactors, very good for nonproliferation. We also have a significant effort in our nonproliferation element where we are working with Australia and the IAEA (International Atomic Energy Agency) to make sure that all of the systems are in place to assure the world that there is no diversion of nuclear material as a result of AUKUS.

Senator SHAHEEN. Thank you. Thank you both.

Chair MURRAY. Senator Murkowski.

Senator MURKOWSKI. Thank you, Madam Chairman. Secretaries, thank you for being here, your leadership.

Secretary Granholm, it is kind of fortuitous that we are having this hearing today because in Energy and Natural Resources Committee yesterday, we had a hearing on the rising energy demand and what it means as we see greater needs across all sectors for increased energy, and the fact that it just takes too darn long to complete energy projects in this country, how we bring them online and kind of this mismatch. It is something that I look at and if we are not more cognizant of the vulnerabilities that we have right now. We are talking a lot about bringing on intermittent sources of power, but base load is where it counts. Base load is where it counts, and this is why I have been pressing you and the folks on your team on the geothermal space. I think we have just got so much more room to run there.

Hydro, we have got so many of our hydro facilities that are up for relicensing in this next handful of years, and the relicensing process takes 10 years and millions and millions of dollars. So I am looking at this gap coming at us, and we want to build chips facilities. We want to have data servers everywhere. One project—one training facility on our military base in Anchorage at JBER (Joint Base Elmendorf-Richardson), one training facility is going to increase their energy consumption on JBER by 50 percent, and it is the number one unfunded priority that that we have right now within PACAF (Pacific Air Forces). So we are going to do it, but where are we going to get the resources from? And as I have shared with you, we have got a decline in our natural gas reserves in Cook Inlet. So I will be damned if we are really going to import LNG from Canada, but that is where things are trending right now.

So I am looking at the timing of all of this, and I want to push you, and I need your team to be working with us. You know, you have got this great commercialization liftoff for geothermal. We want to know where the barriers are, what we need to be doing to move forward on some of these pilot projects, the research. Everything that we can do to work with you to advance that, know that we are in that with you.

I want to use my time on two questions. One is critical minerals, and the other one, very quickly, is on fuel tanks. Fuel tanks. On

the critical minerals, I do thank you for going back and looking at the authorities for your support for mineral projects through the Loan Program Office. You went back, you took a look at it, reevaluated the Department's position, and I think it is going to be important. I am hoping that you will be able to provide the committee or some of us with the process on financial assistance for critical minerals and mine projects. Do the parties need to reach out to DOE? Is there a point of contact that we can direct people to? Are there certain minerals that you are looking to prioritize, kind of help us through this in terms of what some of the conditions of the loan may be. So I would like some information on that.

And then just as a point of curiosity, I read last week that DOD had funded two Canadian mineral projects. One is \$6-and-a-half million. The other is about \$8-and-a-half million. The Canadian Government provided \$9.2 million, we are right in there with them. But in an interview, the Canadian Energy Minister stated that the funding from the DOD grants are "no strings attached." Do you have within DOE any grants to mineral companies in the U.S. that have no strings attached because if that is the case, we got a lot of people in line for that?

Secretary GRANHOLM. I am not sure—I have not read that, and I am not familiar with the DOD process. There are usually strings attached, as you know—

Senator MURKOWSKI. To most everything.

Secretary GRANHOLM [continuing]. Certainly the regulatory environment that we have to be cognizant of, et cetera, so I am not sure if he was just being colloquial or if there is—

Senator MURKOWSKI. Let's follow up with this—

Secretary GRANHOLM. Yes.

Senator MURKOWSKI [continuing]. If we can. I am doing a lot of talking and not giving you a chance to answer, but I want to leave you with this. In so many of our small, rural communities, their power is diesel generation. We want to get them off it. They are doing everything that they can to move towards their own little microgrid, whether it is a little bit of a wind, a little bit of solar, whether it is a run of ribbon—run of river. They are working hard to get off that, but every one of these is going to need their backup generator, and so we are never going to be able to get rid of the need for that fuel. Our problem right now is they store the fuel in these fuel storage tanks, these bulk facilities. There is about a \$1.5 billion in deferred maintenance issue for over 200 bulk fuel farms throughout rural Alaska, and when I say "farms," I mean, I am talking like a couple tanks.

We are not talking big things, but we have been working through the Denali Commission. We have got a couple million a year to allocate to this—these projects, but we have reached out to you at DOE. We are told that you are not aware of any grant programs that are available to Tribes in rural areas to address this. But it seems to me that this should be something where the Office of Fossil Energy and Carbon Management or the Office of Indian Energy or the Arctic Energy Office should be able to address this. So I am using a little bit of my time to raise this as an issue with you. We are trying to work it. We need some help with your teams to identify how we can address a problem. And I think it is not just

unique to us. I am looking at my friend from New Mexico there, and I think it is probably something that you face as well.

Secretary GRANHOLM. Well, I look forward to working with you all on it. If there is no direct authorities right now, perhaps there are some that we can create, and I will be following up with you on the other issues that we discussed because I have some answers.

Senator MURKOWSKI. Thank you.

Secretary GRANHOLM. Yes.

Chair MURRAY. Thank you. Senator Heinrich.

Senator HEINRICH. Thank you, Madam Chair. Secretary Granholm, you actually joined me to see the very first wind towers coming off the line at Arcosa's Manufacturing Plant in Belin, New Mexico. And that is a great example of how the Inflation Reduction Act is literally bringing manufacturing back to the United States, and I believe that we now need to do the same for components of our power grid, things like transformers. Can you talk a little bit about how your budget request of \$113 million for the Office of Manufacturing and Energy Supply Chains can help ensure that we have American-made grid components?

Secretary GRANHOLM. Yes. I mean, we are doing a number of things on this. First, we—and thank you for your leadership on it because we know that we are going—we may need some additional support for it.

Senator HEINRICH. Yes.

Secretary GRANHOLM. Our Office of Manufacturing and Energy Supply chains, as an example, did this with heat pumps through the Defense Production Act—

Senator HEINRICH. Right.

Secretary GRANHOLM [continuing]. And was able to essentially seed domestic industry growth here, and we would like to do the same with grid components, particularly transformers. I will say, though, that 48(c) gave us an opportunity to fund six grid transformer manufacturers in this country. So there will be that expansion because that was a bottleneck as we try to get full supply chains back here. 48(c) has a wide scope, so we are excited about that. To the extent that we can work on other mechanisms to be able to enhance manufacturing in the U.S., we would be excited to do that and excited to work with you on it.

Senator HEINRICH. Great. Yes, I think transformers are a real, as you know, bottleneck right now and something we should be making here for our own security.

Administrator Hraby, I understand that Los Alamos National Laboratory will need more power than its existing power lines can handle by as soon as potentially 2027, and to address that, NNSA decided that building a new transmission line was going to be necessary. Now, I know when NNSA first looked at this, energized reconductoring felt like a little bit of a stretch, but we have seen enormous progress since then. Is energized reconductoring something you would be willing to evaluate to meet LANL's (Los Alamos National Laboratory) power needs?

Ms. HRUBY. Yes. Thanks, Senator Heinrich. The answer is yes. We have to—of course, this is a big process of making sure that we are working with all the stakeholders and—in New Mexico. The

first time we looked at reconductoring, it actually required larger areas to set it up that the Tribes were worried about, sensitive. So we just need to—there has been a lot of progress made in the 2 years since we last looked at that, and we will have another look to see if anything significant has changed. Meanwhile, we will, in parallel, move along because as you mentioned, 2027 is not that far, and we want to continue to do this. So we will keep the process moving that we have right now, the NEPA (National Environmental Policy Act) process, but we will take another look at reconductoring. I think it makes sense.

Senator HEINRICH. I appreciate that, and I have heard concerns from the Tribes about the current proposal as well, so I just think we need to evaluate all our options here. Administrator Hruby, during my tenure in Congress, I have worked really hard to nearly double the budget at Los Alamos National Lab, but as you know, with that growth comes a lot of growing pains, and particularly in housing. What can we do to make sure that we are addressing the housing challenges that face Los Alamos, in particular?

Ms. HRUBY. Yes. Senator Heinrich, this is a good question. You know, for those of you who know Los Alamos, its land is limited on the Mesa, and housing is expensive and in high demand, so we have done a couple of things. We probably need to do more, but we have opened an office in Santa Fe so that people who are not working in the labs, that are working in offices will be—can be closer to other housing, Santa Fe, but also a broader region. We have also looked at options on the other side of the Lab to see if there are some things that we could do to open office spaces in northern—on the north side, and that is still being evaluated. We have offered housing assistance to temporary workers, construction workers in the area so that we can get them there to work on, in particular, the plutonium facility.

So I think we have addressed this in a few ways. We cannot create more land on the Mesa, so we are looking—we are thinking—we are trying to be creative about the options that we can provide.

Senator HEINRICH. Great. Thank you.

Chair MURRAY. Senator Coons.

Senator COONS. Thank you, Chair Murray, and thank you both to our witnesses today for your leadership in America's energy security and for delivering on the promise of landmark legislation—the Chips and Science Act, the Inflation Reduction Act, the Bipartisan Infrastructure Law. You are really delivering a next-generation energy future for America. And since the last time we held this budget hearing, Delaware and the Mid-Atlantic region have been selected for one of the hydrogen hubs, which has potential to be transformational for my region and to give it an opportunity to really participate in the hydrogen economy of the future. We have several iconic Delaware companies that are at the leading edge of electrolyzer technology. We have three oil refineries at the head of the Delaware Bay in three States that are committed to a transformation towards hydrogen production and deployment, if we can get this right.

Madam Secretary, how are you making sure that each of the hubs gets the support and the flexibility they need to achieve lift-off? I am concerned about flexible matching requirements, in par-

ticular, so that we can not just put out a big grant announcement, but actually strike the right balance between private sector partners, public sector investment, and getting hydrogen secured as a next-generation fuel.

Secretary GRANHOLM. Yes. This is such an important issue. We want these hubs to succeed, and we know we have to carve this with a scalpel and not with an axe. The 45(v) requirements, I know, have been put out, and we have received 20,000 or 30,000 comments from stakeholders on all sides. Treasury, with the assistance of DOE are—we are wading through the comments to make sure that we get it right. Suffice it to say the Biden Administration is deeply invested in making a hydrogen economy successful in this country. We are—I can tell you, in meeting with all of my counterparts across the world, we are really the envy of the world because we have such a diverse array of hydrogen—of inputs for these hydrogen hubs. So we are looking at it, we are evaluating, and we want to get it right.

Senator COONS. Thank you. I just in our particular case, I worry about a cash flow crunch in terms of what is the timing of the matching requirements, and I want to make sure we get this right, and I very much look forward to working with you on that.

CHIPS (Creating Helpful Incentives to Produce Semiconductors) and Science also helped authorize a new foundation for your Department—FESI—the Foundation for Energy Security and Innovation, which is a tool many other Federal agencies and entities have used to attract and deploy private sector funding. In fact, I was thrilled that, in part because of funding from this subcommittee, there was the announcement of the inaugural board of directors a few weeks ago. What are the key challenges facing the Department of Energy that you think would benefit from—

Secretary GRANHOLM. Interesting.

Senator COONS [continuing]. Public-private partnership from philanthropic capital and coordination?

Secretary GRANHOLM. Yes, thank you so much. First of all, thank you for your leadership on this. I know this has been in the works for a long time.

Senator COONS. For years.

Secretary GRANHOLM. A long time, and there was such a sense of joy when we finally announced the board members, and it was funded to be able to get it launched. I know the board is—it is a mixture of people with a variety of talents, and so they are interested in the spectrum of things that they might be helpful on. But I do know there is a wealth of opportunity in the space of taking ideas from labs to commercialization.

Senator COONS. Mm-Hmm.

Secretary GRANHOLM. And so helping those and getting a sense of the spectrum from all of the various labs. I mean, there is just so—it is so rich in that environment. They are very interested in leaning in on that, so I think that is a very big way they can help. I would say there is one other way that is not so technically involved, which is, to help us think through and maybe help to supply technical assistance to, for example, Tribes—

Senator COONS. Mm-Hmm.

Secretary GRANHOLM [continuing]. And other areas, rural areas where the region might not—just do not—does not have the—is not equipped to be able to navigate the bureaucracy of the Federal Government to apply for a grant or a loan. So those kinds of things, they are looking at the vast array of it, but thank you so much for giving us this assist at the Department. Even though it is totally independent and bipartisan, it will be a great assist to future—to the Department going well into the future.

Senator COONS. My most bipartisan bill in this area is the PROVE IT Act with Senator Cramer that has 14 bipartisan cosponsors, and it just advanced out of EPW (Energy and Public Works), I think, by a vote of 14 to 5 in January, and NETL (National Energy Technology Laboratory), the whole suite of National Labs will be critical to gathering data about emissions intensity. Any thoughts you want to share about what resources you might need as a Department? Obviously Commerce, USTR, State, EPA, there would be a whole range of participants, but it would really be DOE led. Any thoughts about what actually gathering emissions-intensity data to advance industrial decarbonization might look like for the Department?

Secretary GRANHOLM. Well, I hope the authorizers and the appropriators come together on providing some resources to make this happen, but the bottom line is I think it is an incredibly important bill for our competitive advantage. If we are manufacturing products, we need to know what that footprint looks like, and this is one way to be able to keep—to do that and to keep it updated, so thank you for your leadership on it. I can see why it is so overwhelmingly supported.

Senator COONS. And I am simply going to reinforce what two of my colleagues said. The transformer—the domestic transformer manufacturing bottleneck is something I hear about constantly from the——

Secretary GRANHOLM. Yes.

Senator COONS [continuing]. Delaware Electric Co-op, and Senator Shaheen has been a leader as long as I have been here on performance contracting and energy efficiency——

Secretary GRANHOLM. Yes.

Senator COONS [continuing]. And in my previous role on FSGG, I tried to give some lift to performance contracting. Anything I could do be helpful, I would like to.

Secretary GRANHOLM. Thank you.

Senator COONS. Thank you for your forbearance, Madam Chair.

Chair MURRAY. Yes. Senator Heinrich, do you have additional questions?

Senator HEINRICH. Sure. Thank you. Secretary Granholm, New Mexico is well poised to be a top geothermal energy producer, something that is getting a lot more attention now, I think. I wish we had been sort of further along the trajectory of understanding just how close we are to advanced geothermal productivity in this country when we passed the Inflation Reduction Act.

Secretary GRANHOLM. Yes.

Senator HEINRICH. In New Mexico, we have got not only the resources, but the skilled workers from the oil and gas industry, very similar skillset. We have got Sandia's Geothermal Research Pro-

gram backing this up, and your Department estimates that new geothermal technology could give us as much as 90 gigawatts of clean energy by 2050. So one of the things I am doing is pushing for a \$125 million carveout to start funding demonstration projects for advanced geothermal technology. Can you talk a little bit about how this investment could help DOE reach its goals for advanced geothermal and just the state of the technology right now, because I do not think people understand, like, we are on the verge of something really, really big here.

Secretary GRANHOLM. Yes, it is amazing, and thank you for looking at that. I agree that if we had, you know, been more expansive in the Inflation Reduction Act and the Bipartisan Infrastructure Law, we might have been able to address this, but thank you for considering plussing up our efforts in geothermal. If we do that, we will be able to prove out that you can have geothermal in a variety of geologies in a variety of locations, even where the resource is deeper into the surface, because of the advances made in hydraulic fracturing technology from the oil and gas industry. This is why, speaking of bipartisanship, this is such a bipartisan—I think, the notion of geothermal is a very bipartisan issue, and I am hopeful that we can do that.

So we have done this enhanced geothermal liftoff report, as you noted. It has identified specific barriers that we are breaking down, but honestly, so many of those barriers now end up being market barriers, et cetera, because the technology barriers, through efforts like Fervo and others they, they are breaking down. And the tech world is reaching out to these companies that are doing this enhanced because they would like to see data centers paired with geothermal to get that firm baseload power, which we are very encouraging of, so we are excited about the potential breakthroughs. I just want to see the funding commensurate with the potential, and so thank you for your leadership on it.

Senator HEINRICH. Absolutely, because I think we have known for a long time, or for a substantial amount of time, how to decarbonize the first 80 percent of the power sector. It is that last 20 percent that has been so elusive, and now we have technology that works.

Secretary GRANHOLM. Yes.

Senator HEINRICH. And we just need to bring it down the cost curve.

Secretary GRANHOLM. Right.

Senator HEINRICH. And there is no doubt in my mind that this is another distributed technology that can be brought down the cost curve.

Department of Energy recently announced a major proposal to perform groundbreaking work at the intersection of artificial intelligence, science, energy, national security. Can you talk a little bit about how the national labs—Los Alamos, Sandia, and others—will be incorporated into that project?

Secretary GRANHOLM. Yes, and I feel free to toss Director—Administrator Hruby as well. But the President's executive order on AI has unleashed a whole swath of activity across agencies. Obviously because of the national labs, we are the places where we do have those exascale computers and where the tools for leading in

AI exist. The President's executive order set forth deadlines, shot clocks, et cetera, and we have been meeting all of them. One of the important ones is to be able to train up 500 AI researchers and scientists, and that is going to be critical for not just the Federal Government, but across the span of things.

We are concerned on the plus side of AI of having enough power, and—but we think that AI can help to solve some of that because AI can teach us how to be more efficient as well. And, in fact, I think Nvidia just announced that they have halved the energy use of their chips, which is great, but there is still more that needs to be done on that.

Senator HEINRICH. Yes.

Secretary GRANHOLM. And we are also concerned about the negative uses of AI as well. Let me just toss it over to Administrator Hruby.

Senator HEINRICH. Administrator.

Ms. HRUBY. I love when it gets negative. So just to pick up on that, we are—another role that the Department has and NNSA, in particular, has is red teaming AI models and looking for issues that our adversaries might use. And we are really, like—we need the computers, we need the models, and we need to do good things with them, and we need to make sure nobody else is taking advantage of them or finding information. So we are really well along in that in NNSA, and we will—you know, that is an important role that we will play.

Senator HEINRICH. Yes. Thank you, Madam Chair.

Chair MURRAY. Senator Coons, did you have any additional questions?

Senator COONS. No, thank you.

Chair MURRAY. Thank you. I will turn it to Senator Hoeven in just a second, but while he is getting settled, I just wanted to follow up on what Senator Coons talked about on the hydrogen hubs. Pacific Northwest was selected for a billion-dollar award, along with the six other sites. The Treasury Department's proposed 45(v) rulemaking has thrown up some really big roadblocks, and all seven of the hydrogen hubs have now made it clear that those rules need revisions for them to work. Major companies in this space have already announced that they are going to pull back hydrogen investments unless there are changes. You are not in charge of Treasury, but their final rule will affect the success of these hydrogen hubs, and I wanted to ask you, are you working with the administration to make sure that the final 45(v) rule helps rather than hinders in this process?

Secretary GRANHOLM. Yes, we are.

[Laughter.]

Chair MURRAY. Okay.

Secretary GRANHOLM. It is very important. I mean, your point is super important, and that is why those 20,000 comments that we received, they are painstakingly being reviewed, and we just got to make sure these work.

Chair MURRAY. Yes, we do.

Secretary GRANHOLM. Yes.

Chair MURRAY. Okay. Thank you. Senator Hoeven.

Senator HOEVEN. Thank you, Madam Chair. Secretary, good to see you. Thanks for being here.

Secretary GRANHOLM. Good to see you.

Senator HOEVEN. I want to ask you about both the Clean Power Plan 2.0 and also MATS, and MATS, particularly, has an impact on lignite coal more so than other types of coal. I think you are aware of that. We have had you out to North Dakota, so I know you know quite a bit about our industry. But the independent grid operators, including PJM, Southwest Power Pool, which, of course, is—we have both MISO and Southwest Power Pool, and we supplied power to about 9 States out of North Dakota, coal-fire and electric power. But PJM, SPP and ERCOT all have indicated that they think that these two rules are going to be a huge problem in terms of keeping enough baseload for grid reliability, and I have full letters from all three of them. Madam Chairman, I would ask they be made part of the record——

Chair MURRAY. Without objection.

[The information follows:]



STATEMENT

FOR IMMEDIATE RELEASE

PJM Statement on the Newly Issued EPA Greenhouse Gas and Related Regulations

(Valley Forge, PA – May 8, 2024) – PJM provides this statement concerning the EPA rule on New Source Performance Standards for Greenhouse Gas Emissions and the other EPA regulations promulgated on April 25, 2024.

PJM has the responsibility to ensure both short- and longer-term reliability for the 65 million people we serve in a region spanning 13 states plus the District of Columbia. "Reliability" in this context refers both to the day-to-day work of managing the grid to keep the system in balance as well as ensuring that, looking forward, there are adequate resources available and committed to serve the expected demand for electricity in future years.

Because of these unique responsibilities, PJM and other affected RTOs have been extensively involved in EPA rulemakings dating back to the Mercury and Air Toxics Standards rule promulgated on Dec. 16, 2011. Our role in these rulemakings has been to ensure that, in developing proposed environmental rules, EPA has appropriately taken into account the reliability needs of our respective grids.

Consistent with this past level of involvement, PJM worked cooperatively with MISO, SPP and ERCOT (the RTOs most affected by the EPA rule) to craft a set of detailed comments to EPA raising our collective reliability concerns with EPA's initial proposed greenhouse gas (GHG) rule. Our comments and subsequent meetings with EPA were focused on:

- Educating EPA as to the reliability needs of our respective systems and the potential impact that the then-proposed GHG Rule could have on both day-to-day reliability and resource adequacy; and
- Providing to EPA constructive proposals to help mitigate, from a reliability perspective, potential adverse impacts of the then-proposed Rule with a particular focus on ensuring adequate flexibility within the Rule for grid operators to be able to address both short-term reliability issues and resource adequacy within their regions.

– MORE –



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PJM Statement on the Newly Issued EPA Greenhouse Gas and Related Regulations / Page 2 of 3

Noting the RTO Comments, in its Final Rule issued on April 24, 2024, EPA made certain adjustments to its initial proposal. Those adjustments altered the resources impacted by the rule and provided additional tools that can help provide flexibility to address reliability issues. PJM is appreciative of EPA's acknowledgment of the importance of the existing resources to reliability, of the need for more flexibility, and its consideration of the Joint RTO Comments. The specific adjustments that were grounded in the Joint RTO Comments and adopted in the Final Rule included:

- **Treatment of Existing Gas Resources** – Removing existing gas from this rulemaking to be addressed holistically in a separate rulemaking
- **State-Specific Compliance Flexibility** – Availability of flexibility for the states to address reliability issues, taking into account the remaining useful life and other factors that affect needed units
- **Averaging** – Allowing unit owners to average their compliance obligations over multiple units to ensure least-cost compliance
- **Emissions Trading** – Authorizing states to utilize allowance trading to minimize compliance costs and burdens
- **Mass-Based Programs** – Authorizing states to potentially utilize an emissions cap rather than controlling the rate of emissions from each affected unit
- **Short-Term Reliability Mechanisms** – Allowing needed units to operate for emergencies without jeopardizing compliance with the rule
- **Timeline Extensions** – Providing extensions for retiring units needed for reliability and units needing more time to install controls, with state discretion for longer periods

PJM's Continuing Reliability Concerns

Although we appreciate EPA's adoption of certain flexibility measures in response to our proposals, areas of concern remain related to ensuring reliability given the impact of the Final EPA Rule:

- The new rules governing both existing coal and new natural gas are premised on EPA's finding that carbon capture and sequestration (CCS) technology represents the "best" system of emissions reduction, which will be commercially available at a reasonable cost. However, the availability of CCS is highly dependent on local topology, such as salt caverns available to sequester carbon and the availability of a pipeline infrastructure to transport carbon emissions from individual generating plants to CCS sites potentially hundreds of miles away. There is very little evidence, other than some limited CSS projects, that this technology and associated transportation infrastructure would be widely available throughout the country in time to meet the compliance deadlines under the Rule.

– MORE –

PJM Statement on the Newly Issued EPA Greenhouse Gas and Related Regulations / Page 3 of 3

- The Final Rule imposes the most stringent requirements on new gas and existing coal units that operate as baseload units. Although EPA has focused on these units given that they have greater emissions, these baseload units provide a critical reliability role. We are seeing vastly increased demand as a result of new data center load, electrification of vehicles and increased electric heating load. The future demand for electricity cannot be met simply through renewables given their intermittent nature. Yet in the very years when we are projecting significant increases in the demand for electricity, the Final Rule may work to drive premature retirement of coal units that provide essential reliability services and dissuade new gas resources from coming online. The EPA has not sufficiently reconciled its compliance dates with the need for generation to meet dramatically increasing load demands on the system.
- The Final Rule is premised on the availability of increased access to natural gas infrastructure to support the Rule's "co-firing with gas" compliance option for existing coal units. The present gas pipeline system is largely fully subscribed. Moreover, given local opposition, it has proven extremely difficult to site new pipelines just to meet today's needs, let alone a significantly increased need for natural gas in the future. The Final Rule, which is premised, in part, on the availability of natural gas for co-firing or full conversion, does not sufficiently take into account these limitations on the development of new pipeline infrastructure.
- EPA has left many issues for development in individual state implementation plans. Although this is appropriate and in keeping with the structure of the Clean Air Act, each of the multi-state RTOs like PJM operate a single dispatch. As a result, states will need to coordinate and work closely together to ensure that the individual state plans work well on a regional basis. As a result, the need for regional coordination of individual State Implementation Plans is more important than ever. PJM values its continued collaboration with the other affected RTOs (MISO, SPP and ERCOT) and looks forward to working with the U.S. EPA, individual states and affected stakeholders as this process continues.

[PJM Interconnection](#), founded in 1927, ensures the reliability of the high-voltage electric power system serving 65 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. PJM coordinates and directs the operation of the region's transmission grid, which includes 88,115 miles of transmission lines; administers a competitive wholesale electricity market; and plans regional transmission expansion improvements to maintain grid reliability and relieve congestion. PJM's regional grid and market operations produce annual savings of \$3.2 billion to \$4 billion. For the latest news about PJM, visit PJM Inside Lines at insidelines.pjm.com.

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STATEMENT ON THE RECENT EPA GREENHOUSE GAS EMISSIONS RULE

SPP issues this statement on the final rule the EPA issued on April 25, 2024, regulating greenhouse gas (GHG) emissions from electric generating units under Section 111 of the Clean Air Act (Final Rule).

As a FERC-approved regional transmission organization (RTO), SPP is responsible for maintaining reliability of the bulk electric system in its region covering all or part of 14 states. A key component of SPP's reliability-based responsibilities is assuring that sufficient resources are available when needed to meet expected future demand.

The generating fleet in the SPP region has undergone significant changes in recent years, and SPP has worked to keep pace by adapting its market design, operating processes, and transmission planning practices. Through these adaptations, SPP has facilitated an ongoing transition to carbon-free generation and is supportive of moving further toward a resource mix that reliably reduces emissions as necessary new technology evolves. The SPP region has long been at the forefront of integrating renewable energy, particularly wind generation. In the last decade, SPP has transitioned from a resource fleet that was overwhelmingly made up of traditional generation to a fleet in which wind is the number-one supplier of energy in the SPP region.

SPP's success in integrating significant wind generation has depended largely on having sufficient flexible thermal generation that can be called upon when wind is unavailable. However, the thermal fleet is shrinking. Thermal units are being retired without being adequately replaced, resulting in less total, fuel-assured, ramp-able capacity. Thermal units with these requisite reliability attributes also make up a shrinking percentage of SPP's total available generating capacity, as the growth of variable energy resources is outpacing the addition of new thermal units. The remaining fleet is expected to carry a potentially unsustainable burden of supplying the necessary reliability attributes needed to assure continuous supply of electricity.

SPP sees no slowing in the growth of demand for electricity or in the growth of new load types such as data centers, cryptocurrency mines, and electric vehicle. SPP is concerned that the current pace of new generation development will be insufficient to offset current and projected resource retirement trends and demand increases.

The region has also experienced extreme weather conditions that have impacted SPP's ability to assure energy provision during times when consumers depend the most on continuous supply of electricity. Since Winter Storm Uri in February 2021, during which SPP was forced to interrupt service to customers for short periods of time, Storms Elliott (December 2022) and Heather/Gerri (January 2024) presented similar circumstances. SPP has also experienced extreme heat over the last two summers, contributing to a new summer peak in 2023 that was 10% higher than the one set two summers prior. These challenges underscore the increasing volatility and unpredictability of weather patterns, further highlighting the need for enhanced grid resilience and adaptive strategies to ensure reliable energy provision in the face of such extreme conditions.

As with previous EPA rulemakings, SPP submitted comments to the EPA in the docket for this Final Rule. SPP submitted individual as well as joint comments with other impacted RTOs: Midcontinent Independent System Operator, Inc.; PJM Interconnection, L.L.C.; and Electric Reliability Council of Texas, Inc. SPP also engaged in meetings with EPA staff to discuss issues raised in the comments. SPP's primary goal throughout this engagement was to communicate the trending urgency of resource adequacy in the SPP

region and SPP's sincere concerns about maintaining resource adequacy in the face of thermal generation retirement, an otherwise changing resource mix, increasing demand, and extreme weather trends.

SPP acknowledges and expresses appreciation for EPA staff's consideration of the comments and concerns that SPP and other RTOs presented in the docket and subsequent meetings. SPP notes that the Final Rule reflects changes EPA made from its proposed rule, including removing existing gas generation from the Final Rule's scope and including measures that may provide flexibility in dealing with reliability-impacting events. These changes represent a welcome step toward reflecting the importance of system reliability and the role that existing flexible generation plays toward maintaining that reliability.

SPP remains concerned, however, about the impact the Final Rule may have on the region's ability to maintain resource adequacy and ensure reliability in the SPP region. SPP is concerned that limited technological and infrastructure availability and the compliance time frame will have deleterious impacts including the retirement of, or the decision not to build, thousands of MWs of baseload thermal generation. If sufficient flexible thermal resources are not available to play their critical roles in SPP's resource mix, SPP's ability to maintain regional reliability will be directly impacted. The Final Rule's emissions limits for existing coal and new gas generation are based on the EPA's finding that carbon capture and sequestration (CCS) technology is a viable best source of emissions reduction (BSER) in terms of commercial availability and reasonable cost. SPP continues to be concerned that CCS has not yet been adequately demonstrated at the required capture rate, has not been commercially produced at scale, and will not be widely available and practicable at the level needed for the Final Rule's 2032 compliance time frame. Moreover, while the Final Rule contemplates a natural gas co-firing option for existing coal units that choose to retire before 2039, SPP is concerned about the availability of gas infrastructure necessary to adequately utilize that compliance option in that time frame.

SPP is not expressing these concerns about a hypothetical resource adequacy scenario in the future. SPP and other grid operators are currently working to develop planning and operations policies and practices to deal with resource adequacy issues that have already manifested. SPP's recent Loss of Load Expectation (LOLE) study indicated that, by 2029, as much as a 50% winter season Planning Reserve Margin (PRM) could be necessary to maintain a one-day-in-ten-years LOLE. A PRM of that magnitude would require a significant amount of new capacity to be added in a short time frame. It is important to note that this study considered SPP's existing and projected future resource mix without considering the potential impacts of the Final Rule's 2032 deadline for certain emissions limits. In other words, the study and its projected increase in PRM did not consider the additional at-risk generation that may retire and not be adequately replaced in a relatively short time frame resulting from the compliance time frames contained in the Final Rule. This outcome would further intensify the need for generating capacity and associated transmission upgrades in the SPP region, likely at a pace and cost unprecedented for the industry.

SPP will continue its work to maintain resource adequacy and system reliability. As part of that work, SPP will continue to engage with stakeholders, other RTOs, and the EPA in efforts to address the challenges presented by current and projected trends in resource availability and demand growth.

EXHIBIT 24

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

STATE OF WEST VIRGINIA, <i>et al.</i> ,	§	
	§	
<i>Petitioners,</i>	§	
	§	
v.	§	No. 24-1120
	§	
UNITED STATES ENVIRONMENTAL	§	
PROTECTION AGENCY, <i>et al.</i>	§	
	§	
<i>Respondents.</i>	§	

**DECLARATION OF D. W. RICKERSON, P.E., SENIOR VICE PRESIDENT AND CHIEF
OPERATING OFFICER FOR ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.**

I, D. W. Rickerson, P.E., declare as follows:

1. I am the Senior Vice President and Chief Operating Officer for Electric Reliability Council of Texas, Inc. (ERCOT), where I am responsible for overseeing grid and market operations, system planning, and weatherization. I am providing this declaration on behalf of ERCOT.

2. ERCOT is the independent system operator (ISO) designated by the Public Utility Commission of Texas (PUCT) for the purposes of managing the operation and planning of the ERCOT transmission grid, which serves the majority of customers in the State of Texas. ERCOT is also responsible for operating the wholesale market for electricity in the ERCOT region and facilitating customers' choices of retail providers of electricity.

3. Texas law assigns ERCOT a number of critical functions, including the fundamental responsibility to “ensure the reliability and adequacy of the regional electrical network.” Tex. Util. Code § 39.151(a)(2). ERCOT’s most basic function in ensuring system reliability is to individually dispatch hundreds of generators located across the system to match the system demand at every moment of every day while observing both the physical and stability limits of the transmission network that transfers power from generators to consumers.

4. In its role as ISO, ERCOT also conducts forward-looking assessments to evaluate the adequacy of generation resources to serve future system demand and to identify and plan transmission lines and other facilities to ensure that power from generation facilities can be reliably transported to serve customer demand.

5. It is my understanding that the U.S. Environmental Protection Agency (EPA)’s final rule addressing carbon dioxide emissions from electric generating units (hereinafter, “the rule”) was published in the Federal Register on May 9, 2024 and will become effective on July 8, 2024.

6. It is also my understanding that the rule requires each owner of one or more existing coal-fired electric generating units (EGU) to select one of the following three options: (1) commit to retire the EGU in 2032, (2) commit to meet an emissions standard based on co-firing with natural gas starting in 2030, which would allow the EGU to operate until January 1, 2039, or (3) commit to meeting an

emission standard based on installation of carbon capture and storage (CCS) with 90% capture of carbon dioxide by 2032, which would allow the EGU to operate indefinitely.

7. It is also my understanding that the rule requires owners of new gas-fired EGUs that will use combustion turbines operating with a capacity factor greater than 40% to comply with an emissions standard based on the installation of CCS with 90% capture of carbon dioxide by 2032.

8. I am providing this declaration to express my concerns that the rule will likely lead to retirements of coal-fired EGUs and that it will likely constrain the development of new, gas-fired combustion turbines that will be needed to ensure reliable, dispatchable power for the citizens of Texas.

9. In recent years, the ERCOT region has experienced significant growth of renewable generation, including wind and solar technologies. As of today's date, ERCOT is the national leader in utility-scale solar and wind generating capacity, with approximately 24,000 MW of solar capacity and 39,000 MW of wind capacity installed.

10. While solar and wind generation technologies provide significant amounts of low-marginal-cost power, they are not dependable sources because they produce power only in proportion to the amount of available sunlight and wind. ERCOT cannot dispatch solar generators at nighttime or wind generators when the

wind is not blowing. ERCOT must rely on other dispatchable generation resources to serve the system demand that cannot be consistently served by renewable sources of power.

11. One relatively new form of dispatchable power is electric energy storage, which typically exists in the form of utility-scale batteries. As with renewable energy, ERCOT has experienced a significant growth in the amount of battery storage in recent years, growing from approximately 150 MW in 2019 to over 6,000 MW today, with another 10,000 MW of batteries expected to be added by the end of summer 2025. ERCOT expects this long-term trend in battery storage growth to continue. However, unlike gas-fired and coal-fired generation sources, energy storage systems are inherently duration-limited because they can store only a finite amount of power. Even with a tripling of the current capacity, batteries will only be capable of supplying a small portion of the grid's energy needs for a few hours at a time. Consequently, ERCOT will continue to need to rely on gas-fired and coal-fired EGUs to generate electricity when energy from renewable sources and battery storage is insufficient to serve the grid.

12. While the rule does not prohibit operation of coal-fired and base load gas-fired EGUs, the rule's requirement that owners of these EGUs must install certain technologies that are not currently demonstrated at scale as a condition for operating beyond 2032 creates a risk that, if these technologies do not materialize

or are otherwise not feasible, owners of coal-fired EGUs may choose to retire those EGUs and new gas-fired EGUs may never be developed.

13. With respect to the option for coal-fired EGU owners to choose co-firing with natural gas as an option to operate through 2039, I do not believe this will be viable for most owners because most coal plants do not have natural gas pipelines of significant capacity serving them and because the greater marginal cost of producing electricity using steam created by a gas-fired boiler would almost certainly undermine the ability of coal-fired EGUs to run at sufficient frequency to justify their continued operation—especially considering the significant investment associated with building new natural gas transmission lines and retrofitting a coal plant to co-fire with natural gas.

14. I am also concerned that the still-nascent state of CCS technology will prevent owners of coal-fired EGUs from being able to commit to installing that technology by the time state plans must be submitted to EPA in May 2026, which is only two years from now.

15. At this time, CCS technology is not widely developed and has only been deployed in a very small number of cases. I am skeptical that CCS technology can be implemented on a scale sufficiently large to apply to the many EGUs in the United States that may be required by the rule to install this technology in future years as a condition for long-term operation. CCS technology requires

infrastructure for disposing of and transporting captured carbon dioxide that does not exist yet. Without that infrastructure in place by the time state plans must be submitted in May 2026, I believe the state of uncertainty in CCS technology will lead many coal-fired EGU owners to choose to retire their units rather than commit to installing CCS, as would be required under the rule for long-term operation. It is my understanding that commitments to retire EGUs reflected in state plans will be treated as binding, enforceable commitments.

16. Additionally, if CCS technology does not develop in time for new base load gas-fired EGUs to fully implement this technology by 2032, developers of those generation assets will not have pursued development of these generators by this time, endangering a potentially critical source of dispatchable generation capacity.

17. Because a significant risk exists that many, if not all, coal-fired units in ERCOT will retire as a result of the rule, and that a sufficient amount of compliant, new base load gas-fired EGUs will not be developed as a result of financial risk imposed by the rule, I believe the rule increases the risk that the ERCOT region will experience energy shortages in the future.

18. ERCOT has already identified significant challenges in meeting its future demand without the additional impacts of the rule. ERCOT is in the midst of an explosion of new electricity demand, with average summer peak demand growth

of 7.8% since 2021, far exceeding average historical annual peak demand growth rates of approximately 1.5%. And load growth is now expected to rise even higher in the future. Based on recent utility demand forecasts, ERCOT now anticipates its peak load to exceed 152,000 MW by 2030, significantly outpacing its all-time peak demand record of 85,500 MW set in 2023 with an average annual rate of growth of 11.1% between now and 2030.

19. With these significant rates of anticipated demand growth, the ERCOT region will require even more dispatchable, unlimited-duration generation resources in the future, along with associated transmission infrastructure, to fill in gaps when sufficient renewable generators and battery storage systems are not available to produce energy. Even at this time, ERCOT is uncertain whether it will have enough generation resources to serve this future load. However, it is my view that eliminating coal-fired EGUs—which currently constitute about 14,000 MW of the limited dispatchable generation supply—and inhibiting the growth of new, gas-fired base load EGUs will only further impair ERCOT’s ability to ensure sufficient generation supply to meet demand at all times. If insufficient generation is available at any time, ERCOT must direct utilities to disconnect customers from the grid. This can have significant consequences for consumers who depend on electricity for critical, life-sustaining functions during periods of extreme weather.

20. While EPA has provided several helpful reliability allowances in the rule, these flexibilities do not mitigate my concerns. For example, allowing EGUs to operate during a system emergency, and allowing EGUs up to a year of additional implementation time due to circumstances beyond their control will not have any material impact on a retirement decision. These allowances are also unlikely to have a material impact on decisions to develop new base load gas-fired EGUs if CCS does not materialize. Even with the allowances provided under the “remaining useful life and other factors” (RULOF) policy in the rule, it is my understanding that an EGU owner would not be excused from taking the significant steps to implement co-firing with natural gas or installing CCS if it intended to operate the EGU past 2032.

21. For these reasons stated above, I believe the rule poses an unacceptable risk to the reliability of the ERCOT System.

22. I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on May 13, 2024.



D. W. Rickerson, P.E.
Senior Vice President and Chief Operating Officer
Electric Reliability Council of Texas, Inc.

Senator HOEVEN [continuing]. Expressing those concerns regarding these two EPA rules as promulgated by EPA, so, you know, we are going to need some help here. As you know, we are leading the way on this—these carbon capture, both for coal gasification, which is already in place, but also for carbon capture on coal-fired electric plants, both on the—our U.S. utility—the co-op side and on the private investor side. But with these rules, we are not going to get there, and you have got hundreds of millions invested with us in these projects.

Secretary GRANHOLM. I respectfully disagree that we are not going to get there. In fact, the—when the EPA put out its proposed rule, it took in feedback, listened to the concerns of the power authorities, and pushed back the date by which coal plants—existing coal plants would have to install carbon capture equipment. The question is, is it technologically feasible? You have proved out that it is technologically feasible, and we have financing mechanisms to help—

Senator HOEVEN. Yes.

Secretary GRANHOLM [continuing]. Fund the installation. So we think it is not just think. We have done this analysis with them. We have an MOU (Memorandum of Understanding) with the EPA, and we think that—you know, I understand people being worried about it, but by, you know, in the 2030s, it will be—people will see that it is doable, and you guys have been the example of how that is possible.

Senator HOEVEN. We are doing it both for geologic storage now and EOR (Enhanced Oil Recovery), both, and these projects now are coming online. So we are—now, I have already talked to EPA administrator, Michael Regan, about coming out, and I am going to bring him out, as long as he agrees to come, to the EERC (Energy & Environmental Research Center) where you, where you have already visited.

Secretary GRANHOLM. Yes.

Senator HOEVEN. And I know or I believe it was beneficial for you. I think it would be helpful to him, but he needs to talk to our experts about how we are going to address these rules, and we are going to need flexibility under these rules if we are going to be able to move forward. So I would ask for your assistance, for Deputy Secretary Turk's assistance, for EPA assistance on this.

Secretary GRANHOLM. Yes. We have got the technology. We have got the ability. We can do this, and we would be happy to partner on it.

Senator HOEVEN. Let me also ask you about the cooperative agreements that relates to EERC. They have had cooperative agreements with the DOE since, I think, going back into the 1980s. We need to renew that. As you know, they are not only doing all this work in the carbon capture area, but they are the leader on the Headwaters Hydrogen Hub, which covers Minnesota, North Dakota, South Dakota, so I would like to ask that you would work with us to reauthorize it. It is up, I think, next year, but it needs to be reauthorized, and they have ongoing projects. So these—we do need to reauthorize our cooperative agreement. Now, the funding, of course, we do that separately, so that does not guarantee

them funding, right? We work on that through appropriations, but they have to have the authorization to continue to work projects.

Secretary GRANHOLM. So, you know, we love EERC and they have been a partner with DOE for many, many years.

Senator HOEVEN. You can say that again if you want.

[Laughter.]

Secretary GRANHOLM. The EERC, over the past few years, I think the past 5 years, they have won nine competitive awards because they are so capable.

Senator HOEVEN. Yes. They are doing a lot of work.

Secretary GRANHOLM. We are trying to move in the direction of more competitive relationships, though, and they compete.

Senator HOEVEN. I know. Hence, I expressed the difference between authorization and the appropriation.

Secretary GRANHOLM. Yes.

Senator HOEVEN. And that is very important because we need to keep those—now, whether you end up giving them an award, we will work with you on that, but they have got to have the underlying authorization for continuity of projects, and then they compete with—on the awards, just like anyone else.

Secretary GRANHOLM. Yes.

Senator HOEVEN. So that is why I would ask for your help, and if you would direct the deputy secretary—he has been very good working with us, but—authorize or support, but that is where we need to get to.

Secretary GRANHOLM. Yes.

Senator HOEVEN. So if you have questions about that relative to the competitive aspect you all are working on, I am happy to work on that, but I need your help to work on it.

Secretary GRANHOLM. Yes. We will continue to work with you, but as you know, even on this committee, there has been a push toward competition, and so we want to—

Senator HOEVEN. Yes.

Secretary GRANHOLM. We love all of our masters.

[Laughter.]

Senator HOEVEN. Yes. No, I understand.

Secretary GRANHOLM. Yes.

Senator HOEVEN. Could I ask one more question, Madam Chair? Chair MURRAY. Of course.

Senator HOEVEN. And this is actually for Under Secretary Hruby, the warheads for the Sentinel Program, ICBM, right? As you know, that—the Sentinel is undergoing a Nunn-McCurdy review, and Air Force is working diligently on that. I have talked to them a lot about it, but I want to make sure—but it is not a technological issue. Mainly it is they got to pour so darn much concrete that it is just a, you know, a construction issue. You know, it is like building the interstate system again in some respects for a lot of that area. Are you staying on track and on top of what you have to do both for Sentinel and for the LRSO, the cruise missile warhead, the two different warheads?

Ms. HRUBY. Yes, thank you for that question. Yes, the Sentinel Warhead we call the W87-1, and we are just—as Nunn-McCurdy is proceeding, we are proceeding with the W87-1 warhead on the schedule that we currently have. We are part—we are asked to be

an observer of the Nunn-McCurdy process, so we stay well aware of what is going on there, and when it is finished and there is a decision made, then we will make sure we sync up our timelines again. It is important for us that we have a flight test for our war-head development program.

Senator HOEVEN. Right.

Ms. HRUBY. So that will be where we have to—that is the particular point where we really want to make sure we stay synced up. On the 80–4, we are well aligned, and it is pretty far along in its development, and we will be making a lot of W80–4s to put on the standoff weapon before long.

Senator HOEVEN. Yes. Incredibly important at this time with what is going on in China and Russia.

Ms. HRUBY. It is, yes.

Senator HOEVEN. So thank you for that.

Ms. HRUBY. Thank you.

Senator HOEVEN. Thank you, Madam Chair.

Chair MURRAY. Thank you. That will end our hearing today, and I want to thank our witnesses and my colleagues for participating. I look forward to working together on this year's appropriation bill to make sure we are providing the Department of Energy with the resources they need.

ADDITIONAL COMMITTEE QUESTIONS

I will keep the hearing record open for 1 week. Committee members who want to submit written questions for the record should do so by 5 p.m., Wednesday, May 29. We appreciate the Department of Energy to responding to them in a reasonable period of time.

The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO HON. JENNIFER GRANHOLM

QUESTION SUBMITTED BY SENATOR MARTIN HEINRICH

Question. Sandia National Labs' MESA Facility is crucial for creating secure semiconductors and studying future computer tech. But it's old and needs replacing. What can you do to keep MESA running for important research and production?

Answer. DOE/NNSA is committed to sustaining the Microsystems Engineering, Science and Applications (MESA) complex at SNL via implementation of the MESA Extended Life Program, which was developed to identify investments required to sustain the existing capabilities of the MESA Complex. It provides a 20-year forecast of tools and equipment recapitalization, and facilities and infrastructure projects. This includes facilities and equipment upgrades to maintain and advance the research and production capabilities needed for all current and future weapons modernization programs.

NNSA is exploring potential solutions to address the risks associated with maintaining the aging MESA infrastructure, collaborating with selected manufacturers to evaluate technologies that can sustain MESA's capabilities long into the future. This includes developing plans for equipment sourcing, providing additional manufacturing space for radiation-hardened microelectronics. Long term, it is anticipated that new capabilities will be required to replace the oldest of the MESA laboratories, the Silicon Fabrication Facility (SiFab). NNSA calls this the Microelectronics Components Capability (MC2) Project.

QUESTIONS SUBMITTED BY SENATOR JOHN KENNEDY

Question. Some clean hydrogen projects both produce and use hydrogen in the same facility, but those projects are not included in the eight pathways identified in the proposed Section 45V tax credit guidance and, therefore, the emissions reduction value of that process is not captured in the new 45VH2 GREET model. This appears to be at odds with the congressional intent of the tax credit and the Administration's stated goals of supporting clean hydrogen production and use. How will DOE account for these projects in the alternative emissions value determination to be conducted by the DOE, and when will those process details be released?

Answer. Question was answered during a briefing for Senator Kennedy's staff on July 18, 2024. Committee Staff confirmed that the question was addressed during the briefing and a written response was no longer required.

QUESTIONS SUBMITTED BY SENATOR BILL HAGERTY

Question. Developing and deploying the next generation nuclear reactor technology and the related supply chains and technologies in the United States is critically important. While your department agrees with this principle, your Fiscal Year 2025 budget does not seem to reflect this as a priority.

In Fiscal Year 2024, Congress provided \$100 million to support the design, licensing, supplier development, and site preparation of a grid-scale generation 3+ reactor design that can be deployed by 2030. By law, that money must be awarded by June 7, 2024.

Can you tell me where we are in that process? Have you put out a request for a proposal? Have you received any proposals? Will your department be able to meet that June 7th deadline?

Answer. In an effort to achieve the largest benefit for the Federal dollars available, the Department of Energy's (DOE) Office of Nuclear Energy (NE) partnered with DOE's Office of Clean Energy Demonstrations (OCED) to develop a joint competitive solicitation to provide support for both the design, licensing, supplier development, and site preparation of a grid-scale Generation III+ (Gen III+) reactor design, as well as the up to two utility deployments of Gen III+ small modular reactor (SMR) designs, included in the Fiscal year (FY) 2024 appropriation bill language.

This approach provides the greatest potential, for the dollars available, to provide strategic support to the U.S. industry to achieve a first-of-its-kind deployment of a Gen III+ SMR technology, plus reduce the risk for additional movers to make investment decisions to build out the first orderbooks.

DOE issued a Notice of Intent for the solicitation on June 17, 2024, held an Industry Day on August 14–15, 2024, for potential applicants and team members to learn more about the upcoming solicitation and to facilitate team forming, and is preparing a competitive solicitation for public release in Fall 2024. Industry applications in response to the solicitation are anticipated in January 2025, with award selections anticipated for Spring 2025.

Question. In your opinion, will this money be better spent supporting design, helping with the licensing process, developing suppliers or beginning site preparation?

Answer. With the approach identified in the response to question 1a, DOE plans to focus the use of the \$100 million to address three key risk areas, within the areas of design, licensing, supplier development, and site preparation, to reduce key risks for entities looking to deploy the first orderbook.

These items include: (1) the independent evaluation of project cost estimates and integrated project schedules to identify if any key elements of the project have not been addressed and to increase customer confidence in a project's planned cost or schedule (aligns with design area); (2) the evaluation and preparation of potential sites currently under consideration for near-term deployments (e.g. early site permits through the Nuclear Regulatory Commission), to understand the advantages and disadvantages potential sites offer for the near-term deployment of Gen III+ SMRs (aligns with licensing and site preparation areas); and (3) support for key areas of the domestic supply chain to improve their capability, capacity, or competitiveness in supporting the domestic supply of products or services for the deployment of Gen III+ SMRs (aligns with supplier development area).

Each of the above areas are critical for improving the customer's confidence in the anticipated cost and schedule for future deployment projects and reducing risks for the domestic deployment of Gen III+ technologies. As each of these areas are important, DOE will consider the solicitation's evaluation criteria and policy factors to determine the best suite of projects that will advance the program's objectives to support industry achieving a committed orderbook for near-term deployments.

Question. In Fiscal Year 2024, Congress also provided \$800 million for two near-term utility commercial deployments of generation 3+ small modular reactor technology in the United States.

Could you provide a status update on the \$800 million allocated in Fiscal Year 2024 for two near-term utility commercial deployments of small modular reactor technology in the United States? How will you select these two utility commercial deployments? And in your view, what is the definition of “near-term deployment” in this context?

Answer. The Office of Clean Energy Demonstrations (OCED) and the Office of Nuclear Energy (NE) released a notice of intent on June 17 announcing their intent to release a funding opportunity for both the \$800 million managed by OCED and the \$100 million managed by NE later this year. The Department recently hosted an industry day on August 14 and 15 for potential applicants and team members to learn more about the program and to facilitate networking and team formation. OCED and NE are still developing the final funding opportunity. The speed in which projects can be completed will depend on the quality and completeness of the submitted project applications.

Question. The Department’s Commercial Liftoff report explains that a generation 3-plus technology is one that uses water as a coolant and low-enriched uranium as fuel. This is my understanding as well. Do you expect the Department to change its view on what constitutes a gen 3-plus nuclear technology?

Answer. The Department intends to remain consistent with the definition of a Gen III+ technology that was used in the Notice of Intent for the Gen III+ program, which states that a Gen III+ small modular reactor (SMR) is a nuclear fission reactor that uses light water as a coolant and low-enriched uranium (LEU) as a fuel, is included as part of a single or multiple unit plant that has a power output of approximately 50–700 mega-watts-electric (MWe) (with no single unit rated less than 50 MWe), maximizes factory fabrication approaches, and provides a number of other significant safety and efficiency improvements compared to existing reactors.

Question. In your opinion, with the fiscal realities before this committee, what can that funding be most efficiently spent on: design, licensing, developing suppliers? Does that align with your understanding of what congress intended for the funding?

Answer. The Department has released the Notice of Intent and recently hosted an Industry Day to better inform applicants of the details of the program and to inform industry applicants on how to develop strong proposals that will determine where Federal funds can be most effective in developing and deploying Gen III+ SMR technology. This approach aligns well with the legislation’s intent of deploying utility scale projects that have potential to be deployed beyond the first of a kind.

Question. How long will it take your department to distribute this funding? What mechanisms will your department use to dispense this funding—will it be a new competition, or will you utilize existing partnerships?

Answer. The Department plans to offer a funding opportunity later this year in which teams will apply for funding.

Question. The Y-12 National Security Complex (Y-12) is a key facility in our nation’s nuclear security infrastructure, located in my home state of Tennessee. Since being founded decades ago, Y-12’s role has evolved, and it now plays a critical part in maintaining the safety, security, and effectiveness of the U.S. nuclear weapons stockpile.

In May 2022, the NNSA announced a five-year contract extension to Consolidated Nuclear Security, LLC, for the management and operation of the Y-12 National Security Complex.. Administrator Hruby, can you provide an update on the management and operations expected competition of the Y-12 contract?

Answer. NNSA will begin pre-solicitation activities for the Y-12 M&O contract competition in FY 2025 and final solicitation is expected to be released during the second quarter of FY 2026 to be prepared to transition to a new contract in FY 2027.

Question. Congress has already appropriated over \$6.3 billion for Y-12’s Uranium Processing Facility project, which included considerable reprogramming and increases in Fiscal Year 2024. Administrator Hruby, can you provide an overview of the latest status of this project and the cost needed for completion?

Answer. The UPF cost estimates have continued to increase as a result of lack of contractor performance, insufficient professional labor availability, and unplanned growth in procurement costs. However, the UPF project executed 45 days ahead of schedule and \$7 million below cost from December 2023 through July 2024. This is the longest duration the project has executed per schedule and cost since construction began in 2018. We continue to closely measure the project’s performance. We will perform necessary internal reviews and approvals to formalize the contractor’s performance measurement baseline in the coming months.

Question. It has become particularly apparent that NNSA projects are plagued with cost overruns and scheduling delays. This committee deserves assurance that the NNSA has the capability to function within the initial project outlines that your administration proposes.

What concrete measures are being implemented at the NNSA to address the persistent issue of cost overruns and scheduling delays, ensuring that important projects are completed in a timely and cost-efficient manner?

Answer. We recognize the importance of executing within project cost and schedule baselines, not only to maintain and grow stakeholder confidence, but also to avert significant budget modifications, especially near or during the year of execution. With that in mind, improvements our NNSA team implemented include:

- Partnering with lab, plant and sites management and governing boards to understand execution challenges, establish and track mitigations, and set expectations.
- Establishing initiatives centered on project lifecycle process improvements such as Build SMART and EMDI recommendation 10, which calls for streamlining execution of non-nuclear, non-complex, commercial type construction projects by institutionalizing the tailoring of substituting DOE Order 413.3B requirements for project management processes more appropriate for low-risk commercial-like construction.
- Modifying contractor performance plans to include specific goals to drive accountability and ensure a common understanding of the importance of executing safe, quality construction within baselined project cost and schedule parameters.
- Establishing contract changes to enforce performance objectives, structural organization, and procedural changes for projects. Contracting for performance helps reduce costs and achieve value beyond the contract's original scope by shifting responsibility from NNSA to the M&O and specifying milestones, performance monitoring, and management processes. NNSA will make sure that metrics are defined at acceptable quality levels as part of the scope of work and establish a clear governance structure for reporting and monitoring continuous improvement. The distinct advantage of performance-based contracts is that operational efficiencies are guaranteed by the M&O. Such assurance comes from the inclusion of performance metrics, penalties, and monitoring, as well as performance incentives and gain-share mechanisms that are common in partnerships.
- Working with our lab, plant, and sites management to develop better front-end planning and estimating based on maturing understanding of cost and schedule drivers.

Question. Specifically, what actions are being carried out at the NNSA to ensure that Y-12's Lithium Processing Facility construction does not suffer the same challenges as the Uranium Processing Facility?

Answer. In addition to the actions discussed above, NNSA chose to contract a construction manager at risk (CMAR) for the LPF project, which was not used for the UPF project. This project delivery method uses an experienced construction firm to provide cost estimating and constructability reviews during design. Throughout design development, the contractor confirms project feasibility and provides its own detailed cost estimate for comparison with that of the design agent. Because the CMAR is contracted to also perform as the construction agent once a guaranteed maximum price (GMP) is negotiated, this is expected to result in a more informed cost estimate from an experienced construction agent prepared to bear the risk of cost overruns should they breach the GMP, which, again, was not the case for the UPF project. Due to the complexity and uncertainties with aspects of the LPF project, it remains likely that elements of the project will still need to be executed outside the more fixed price negotiated GMP as cost reimbursable, where it is found neither prudent nor affordable for NNSA to transfer that risk to the CMAR. Once the design is complete and a GMP is negotiated with the CMAR, the LPF project execution will have greater cost certainty than the cost reimbursable contract used for the UPF project. However, given the construction environment in the United States, this "fixed price" approach may lead the CMAR to be more risk adverse in its estimates. . NNSA will continue to pursue contract mechanisms that maximize cost efficiency and limit uncertainty.

Unlike UPF, the LPF project maximized build-to-print design and minimized build-to-specification designs in the facility. All major components of LPF are build-to-print designs, which give greater detail to support cost estimating efforts to mitigate risk exposures related to cost uncertainty and design changes during construction. Build-to-specification design, which was a common element of the UPF design, leaves detailed design to a subcontractor during the construction phase of the

project, which can result in quantity, cost, and delay increases during construction as the subcontractor works through the process of building out designs that meet specification.

Question. What is NNSA's plan to accelerate work on new manufacturing processes for depleted uranium at Y-12?

Answer. Modernizing, recapitalizing, and reestablishing key production capabilities across the nuclear security enterprise are top NNSA priorities. NNSA is supporting new manufacturing technologies to modernize existing processes in the Depleted Uranium (DU) Modernization Program. Current processes can produce in-specification components, but they are material inefficient, leading to unnecessary waste and higher costs. The DU program is accelerating its technology readiness assessments for new manufacturing technologies. For example, Direct Casting is an alternative technology to legacy component manufacturing, which will reduce risks of equipment failure, improve process efficiency, and decrease material waste. The program is also maturing Electron Beam Cold Hearth Melting, a technology which will improve binary ingot production efficiency and provide process improvements for alloying, recycling, and material refinement capabilities.

To resume full-rate production, the DU Modernization Program is executing high purity DU and alloy feedstock procurements before current inventory is exhausted in 2029. The program is also restarting and maintaining alloying and manufacturing capabilities, while simultaneously investing in key new technologies. NNSA is also leveraging innovative acquisition methods with industry and interagency partners to meet weapons requirements and increase component capacity with a mixture of modernized existing capabilities and new technologies. This complete strategy will improve the enterprise's reliability and reduce risk to future stockpile modernization programs.

CONCLUSION OF HEARINGS

Chair MURRAY. We stand adjourned.

[Whereupon, at 11:09 a.m., Wednesday, May 22, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

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