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LIFT AMERICA: MODERNIZING OUR INFRASTRUCTURE FOR THE FUTURE

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

MAY 22, 2019

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[1] Mr. Wahler's prepared statement has been retained in committee files and also is available at https://docs.house.gov/meetings/IF/IF00/20190522/109531/HHRG-116-IF00-Wstate-WahlerB-20190522.pdf.

[2] The legislation has been retained in committee files and also is available at https://docs.house.gov/meetings/IF/IF00/20190522/109531/BILLS-1162741ih-LIFTAmericaAct.pdf.

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[3] The report has been retained in committee files and also is available at https://docs.house.gov/meetings/IF/IF00/20190522/109531/HHRG-116-IF00-20190522-SD014.pdf.

LIFT AMERICA: MODERNIZING OUR INFRASTRUCTURE FOR THE FUTURE

WEDNESDAY, MAY 22, 2019

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
WASHINGTON, DC.

The committee met, pursuant to call, at 10:02 a.m., in the John D. Dingell Room 2123, Rayburn House Office Building, Hon. Frank Pallone, Jr. (chairman of the committee), presiding.

Members present: Pallone, Rush, Eshoo, Engel, DeGette, Doyle, Schakowsky, Butterfield, Matsui, Castor, Sarbanes, McNerney, Welch, Luján, Tonko, Clarke, Loebsack, Schrader, Kennedy, Cárdenas, Ruiz, Peters, Dingell, Veasey, Kuster, Kelly, Barragán, McEachin, Blunt Rochester, Soto, O'Halleran, Walden (committee ranking member), Upton, Shimkus, Burgess, Latta, Rodgers, Guthrie, Olson, McKinley, Griffith, Bilirakis, Johnson, Long, Bucshon, Flores, Brooks, Mullin, Hudson, Walberg, Carter, Duncan, and Gianforte.

Staff present: Jeffrey C. Carroll, Staff Director; Jacqueline Cohen, Chief Environment Counsel; Sharon Davis, Chief Clerk; Adam Fischer, Policy Analyst; Jean Fruci, Energy and Environment Policy Advisor; Waverly Gordon, Deputy Chief Counsel; Tiffany Guarascio, Deputy Staff Director; Omar Guzman-Toro, Policy Analyst; Caitlin Haberman, Professional Staff Member; Alex Hoehn-Saric, Chief Counsel, Communications and Consumer Protection; Stephen Holland, Health Counsel; Zach Kahan, Outreach and Member Service Coordinator; Rick Kessler, Senior Advisor and Staff Director, Energy and Environment; Josh Krantz, Policy Analyst; Brendan Larkin, Policy Coordinator; Una Lee, Chief Health Counsel; Jerry Leverich, Senior Counsel; John Marshall, Policy Coordinator; Dan Miller, Policy Analyst; Elysa Montfort, Press Secretary; Meghan Mullon, Staff Assistant; Phil Murphy, Policy Coordinator; Lisa Olson, FERC Detailee; Joe Orlando, Staff Assistant; Alivia Roberts, Press Assistant; Tim Robinson, Chief Counsel; Chloe Rodriguez, Policy Analyst; Andrew Souvall, Director of Communications, Outreach, and Member Services; Benjamin Tabor, Staff Assistant; Kimberlee Trzeciak, Chief Health Advisor; Teresa Williams, Energy Fellow; Tuley Wright, Energy and Environment Policy Advisor; Mike Bloomquist, Minority Staff Director; S. K. Bowen, Minority Press Assistant; Adam Buckalew, Minority Director of Coalitions and Deputy Chief Counsel, Health; Robin Colwell, Minority Chief Counsel, Communications and Technology; Jerry Couri, Minority Deputy Chief Counsel, Environment and Climate Change; Jordan Davis, Minority Senior Advisor; Margaret Tucker

Fogarty, Minority Legislative Clerk/Press Assistant; Peter Kielty, Minority General Counsel; Tim Kurth, Minority Deputy Chief Counsel, Communications and Technology; Ryan Long, Minority Deputy Staff Director; Mary Martin, Minority Chief Counsel, Energy and Environment; Brandon Mooney, Minority Deputy Chief Counsel, Energy; Brannon Rains, Minority Legislative Clerk; Kristin Seum, Minority Counsel, Health; and Peter Spencer, Minority Senior Professional Staff Member, Energy and Environment.

Mr. PALLONE. The Committee on Energy and Commerce will now come to order, and I will recognize myself for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Two of our committee's top priorities are strengthening the economy and combating climate change. One of the best ways for Congress to address both of these priorities now is by rebuilding and modernizing our Nation's crumbling infrastructure.

There is no better day for us to be having this hearing as the President and Democratic leaders are meeting to follow up on the President's promise to come up with the $2 trillion to pay for, if you will, our infrastructure package.

And today, we are discussing the Leading Infrastructure for Tomorrow's America Act, or the LIFT America Act, which was introduced last week by all 31 committee Democrats.

This is a comprehensive bill that addresses critical infrastructure needs across our entire committee's jurisdiction. It will strengthen our economy for the future by creating good-paying jobs and investing in critical clean energy, broadband, drinking water, and healthcare infrastructure.

So as we continue to develop a comprehensive plan to address climate change, there are many actions we can take now to reduce carbon pollution immediately.

LIFT America invests over $33 billion for clean energy, including $4 billion to upgrade the electric grid to accommodate more renewable energy and to make it more resilient.

It includes $1.5 billion to facilitate the replacement of leaking gas pipelines, another $4 billion for the expansion of renewable energy use, including the installation of solar panels in low-income and underserved communities.

We also make significant investments in energy efficiency, helping States and communities make our public places more energy efficient and helping homeowners weatherize their homes.

We also invest in the development of an electric-vehicle-charging network, something that is critical to tackling the greenhouse gas pollution coming from the transportation sector.

Collectively, all of these investments will help us take an important step in combating the climate crisis while also strengthening our economy, creating good-paying jobs, and providing some much-needed relief to consumers on their energy bills.

We also make significant investments in the expansion of broadband internet access. For too long, we have heard stories of

the sorry state of our Nation's digital infrastructure that is simply leaving too many communities behind.

We have heard about rural communities whose businesses can't compete without access to the internet. We have heard about kids living in urban broadband deserts that have no other choice than to walk to a nearby McDonald's late after school to access Wi-Fi just to do their homework.

And we have heard the tragic calls to 9–1–1 of Americans that died during emergencies because when they needed help the system couldn't find them.

So the LIFT America Act takes bold steps to ensure a prosperous, fairer, and safer tomorrow. It provides $40 billion to fund connections to the internet for at least 98 percent of the country and $12 billion to upgrade our frail 9–1–1 infrastructure.

And the LIFT America Act also makes critical investments in protecting human health and our environment. We invest more than $21 billion to protect Americans' drinking water, including $2.5 billion to establish a new grant program allowing PFAS-affected communities to filter the toxic chemicals out of their water supplies.

We also extend and increase authorizations for the drinking water State Revolving Fund and other safe-water programs that we authorized as part of the 2017 Safe Drinking Water Act.

And we also further fund the Brownfields program, which has successfully helped communities clean up contaminated sites, remove public health threats, and prepare the sites for development. This is another job creator that spurs local investment and revitalizes communities.

And finally, we address our Nation's healthcare infrastructure. In recent years, we have heard of vulnerabilities in the physical structures, cybersecurity, and data system technology in healthcare facilities.

From cyberattacks in hospital data systems that threaten patient privacy to the literal corrosion of pipes in Indian Health Service facilities, our faltering health infrastructure is putting the well-being of patients at risk.

So the LIFT America Act responds to these problems by investing in core public health resources at the Centers for Disease Control and Prevention and in State and local health departments.

It also directly funds hospital infrastructure, Indian Health Service facilities, public health labs, and behavioral health clinics to protect or to better protect human health.

It is obvious this is a very ambitious plan. A lot is going to depend on to what extend when the House leadership and the Senate meet with the President and decide how it is going to be paid for and how much and how large it will be.

But it is, I believe, what is necessary and what is possible under the funding framework that has been outlined so far by the President and Democratic congressional leaders. I don't think we can wait any longer to modernize our Nation's aging infrastructure, and I look forward to working with other members of this committee to move this legislation forward.

And before I recognize our ranking member, I do want to say as I think most of you know normally we have hearings at the sub-

committee level. But this bill has jurisdiction over all the subcommittees. So that's why we decided that we would have a full committee hearing today, because of the breadth and scope of the legislation.

[The prepared statement of Mr. Pallone follows:]

PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

Two of our committee's top priorities are strengthening the economy and combating climate change. One of the best ways for Congress to address both of these priorities now is by rebuilding and modernizing our Nation's crumbling infrastructure.

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LIFT America invests over $33 billion for clean energy—including $4 billion to upgrade the electric grid to accommodate more renewable energy and to make it more resilient. It includes $1.5 billion to facilitate the replacement of leaking gas pipelines. It includes another $4 billion for the expansion of renewable energy use, including the installation of solar panels in low-income and underserved communities. We also make significant investments in energy efficiency—helping States and communities make our public places more energy efficient, and helping homeowners weatherize their homes.

We also invest in the development of an electric vehicle charging network—something that is critical to tackling the greenhouse gas pollution coming from the transportation sector.

Collectively, all of these investments will help us take an important step in combating the climate crisis, while also strengthening our economy, creating good-paying jobs and providing some much-needed relief to consumers on their energy bills.

We also make significant investments in the expansion of broadband internet access. For too long, we've heard stories of the sorry state of our Nation's digital infrastructure that is simply leaving too many communities behind. We've heard about rural communities whose businesses can't compete without access to the internet. We've heard about kids living in urban broadband deserts that have no other choice than to walk to a nearby McDonalds late on a school night to access Wi-Fi just to do their homework. And we've heard the tragic calls to 9–1–1 of Americans that died during emergencies—because when they needed help, the system couldn't find them.

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We invest more than $21 billion to protect Americans' drinking water, including $2.5 billion to establish a new grant program allowing PFAS-affected communities to filter the toxic chemicals out of their water supplies. We also extend and increase authorizations for the drinking water State Revolving Fund (SRF) and other safe water programs that we authorized as part of the 2017 Safe Drinking Water Act.

We also further fund the Brownfields program, which has successfully helped communities clean up contaminated sites, remove public health threats and prepare the sites for development. This is another job creator that spurs local investment and revitalizes communities.

Finally, we address our Nation's healthcare infrastructure. In recent years, we've heard of vulnerabilities in the physical structures, cybersecurity and data system technology in healthcare facilities. From cyberattacks in hospital data systems that threaten patient privacy to the literal corrosion of pipes in Indian Health Service facilities, our faltering health infrastructure is putting the wellbeing of patients at risk.

The LIFT America Act responds to these problems by investing in core public health resources at the Centers for Disease Control and Prevention and in State and local health departments. It also directly funds hospital infrastructure, Indian Health Service facilities, public health labs and behavioral health clinics to better protect human health.

This is an ambitious plan, but it is what is necessary and what is possible under the funding framework outlined by the President and Democratic congressional leaders. We cannot wait any longer to modernize our Nation's aging infrastructure, and I look forward to working with every member of this committee to move this legislation forward.

Thank you.

Mr. PALLONE. So now I'll recognize our ranking member for his opening statement.

OPENING STATEMENT OF HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. WALDEN. Good morning, Mr. Chairman. I assumed because it was your bill we were doing this in full, but just saying you get to do that as chairman. I kind of remember, sort of.

I am encouraged that members from both sides of the aisle as well as President Trump are taking serious interest in what should be a shared priority for all of us, and that's rebuilding our Nation's infrastructure. And I think we can all agree Republicans and Democrats should be able to come together and work in good faith to do this and make America stronger and better.

Mr. Chairman, as you know and as members of this committee know, infrastructure means a lot of things and more than just roads and bridges, which are also important. Last Congress our committee worked together to do I think some pretty significant work on infrastructure improvement in America.

We made some great strides to close the digital divide by expanding broadband infrastructure, directing Federal resources to target communities that are currently unserved, and trying to streamline the very complex costly Federal regulations in order to spur broadband deployment and innovation and have the private sector do a lot of that investment.

We were instrumental in ensuring the America's Water Infrastructure Act was signed into law. This package cut bureaucratic red tape and reauthorized the Safe Drinking Water Act for the first time in more than 20 years—more than 20 years since that had been done.

We did it in a bipartisan way. We provided new tools and resources that State and local governments need to ensure the public has access to clean and safe drinking water.

It also promoted hydropower development, which creates clean energy jobs here at home and provides consumers with low-cost, emissions-free electricity, and I think that was really an important accomplishment in a bipartisan way on our committee.

We also reauthorized the EPA's Brownfields program. This program allows EPA, the States, and local governments to work together to redevelop industrial or commercial facilities, create jobs, and provide for local economic development.

As I recall from our work there, Federal taxpayers get a 16 to 1 rate of return when these Brownfield sites are cleaned up and put into productive use.

And we worked together to explore solutions to expand, improve, and modernize our energy infrastructure so we can deliver energy to consumers more safely, reliably, and cost effectively.

I always want to put consumers first in this equation.

The legislation under consideration today addresses many of these same policies, and that is good because there is more work to do. But just authorizing more money to spend may not necessarily achieve what I believe are shared infrastructure goals.

I think back to 2009, when the stimulus program was advertised that it would create "shovel-ready projects." Unfortunately, many of the jobs that were promised never materialized, and billions of taxpayer dollars went into what we later learned were pretty wasteful or duplicative projects because of the speed with which the money had to go out the door.

The 2009 stimulus bill put the cart before the horse when it came to spending on broadband deployment without adequate mapping, a subject we are still concerned about in this committee in a bipartisan way, and they didn't know where the unserved or underserved areas were. But the money had to be out the door and spent before the mapping was to be completed.

I offered an amendment at the time to correct that reverse problem, but it was, unfortunately, rejected. Instead, we didn't get the maps until after the money was already out the door. Seems kind of backwards.

While I am not trying to relitigate the past, these examples underscore the need to be prudent in how we structure and allocate infrastructure investment, and we must ensure that taxpayer dollars are used wisely and we must continually revisit and reevaluate Federal programs and regulations to ensure our goals are being met.

The LIFT America Act designates new investments in some prudent programs indeed. But I think there are other things that should be looked at as well, such as the immediate need to streamline permitting and reduce regulatory burdens for infrastructure projects, action that if taken would yield immediate results.

I look at what ratepayers are having to pay, or they can't even get access to natural gas in the New England area because of issues over pipelines.

We should see that infrastructure get built. The promises of modern energy infrastructure have been held back by what some might call Washington's command-and-control regulatory regime, and I think we need to recognize that innovation and technology development and market-driven efficiencies ensure economic growth, spur job creation, lower energy costs for consumers, and make a positive impact addressing climate change risks.

So the LIFT America Act also calls for our shared goal of expanding broadband deployment. But we do need to address this mapping issue, and I think there is bipartisan agreement on that, and the need for better program coordination.

The current lack of coordination and adequate mapping has led to rampant overbuilding in existing programs. We also know the private sector is looking to build out. This commitment by T–Mobile and others as part of their merger to reach 99 percent of America and cover it with high-speed broadband is really remarkable,

and they face a $5 billion penalty if they don't deliver if the merger goes through. To me, that is what we want to incent—private sector doing this.

So I appreciate the bills before us and I appreciate the inclusion of Next Generation 9–1–1, among other things, and look forward to working with you and our colleagues on both sides of the aisle to achieve our mutual goals.

[The prepared statement of Mr. Walden follows:]

PREPARED STATEMENT OF HON. GREG WALDEN

Mr. Chairman, thank you for holding today's hearing.

I am encouraged that members from both sides of the aisle, as well as President Trump, are taking serious interest in what should be a shared priority for us all: rebuilding our Nation's infrastructure. I think we can all agree that Republicans and Democrats should be able to come together and work in good faith to build a stronger America.

Mr. Chairman, as you know, and as the members of this committee know, infrastructure means more than roads and bridges. Last Congress, the Energy and Commerce Committee did significant work on infrastructure.

We made great strides to close the digital divide by expanding broadband infrastructure, directing Federal resources to target the communities that are currently unserved, and streamlining the complex, costly Federal regulations in order to spur broadband deployment and innovation.

We were instrumental in ensuring the America's Water Infrastructure Act was signed into law. This package cut bureaucratic red tape and reauthorized the Safe Drinking Water Act for the first time in more than two decades, providing the tools and resources that State and local governments need to ensure the public has access to clean, safe drinking water. It also promoted hydropower development, which creates clean energy jobs here at home and provides consumers with low-cost, emissions-free electricity.

We also reauthorized the EPA's Brownfields program, which allows EPA, States, and local governments to work together to redevelop industrial or commercial facilities, create jobs, and provide for local economic development.

And we worked together to explore solutions to expand, improve, and modernize our energy infrastructure so that we can deliver energy to consumers more safely, reliably, and cost-effectively.

The legislation under consideration today revisits many of these same policies. But just spending more money may not necessarily achieve what I believe to be our shared infrastructure goals.

The 2009 stimulus program was advertised that it would create "shovel ready" projects, but many of the jobs that were promised never materialized, and billions of taxpayer dollars went towards wasteful and duplicative projects.

The 2009 stimulus bill put the cart before the horse when it came to spending on broadband deployment without adequate mapping to know exactly what parts of the country needed the most help. I offered an amendment at the time to correct this concern, but it was rejected. Instead, we didn't get the maps until after the money was allocated.

While I am not trying to relitigate the past, these examples underscore the need to be prudent in how we structure and allocate infrastructure investment.

We must ensure that taxpayer dollars are being used wisely and we must continually revisit and reevaluate Federal programs and regulations to ensure goals are being met.

The LIFT America Act designates new investments in some proven programs, but neglects to address some of these concerns.

Such as the immediate need to streamline permitting and reduce regulatory burdens for infrastructure projects. Action that, if taken, would yield immediate results—we would see infrastructure actually getting built!

The promises of modernized energy infrastructure have been held back by Washington's command and control regulatory regime. We should recognize that innovation, technological development, and market-driven efficiencies ensure economic growth, spur job creation, lower energy costs for consumers, and make a positive impact addressing climate change risks.

The LIFT America Act also calls for our shared goal of expanding broadband deployment, but we need to address mapping and the need for better program coordi-

nation. The current lack of coordination and adequate mapping has led to rampant overbuilding in existing programs.

I appreciate that the bill adopts our approach to conduct reverse auctions. I also appreciate the inclusion of Next Generation 9–1–1 and hope that effort can be worked on simultaneously with the broader infrastructure debate.

And while both sides of the aisle have supported State and local public health department infrastructure improvements for purposes of preparedness and response, the LIFT America Act's public health infrastructure provisions require significant further scrutiny. But I do believe we can and should work together on making meaningful reforms and improvements to the Indian Health Service.

I do have questions about how my colleagues intend to pay for the spending contained in this bill and look forward to working with them as that part of the proposal is developed.

I look forward to today's discussion and thank you again for holding today's hearing. I yield back.

Mr. WALDEN. And with that, Mr. Chairman, I yield back.

Mr. PALLONE. Thank you, and I—and, obviously, we would like to, as always, report out at some point. You know, this is the beginning of the process, obviously, a bill that's bipartisan and working with the Republicans and with the President.

So the way it works—those are the opening statements. But if Members want to submit written opening statements, they will be made part of the record. And we are now going to proceed to our panel.

And I want to introduce our witnesses. First, on my left, I am very proud that I have the Honorable Brian Wahler, who is mayor of Piscataway Township in my district. But Brian isn't just here because he's a mayor in my district. He's been very active with the National Conference of Mayors in pushing for a number of infrastructure initiatives.

When we had the legislative hearing on the energy block grant, that was something that he pushed but also the National Conference of Mayors pushed as well. So thank you for being here, Brian. I appreciate you being here.

And then we have—no stranger to this committee—Ms. Mignon Clyburn, who is now a principal with MLC Strategies, but of course we knew her for many years as one of the FCC Commissioners.

And then we have Mr. John Auerbach, who is president and CEO of the Trust for America's Health; Ms. Jessica Eckdish, legislative director for the BlueGreen Alliance; Mr. Daniel Lyons, visiting fellow from the American Enterprise Institute; and Mr. Christopher Guith—I hope I got that right—who is acting president for the Global Energy Institute with the U.S. Chamber of Commerce.

And I want to thank all of you for being here today. We look forward to your testimony. The way it works is, I will recognize each of you for 5 minutes for an opening statement.

Let me just mention about the lighting system in front of—talk about energy, right. In front of you is a series of lights, and the light will initially be green at the start of your opening statement.

The light will then turn yellow when you have 1 minute remaining, and then you should try to wrap up your testimony at that point, and then the light turns red when your time expires.

So we are going to go from left to right and start with Mayor Wahler. Thank you, Mayor.

STATEMENTS OF BRIAN WAHLER, MAYOR, PISCATAWAY, NEW JERSEY, ON BEHALF OF THE U.S. CONFERENCE OF MAYORS; MIGNON L. CLYBURN, FORMER ACTING CHAIRWOMAN, FEDERAL COMMUNICATIONS COMMISSION; JESSICA ECKDISH, LEGISLATIVE DIRECTOR, BLUEGREEN ALLIANCE; DANIEL LYONS, VISITING FELLOW, AMERICAN ENTERPRISE INSTITUTE, AND PROFESSOR, BOSTON COLLEGE LAW SCHOOL; CHRISTOPHER GUITH, ACTING PRESIDENT, GLOBAL ENERGY INSTITUTE, U.S. CHAMBER OF COMMERCE; AND JOHN AUERBACH, PRESIDENT AND CHIEF EXECUTIVE OFFICER, TRUST FOR AMERICA'S HEALTH

STATEMENT OF BRIAN WAHLER

Mr. WAHLER. Good morning.

Chairman Pallone, Ranking Member Walden, and members of the committee, I want to thank you for the invitation today to discuss H.R. 2741, Leading Infrastructure for Tomorrow's America—the LIFT Act.

My name is Brian Wahler, the mayor of Piscataway Township in New Jersey, and I am testifying on behalf of the United States Conference of Mayors in support of this bill.

Infrastructure is inherently local, and this is where infrastructure improvements are most needed. Local governments have outperformed the Federal and State governments in growing new revenue for many of our infrastructure needs.

But we need Federal Government to do its part. The LIFT Act will do just that. The bill addresses many priorities for the Nation's communities, including additional allocations for safe drinking water, Brownfields programs. But for today I just want to focus on energy components of this bill.

Cities must be an integral part of the Nation's energy strategy because cities drive the Nation's economy engine. An IHS study estimated that metro economies in 2017 were home to 91 percent of the Nation's gross domestic product, 92 percent of the wage income, and 88 percent of the Nation's jobs.

Our metro economies and businesses within our communities generate tax revenues that you appropriate. These economic factors suggest that any national strategy to address energy needs, climate change, and reduce pollution must include communities both big and small that comprise our metro areas.

Local governments recognize the value in energy demand management as possible by weatherization and smart building technologies. Weatherization programs have proven reliable over time, and now smart building controls have potential effect for reductions of energy use and increased cost savings.

Solar installation for low-income and underserved communities target an economic group that struggles to afford basic utilities. This program will help reduce energy costs for low-income households.

We also support the clean distribution energy systems provision that will promote energy diversity and resiliency by creating energy systems that will not totally rely on central transmission lines and traditional vulnerabilities.

The conference particularly recommends the committee for including reauthorization of the EECBG program, which is a top priority of the Nation's mayors and local governments.

EECB focuses on energy infrastructure investment at the local level and will help promote energy independence, reliability, efficiencies with the goal to achieve clean energy, clean air, and consumer savings.

Recipients of the EEC funds are required to develop comprehensive energy plans for their community, and with more than a dozen eligible applications for grant money, this is enough flexibility to meet many community needs.

When the program was previously funded, many communities leveraged their resources to add additionals to the grant moneys, and this was a positive local regional multiplier effect.

An Oak Ridge Laboratories report commended the program as one of the most successful programs in bringing energy efficiency and conservation to the communities.

EEC is the single most important way to kick start local investment, because the greatest impediment to infrastructure investment is finding the necessary capital.

In my own city we used our EEC money to put solar panels on our public works department. This solar array produced more than 1.5 million kilowatt hours, replacing fossil fuels and reducing air pollutants.

Last year we signed a contract with Great Eastern Energy. Now 20 percent of our energy that we use for municipal purposes comes from renewable sources.

This is projected to save more than 4.3 million kilowatts of fossil fuels-created electricity over 2 years. We now require many new developments within our community to have electric vehicle plug-in charging stations in their parking areas, which also includes government facilities where we are building a new community center.

By authorizing and funding this program, you will jump start or enhance over a thousand communities nationwide to do energy efficiency, conservation, clean energy projects.

Simply put, the Federal Government does not have access to diverse building and fleet sectors as local communities do. We need a strong Federal partnership for H.R. 2741. It provides a practical framework to move forward.

I want to thank you, Chairman Pallone, and the committee for inviting me to testify today. We are at a critical juncture in areas of infrastructure, climate change, and I strongly urge on behalf of the Nation's mayors that the committee and this Congress pass a fully funded and much-needed legislation.

Thank you.[1]

Mr. PALLONE. Thank you, Mayor, and thank you for being here.

And next I will recognize Ms. Clyburn for 5 minutes, and thank you also for being here.

STATEMENT OF MIGNON L. CLYBURN

Ms. CLYBURN. Thank you.

[1] Mr. Wahler's prepared statement has been retained in committee files and also is available at https://docs.house.gov/meetings/IF/IF00/20190522/109531/HHRG-116-IF00-Wstate-WahlerB-20190522.pdf.

Chairman Pallone, Ranking Member Walden, members of the committee, thank you for inviting me here to testify this morning.

For almost 9 years I had the privilege of serving on the Federal Communications Commission. During my tenure, I was afforded the opportunity to travel across this great Nation and around the world, where I witnessed firsthand the transformative power of broadband.

Unfortunately, too many Americans, including those in rural communities, remain unable to harness the incredible power of connectivity.

Since the FCC released its national broadband plan almost 10 years ago, it has been focused on closing the broadband availability gap. We still have a long way to go, which is why I ask that you go big and be bold.

The LIFT America Act contemplates a $40 billion infusion of capital for broadband infrastructure, almost 10 times the annual amount of CAF funding currently available.

While that is, indeed, a significant number, what is clear is that this level of investment is necessary. Based on my past experience as a regulator, allow me to offer a few principles for your consideration.

The act should prioritize capital expenditures for communities currently without broadband-capable infrastructure. By this I mean those areas in both rural and urban America that don't even have 10/1 speed.

Determinations of where support is needed to deploy broadband should be based on reliable and verifiable coverage maps. Everyone is frustrated because more needs to be done to improve the FCC maps.

The current maps should not be exclusively used for any proceeding, including for funding purposes at this time. What the FCC needs to do is immediately act on its pending proceeding to update Form 477 and produce a reliable map so that we can know precisely where the areas are that don't have 10/1 coverage.

It is also very important that this investment is viewed through a once-only lens, and what I mean by that is taxpayers should be asked to fund broadband infrastructure only one time and that infrastructure should be robust and capable of serving their communities long into the future.

The U.S. lags behind European and Asian countries that are planning to deliver high-speed broadband infrastructure that can be upgraded cost effectively. Online demand is increasing, which means we need robust networks to handle that demand.

Since we are going big and bold with LIFT, Congress should invest the money in infrastructure that will deliver high-speed broadband of at least 1 gig symmetrical service. This should put our country on par with others and catch us up to those who are ahead.

The bill can remain competitively and technologically neutral, but it must be refined to give projects that can deliver 1 gig service a bidding preference.

Similarly, where 1 gig can be upgraded to deliver even higher speeds quickly and at a lower cost, the bill should include that as a positive in the waiting process.

As Commissioner O'Rielly has said, we must coordinate all of the government broadband funding mechanisms to avoid duplication, which will ensure that we will get as much bang from our limited bucks as possible.

Accordingly, new funding provided by LIFT should be restricted to those unserved areas that aren't receiving funds from other programs. Moreover, as Chairman Pai has discussed, reverse auctions have delivered incredible benefits and have saved taxpayer money.

Reverse auctions should be embraced. Simply speaking, they are more efficient and more effective.

I would like to commend you, Chairman Pallone, and all who have been working on LIFT for your leadership in securing a brighter economic future for those Americans whose dreams have yet to be realized.

Thank you for the opportunity to testify this morning, and I am happy to answer any questions you may have.

[The prepared statement of Ms. Clyburn follows:]

Written Testimony of

Mignon L. Clyburn
Former FCC Commissioner

Before the

U.S. House of Representatives
Committee on Energy and Commerce

Regarding

"LIFT America: Modernizing Our Infrastructure for the Future"

May 22, 2019

Chairman Pallone, Ranking Member Walden, and members of the Committee, thank you for inviting me to testify this morning. I am Mignon Clyburn, former Acting FCC Chairwoman and Commissioner.

For almost nine years, I had the profound privilege of serving on the Federal Communications Commission. During my tenure, I was afforded the opportunity to travel across the country and around the world where I witnessed first-hand the transformative power of broadband. In Senegal, The Gambia, Ghana and Kenya, I saw farmers' incomes literally rise before my eyes as they compared prices in competing markets and took their goods to be sold in those places that yielded the highest returns. I witnessed children with special needs in an Arlington County school, and adults with cultural differences and mental health challenges on Los Angeles' Skid Row, get a firmer footing by accessing online learning tools, social and psychiatric services and training techniques previously not available in their community.

A broadband connection made all of this and more possible. And that previously digitally unsavvy Grandmother I met in Mississippi? Well, she became the lead spokesperson of a wildly successful rural telehealth pilot that is saving road miles, money, and time and is making traumatic diabetic medical episodes that previously resulted in costly emergency room visits a thing of the past.

Unfortunately, too many Americans and rural communities remain disconnected and unable to leverage this incredible power. Schools without an adequate internet connection disadvantage students and educators and make it more likely that they will remain stuck on the wrong side of the digital divide. Today, an estimated seven out of ten students are assigned school work that requires online access, but without broadband access at home, they are forced

to sit in the parking lots of McDonald's or the local library and complete their homework in cars or on concrete stoops late into the night.

Rural health clinics off the grid are not adequately serving their patients, forcing them to drive hours for follow-up exams, miss work and school to get test results read or forgo specialized care. Rural communities without adequate broadband cannot attract industry, and are likely to suffer from brain drain as their young move away for more robust economic opportunities in larger, better connected cities.

When I was first sworn in as a federal commissioner nearly 10 years ago, there were heated debates about the necessity of broadband. Today, those who still claim that broadband is a luxury and not an essential service are simply not living in the same universe as you and me.

Since the FCC released its National Broadband Plan at the direction of Congress — it has focused on how best to address the broadband network availability gap. It rightly transformed its Universal Service Fund's high-cost program into the Connect America Fund and required those funds to be used to support and expand broadband-enabled networks. Many lessons have been learned from that mandate, and I hope those lessons will continue to guide Congress as it considers funding broadband infrastructure through the LIFT America Act.

I have highlighted some experiences to bolster my support of efforts that promise to enable and expand broadband deployment in America. Allow me to now offer a few suggestions on how to improve upon them through the proposed legislation.

First, I recommend that you go big and be bold. The LIFT America Act contemplates a $40 billion infusion of capital for broadband infrastructure — almost ten times the annual amount of CAF funding currently available. While significant, it is an important and necessary level of investment. But what is just as important is getting this right. How then do we ensure

that the money we invest is best used to serve the American people? The answers, I believe, should include the very principles Congress considers in the LIFT America Act.

Capital expenditures should be prioritized for communities currently without broadband-capable infrastructure — by this I mean those areas in both rural and urban America, that today do not even have 10/1 Mbps speeds. Funding must be targeted to places with the greatest need, to ensure that those communities and citizens who have been completely left behind, are connected as quickly as possible. Prior attempts — while important and well-intentioned — simply have not done enough to close persistent gaps. Investments must begin there. These communities should be our top priority, as such, I support the Act prioritizing unserved areas with a reverse auction.

Second, determinations of where support is needed to deploy broadband should be based on reliable and verifiable coverage maps. Everyone is frustrated because it has been clear for quite some time that more needs to be done to improve the FCC maps. To be frank, I recommend that we throw those coverage maps out. They should never again be used for *any* proceedings, including for funding purposes.

FCC Form 477. In short, it needs to be changed. Providers should be required to show where they *currently* provide service, using subscription-based information to confirm network coverage, and comparing the FCC's information to third-party sources, like Microsoft's broadband usage data that is publicly available. Commissioner Rosenworcel has suggested crowd-sourcing information to improve the maps… another good idea. It is critical that Congress requires the FCC to update Form 477 and reform its maps right away, so that we know the geographic areas in the U.S. without 10/1 Mbps coverage — the areas that should be prioritized for the LIFT America Act funding. In sum, I recommend the LIFT America Act

clarify that these steps must be taken to improve the National Broadband Availability Map *before* it is used to determine the unserved areas eligible for LIFT America Act funding.

Third, you should approach this investment as an 'only once' proposition. In others words, taxpayers should be asked to fund broadband infrastructure just one time and the infrastructure built should be robust and capable of serving their communities long into the future. The U.S. lags behind European and Asian countries in broadband infrastructure designed to deliver high-speed service that can be upgraded cost effectively. And as more businesses and American consumers rely upon connectivity, online demand is increasing, which means we need robust networks to handle that demand.

Since we are going big and bold with the LIFT America Act legislation — Congress should be investing the taxpayers' money in infrastructure that will deliver high-speed broadband of at least 1 Gigabit, future-proof symmetrical service. This should put our country on par with others and catch us up to those that are already ahead. As such, the legislation can remain competitively and technologically neutral, but it must be refined to give projects that can deliver 1 Gig of symmetrical service a priority in the reverse auction. Similarly, where 1 Gigabit can be upgraded to deliver even higher speeds quickly and at a lower cost, the proposed legislation should include that as a positive in the weighting process.

To the extent that the legislation enables and promotes more fiber deployment, such deployment can be used to support 5G wireless networks. Indeed, we will not even have robust 5G networks without fiber connectivity. Thus, recipients of this taxpayer funding should not be permitted to unreasonably withhold wholesale service from other providers that can and will use fiber connectivity to bring 5G and other types of broadband service to rural America. They are benefiting tremendously from scarce public dollars, and we should allow those dollars to be

leveraged by the private sector in as many ways possible. Accordingly, I recommend adding a clause to the legislation that prohibits recipients from unreasonably withholding wholesale service to other broadband providers.

Fourth, as FCC Commissioner O'Reilly has emphasized, we must be mindful and coordinate all of the government broadband funding mechanisms to avoid duplicative funding and ensure that we get as much bang from our limited bucks as possible. Accordingly, the new funding provided by the LIFT America Act should be restricted to those unserved areas that are not receiving funds from the Connect America Fund Phase II, the USDA's ReConnect program, or the upcoming Rural Digital Opportunity Fund that Chairman Pai recently announced. It is appropriate for the FCC to be the coordinating agency for all of this work, and the legislation should be modified to require the FCC to ensure duplicative funding for all of these programs does not occur.

Moreover, as has been rightly emphasized, reverse auctions have brought more benefits, saved the taxpayers money and should be embraced to more efficiently and effectively close the broadband network availability gap. For example, one study estimated that the Connect America Fund II auction resulted in 70% less funding than the FCC's original CAF model suggested would be needed to deploy broadband. Indeed, in the CAF II, on average the FCC will be spending just over $2,000 per location as compared to its recent announcement that the rate-of-return carriers opting into the A-CAM model will receive just over $6,000 per location. Thus, I support the LIFT America Act's plan to use a reverse auction which will encourage providers to bid, promoting efficiency. I also believe it is important to encourage participation by as many potential providers in the reverse auction to drive efficiency and effectiveness; thus, I am supportive of no provider being required to be an eligible telecommunications carrier to

participate in the reverse auction. This will ensure incumbent providers, competitive providers, local communities and rural electric cooperatives (among others) have the opportunity to bid. Moreover, to the extent that any state legislation restricts local communities from offering broadband service, thus participating in the reverse auction, this legislation should clarify that the LIFT America Act supersedes those state prohibitions. Indeed, it is well past time for the Congress to preempt all state laws that prohibit local communities from delivering or expanding existing broadband service to meet their citizens' demand.

The legislation should provide every auction winner the rights to access poles, conduit and rights-of-way under Section 224 of the Communications Act to build their broadband infrastructure efficiently. The legislation also should clarify that building owners cannot prohibit a funded provider from serving a tenant that has requested the service. As you may be aware, broadband providers have faced barriers to obtaining access to poles, conduits, rights-of-way and multi-tenant buildings. Accordingly, the legislation should clarify that funded providers cannot be refused the access needed to construct their networks and reach consumers. In San Francisco, where the city passed a local ordinance requiring building owners to allow broadband providers access when a tenant requests service from that provider, a new fiber-to-the-home provider has been able to build its network faster, enabling 1 Gig of symmetrical service at reasonable prices in areas that previously had no such offering.

I would be remiss if I also did not draw attention to the fact that while infrastructure funding is crucial to connecting unserved areas, low-income and minority consumers are more likely to remain disconnected from broadband opportunities due to the cost of service. The FCC's Lifeline program was reformed to help connect consumers to broadband by subsidizing the service — an important change that I advocated as Chair of the Joint Board and as an FCC

Commissioner. Unfortunately, the Lifeline program and the broadband subsidy it supports remains in jeopardy with a looming FCC proceeding that proposes to remove from the program most of the providers that are serving this community. I stand with both Commissioners Starks and Rosenworcel in calling for that proposal's rejection. We need to make it a priority that no American should be left behind because they cannot afford broadband and that the digital divide not be ignored while we are enabling taxpayer Universal Service Funds to be used only to build broadband networks.

If any two institutions deserve the moniker of anchor institutions, it is our nation's schools and libraries. They remain the foundation and the backstop of educational, employment and (re)training opportunities and are primarily responsible for our professional successes. Enabling these institutions the option to participate in the auction at the state level where communities are deemed unserved, may very well net innovative alternatives for those who are digitally disconnected.

As a former co-owner of an often single-person operated coffee, popcorn and ice cream shop and one who witnessed Hurricane Hugo's destructive force, I am especially sensitive to the public's expectations of our nation's first responders. Enabling a more intuitive, redundant and interoperable 9-1-1 network that allows one to send texts or images in addition to completing voice calls, is not an option but a necessity. I applaud Representatives Eshoo and Shimkus for embracing a plan that would establish local agency coordination and the expanded use of internet protocol and broadband to enable a more resilient public safety network.

Not a year goes by without a headline highlighting the crisis with our nation's water systems. While Flint, Michigan has dominated the headlines, there are hundreds of failing drinking water systems that are threatening the health and well-being of American citizens, most

notably our children. What is obvious is that state and local committees are unable to tackle this half a trillion dollar problem alone, so the creation of the Broadband Infrastructure Finance and Innovation Act (BIFIA) program at the National Telecommunications and Information Administration is positive news. A $5 billion investment making low-interest financing available for broadband infrastructure deployment projects would begin to help those on Native lands and millions of others who in 2019 are still drinking from lead pipes.

I would like to commend you, Chairman Pallone and all who have been working on the LIFT America Act, for your leadership. Every American should have affordable access to broadband, and your work to ensure that this happens in the near term is vitally important to securing a brighter economic future for each citizen and our nation.

Thank you for the opportunity to testify. I am happy to answer any questions you may have.

Mr. PALLONE. Thank you, Ms. Clyburn. Thank you for being here today and for all you did at the FCC.

So next we have Ms. Eckdish. You are recognized for 5 minutes.

STATEMENT OF JESSICA ECKDISH

Ms. ECKDISH. Good morning.

Thank you, Chairman Pallone, Ranking Member Walden, and members of the committee. My name is Jessica Eckdish. I am the legislative director of the BlueGreen Alliance.

On behalf of my organization, our partners, and the millions of members and supporters they represent, I want to thank you for the opportunity to testify today.

The BlueGreen Alliance unites America's largest labor unions and most influential environmental organizations around the belief that we don't have to choose between a good job and a clean environment. We can and must have both.

Investing in repairing and modernizing our Nation's infrastructure is a clear example of this principle. If done right, a Federal infrastructure package will boost our economy and create millions of jobs while simultaneously reducing pollution, combating climate change, and strengthening our communities.

The LIFT America Act is a key step in this direction. Failing infrastructure is a critical threat to our communities, from crumbling bridges and contaminated drinking water to inefficient and unhealthy schools, power outages, and dangerous and leaky gas distribution pipes under our cities.

These problems are only getting worse. The historic 2017 hurricane season laid waste to Puerto Rico, the U.S. Virgin Islands, Texas, and Florida, plunging millions of Americans into darkness and further aggravating an already desperate need for safe water.

As the world's climate continues to change, the deteriorating state of our infrastructure becomes a vicious circle. As our systems crumble and become more inefficient, the excess pollution exacerbates climate change, and as our climate changes, more extreme weather tests our already strained infrastructure systems, endangering the health and safety of our communities.

BlueGreen Alliance research has found that investing an estimated $2.2 trillion in a variety of infrastructure sectors to improve them from a D-plus grade to a B grade has the potential to support or create an additional 14.5 million job-years across the U.S. economy, add $1.66 trillion to GDP over 10 years, and reduce greenhouse gas pollution versus a business-as-usual approach.

Last week we released a set of 14 infrastructure policy priorities in key sectors including energy transmission, distribution, and storage, transportation, water, schools, and other buildings, broadband, natural infrastructure, climate resilience, and manufacturing.

Making these smart investments has the potential to deliver millions of good jobs, reduce climate and toxic pollution, and make our communities more resilient, but only if we do this the right way.

In order to maximize these benefits for communities, the environment, and workers, there are five principles that any legislation must follow.

First, any infrastructure package must create quality family-sustaining jobs. This means ensuring that all projects are subject to

Buy America and Davis-Bacon standards that bolster American manufacturing and ensure that workers are paid a prevailing wage.

It means utilizing project labor agreements, community benefit agreements, and other provisions that improve training, working conditions, and project benefits, and it means maintaining and growing jobs in the public sector to support all of this work as well as respecting collective bargaining agreements and workers' organizing rights.

Second, an infrastructure package must deliver climate benefits and reduce pollution, a range of investments from natural infrastructure and grid modernization to repairing and replacing aging gas distribution pipes, that all deliver significant greenhouse gas emission and other pollutant reductions.

Third, this package must make our communities more resilient. This means driving forward-looking planning and investments that build for the future, not the past, and that make our infrastructure systems and communities more resilient to the impacts of climate change. This must include prioritizing natural infrastructure solutions.

Fourth, an infrastructure package must maximize benefits to workers in communities, especially those most in need. Our infrastructure investments must provide economic opportunities for low-income communities, communities of color, women, and local workers across the country.

Finally, any infrastructure package must begin with a robust public investment and must tackle the broad array of our infrastructure needs.

The LIFT America Act embodies these five principles and takes a significant step towards addressing our country's infrastructure challenge. We are particularly pleased to see efforts included in the bill to address drinking water infrastructure, electric grid resiliency and modernization, school energy efficiency, methane emissions from natural gas distribution lines, and broadband access.

While the bill also includes necessary conditions to ensure domestic content, prevailing wage, and other benefits for workers and communities, there are opportunities to expand these provisions across the bill.

Preparing America's infrastructure systems is both urgently needed and an enormous opportunity. We look forward to working with this committee as this bill moves forward to ensure the strongest possible outcome for workers and our environment.

Thank you again for the opportunity to testify today.

[The prepared statement of Ms. Eckdish follows:]



CREATING GOOD JOBS, A CLEAN ENVIRONMENT, AND A FAIR AND THRIVING ECONOMY

WRITTEN TESTIMONY

Jessica Eckdish
Legislative Director, BlueGreen Alliance
Before the 116th United States Congress, House Committee on Energy and Commerce
LIFT America: Modernizing Our Infrastructure for the Future
Rayburn House Office Building, Room 2123
Wednesday, May 22, 2019

Thank you Chairman Pallone, Ranking Member Walden, and distinguished members of the committee. My name is Jessica Eckdish, and I am the Legislative Director of the BlueGreen Alliance. On behalf of my organization, our partners, and the millions of members and supporters they represent, I want to thank you for convening this hearing today.

The BlueGreen Alliance unites America's largest labor unions and its most influential environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a stronger, fairer economy. Our partnership is firm in its belief that Americans don't have to choose between a good job and a clean environment—we can and must have both.

Investing in repairing and modernizing our nation's infrastructure—the topic of today's hearing—is a clear example of this principle. If done right, a federal infrastructure package will boost our economy and create millions of jobs, while simultaneously reducing pollution, combating climate change, and strengthening our communities.

American infrastructure systems today are in dire need of repair and modernization. The American Society of Civil Engineers (ASCE)'s latest *2017 Report Card for America's Infrastructure* gave the nation's infrastructure a

grade of "D+."[i] This is not just a grade on paper, it means real threats to our communities, from failing bridges and contaminated drinking water to inefficient and unhealthy schools, power outages, and dangerous and leaky gas pipes under our cities.

These problems are only getting worse. The 2017 historic hurricane season laid waste to Puerto Rico, the U.S. Virgin Islands, Texas, and Florida, in some areas destroying critical infrastructure systems, plunging millions of Americans into darkness, and further aggravating an already desperate need for safe water.[ii]

The world's climate continues to change, and the deteriorating state of our infrastructure creates a vicious circle. As our systems crumble and become more inefficient, the excess pollution exacerbates climate change. And as our climate changes, more extreme weather—floods, stronger storms, droughts, and other impacts—test our already strained infrastructure systems, endangering the health and safety of our communities.

It is past time for Congress to move forward a plan to meet this challenge. BlueGreen Alliance research has found that investing an estimated $2.2 trillion in a variety of infrastructure sectors to improve them from a "D+" grade overall to a "B" grade has the potential to support or create an additional 14.5 million job-years across the U.S. economy, add a cumulative $1.66 trillion to Gross Domestic Product (GDP) over 10 years, and reduce greenhouse gas and toxic chemical pollution—versus a business-as-usual approach.[iii]

Last week, we released a set of fourteen infrastructure policy priorities in key sectors, including energy transmission, distribution and storage, transportation, water, schools and other buildings, broadband, natural infrastructure and climate resilience, and manufacturing.[iv] Our full list of priorities is included as an attachment with this testimony.

Making these smart investments has the potential to deliver millions of good jobs. They will also pay dividends for our environment and communities by reducing air and water pollution—including the emissions driving climate change—reducing the use of materials and chemicals that are hazardous to human health, and making our communities more resilient to the impacts of climate change.

However, we will accrue these benefits only if we tackle this challenge the right way. To ensure we maximize the benefits of our infrastructure investments for communities, the environment, and workers, any federal infrastructure package must deliver in five key ways:

1) Create Good-Paying Jobs

First, any infrastructure package must create good-paying jobs. The people who build and rebuild our infrastructure projects should be well-trained, make a decent living, and work in a safe environment. This means enforcing Davis-Bacon provisions that ensure workers are paid prevailing wages. It means utilizing project labor agreements (PLAs), community benefit agreements, local hire, and other provisions and practices that improve training, working conditions, and project benefits. These requirements and benefits should extend across infrastructure projects and to manufacturing of infrastructure related equipment and technology.

Investing in infrastructure not only creates jobs at projects themselves, but can lead a revival in the U.S. manufacturing sector, with the expansion of good job opportunities at all levels of the domestic supply chain, and increased cost savings and competitiveness among manufacturers that reduce their energy waste through energy efficiency. Effective procurement policies—both long standing measures, and new, innovative approaches—can help infrastructure projects achieve these objectives.

First and foremost, any infrastructure package must ensure all projects built with public resources are subject to Buy America and Buy American standards that maximize the return to taxpayers and bolster American manufacturing. It must also include respect for collective bargaining agreements and workers' organizing rights such as neutrality, majority sign-up, and first contract arbitration. Lastly, it means maintaining and growing jobs in the public sector necessary to effectively maintain and operate assets, ensure project quality, protect worker and environmental safety and health, and deliver continued cost-effective operation in the public interest.

2) Deliver Climate Benefits and Reduce Pollution

Second, an infrastructure package must deliver climate benefits and reduce pollution. Targeted investments could deliver significant greenhouse gas emissions reductions. Take drinking water investments: 6 billion gallons of clean water is leaked daily from public drinking water systems—enough for 15 million households—which has significant associated greenhouse gas (GHG) impacts.[v] A 5 percent reduction in leaks reduces climate change pollution by an equivalent of 225,000 metric tons of carbon dioxide.[vi] Similarly, full implementation of a nationwide smart grid could reduce U.S. carbon dioxide emissions by 12 percent, equal to preventing 442 million metric tons of carbon emissions from entering the atmosphere each year.[vii]

A range of other investments—from expanding natural infrastructure, to making our public buildings more energy efficient, to repairing and replacing aging gas distribution pipes—could all significantly reduce climate pollution, as well as air and water pollution. Ensuring that we "Buy Clean" and prioritize use of the most efficient, resilient, and cleanest materials and products with the lowest carbon and toxicity footprints can also significantly reduce emissions while rewarding manufacturing companies that invest in reducing their carbon footprints.

Any infrastructure package should also follow processes that ensure effective environmental review and public participation in infrastructure decisions while also prioritizing the resources
needed to ensure these projects move forward quickly and deliver benefits to communities and workers quickly.

3) Increase Community Resilience

Third, this package must make our infrastructure and communities more resilient. This means driving forward-looking planning and investments that build for the future, not the past, and that make our infrastructure systems and communities more resilient to the impacts of climate change, like extreme weather events and rising sea level. It means prioritizing investments in natural infrastructure solutions, like restoring the nation's forests, wetlands, floodplains, grasslands, and coastlines—all of which make communities safer and serve as carbon sinks. It also includes building efficient, safe, and connected schools, hospitals, and public buildings that provide critical community services daily and in extreme weather.

Building infrastructure with future conditions in mind is also smarter and more cost-effective than rebuilding systems that have proven to be vulnerable. Strategic investments in climate-resilient infrastructure—and a workforce that is well trained to ensure the work is done right to maximize the efficiency benefits and build in climate resilience, as well as trained to aid in emergency response—can make sure that our communities are prepared for these impacts and come out stronger, more sustainable, and more resilient to meet the challenges of the next century.

4) Maximize Benefits to Workers and Communities

Fourth, an infrastructure package must maximize benefits to workers and communities—especially those most in need. This can be done by enhancing

workforce training and registered apprenticeship programs to expand the number of skilled workers in new and existing industries and in the public sector. It means enhancing and enforcing hiring and procurement policies that spur local job creation and benefit low-income communities, people of color, and women. It means prioritizing investments in communities impacted by historic inequities, disinvestment, and deindustrialization. Policies like these can help ensure our infrastructure investments provide economic opportunities for communities and local workers across the United States.

5) Ensure Robust, Public Investment

Finally, any infrastructure package must begin with a robust, public investment and tackle the broad array of our infrastructure needs—from repairing our failing roads and bridges, water systems, and natural gas distribution pipelines, to modernizing our schools, buildings and electric grid, and transforming our transportation systems.

Public investment in infrastructure is flagging. As a share of GDP, public expenditures on infrastructure spiked toward the end of the recession due both to shrinking GDP and investment funded by the American Recovery and Reinvestment Act of 2009.[viii] As a result, our overall infrastructure grade remained consistent with the 2013 grade—sadly only a "D+"[ix]—but more recently, transportation and water infrastructure investment at the federal level has fallen to the lowest levels since the 1970s as a share of GDP.[x] Our need has not stopped growing, however. The gap between planned infrastructure expenditures and the amount of funding needed to bring it to an overall "B" grade has risen to more than $2 trillion dollars, up from $1.6 trillion in 2014.[xi]

The longer we wait to repair these basic systems, the more it will cost in the long run in terms of investment needed, interest accrued, and other factors. If these investments were accomplished under the present form of government

expenditure and at today's interest rates of roughly 3 percent—versus the pre-recession rate of 4.5 percent—taxpayers would save nearly $1 trillion dollars over 30 years financing the $2 trillion in additional funding needed to close the gap necessary to achieving an overall "B" grade.[xii]

ASCE estimates the economic cost of allowing the gap to perpetuate would be approximately $3.9 trillion lost GDP and 2.5 million lost jobs through 2025.[xiii]It is critical that any federal infrastructure package delivers robust, direct public spending and it's in America's best interest to fix our infrastructure sooner rather than later.

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The LIFT America Act embodies these five principles and takes a significant step towards addressing our country's infrastructure challenge. We are particularly pleased to see efforts included in the bill to create or expand programs and increase funding for drinking water infrastructure, electric grid resiliency and modernization, building energy efficiency—including schools—reducing methane emissions from natural gas distribution pipelines, expanding broadband access, and brownfield redevelopment. While the bill also includes necessary conditions to ensure domestic content, prevailing wage, and other benefits for workers and communities, there are opportunities to expand these provisions across the bill. We look forward to working with the committee and identifying opportunities to strengthen and advance this important effort moving forward.

Repairing America's infrastructure systems is both urgently needed and an enormous opportunity; it should be a bipartisan legislative priority in the 116th Congress.

In closing, I want to reiterate that tackling the crisis of our aging infrastructure—if done right—is a significant opportunity to increase U.S.

global competitiveness, create quality, family-sustaining jobs across the country, significantly reduce greenhouse gas emissions and other pollution, and make our children healthier and our communities more more resilient.

We look forward to working with this Committee as you move forward your infrastructure agenda for the 116th Congress. Thank you again for the opportunity to testify today.

Endnotes

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[ii] National Geographic, "2017 Hurricane Season Was the Most Expensive in U.S. History," November 30, 2017. Available online: https://news.nationalgeographic.com/2017/11/2017-hurricane-season-most-expensive-us-history-spd/

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[vi] Chicago State University, The Carbon Footprint of Water, 2009. Available online: http:// www.csu.edu/cerc/researchreports/documents/CarbonFootprintofWater-RiverNetwork-2009.pdf

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[x] Ibid.

[xi] BlueGreen Alliance, *Making the Grade 2.0: Investing in America's Infrastructure to Create Quality Jobs and Protect the Environment*, September 7, 2017. Available online: https://www.bluegreenalliance.org/resources/making-the-grade-2-0-investing-in-americas-infrastructure-to-create-quality-jobs-and-protect-the-environment/

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Our nation must move forward with an ambitious plan to rebuild and transform America's infrastructure that will boost our economy, create millions of jobs, and strengthen our communities, while simultaneously reducing pollution and combating climate change. We should be leading the world in building the innovative infrastructure systems that will ensure our global competitiveness in the 21st century and beyond.

BlueGreen Alliance research has found that investing an estimated **$2.2 trillion** in key sectors of America's infrastructure to improve them from a "D+" grade overall to a "B" grade has the potential to **support or create an additional 14.5 million job-years across the U.S. economy**, add a cumulative $1.66 trillion to Gross Domestic Product (GDP) over 10 years, and reduce greenhouse gas pollution and boost climate resilience—versus a business as-usual approach[1]

This document is intended to guide policymakers in the development of federal legislation to invest in our nation's infrastructure. This should not be considered an exhaustive list of BlueGreen Alliance recommendations.[2] The following recommendations are BlueGreen Alliance infrastructure policy priorities for legislation in the 116th Congress, which build on issues identified in the BlueGreen Alliance's *Making the Grade 2.0* infrastructure platform.

There are fourteen specific priorities listed here, ordered roughly by sector (not by importance), as well as overarching standards that are relevant to all legislation.

Sector: Energy Transmission, Distribution, and Storage

Priority 1: Finance, Plan for, and Build High-Voltage Transmission Lines
Priority 2: Increase Funding for Energy Storage and Grid Resiliency Research, Development, and Deployment
Priority 3: Reduce Methane Leaks from Natural Gas Distribution Pipelines

Sector: Transportation

Priority 4: Modernize Transit and Enhance Public and Jobs Benefits
Priority 5: Deploy Innovative and Electric Transportation Infrastructure

Sector: Manufacturing

Priority 6: Support Clean Technology Manufacturing Leadership, Industrial Energy Efficiency, and Advanced Manufacturing

Sector: Water

Priority 7: Increase, Improve, and Expand Funding for Water Infrastructure
Priority 8: Support Green Stormwater Infrastructure

Sector: Buildings

Priority 9: Improve the Energy Efficiency of Schools and Health and Safety for Teachers and Students

Priority 10: Invest in the Energy Efficiency of MUSH (Municipal, University, School, Hospitals) Buildings

Sector: Broadband

Priority 11: Deploy High-Speed Broadband Internet to Close the Digital Divide, Reduce Emissions, and Spur Economic Development

Sector: Natural Infrastructure, Reclamation, and Climate Resilience

Priority 12: Restore Our Public Lands
Priority 13: Reclaim Abandoned Mine Lands and Clean Up Hazardous Waste and Brownfield Sites
Priority 14: Plan, Manage, and Build for Climate Resilience

Overarching Recommendations: Ensure High-Road Standards Apply to All Infrastructure Legislation

To ensure we maximize the benefits of our infrastructure investments for communities, the environment, and workers, any infrastructure package must:

Create family-sustaining jobs:

- Ensure all projects built with public resources are subject to **Buy America** standards that maximize the return to taxpayers and the American economy;
- Enforce **Davis-Bacon** provisions that ensure workers are paid prevailing wages;
- Utilize p**roject labor agreements (PLAs), community benefit agreements, local hire**, and other provisions and practices that prioritize improving training, working conditions, and project benefits, including respect for collective bargaining agreements and workers' organizing rights such as neutrality, majority sign-up, and first contract arbitration;
- Ensure these requirements and benefits **extend across infrastructure projects and to manufacturing** of infrastructure related equipment and technology; and
- **Maintain and grow jobs in the public sector** necessary to maintain and operate assets, and ensure compliance and project quality.

Reduce pollution and make our communities more resilient:

- Drive forward-looking planning and investments that meet environmental standards and **build resilient infrastructure systems and communities**; and
- Ensure that we **Buy Clean** and prioritize use of the most **efficient, resilient, and cleanest materials and products** with the lowest carbon and toxicity footprints.

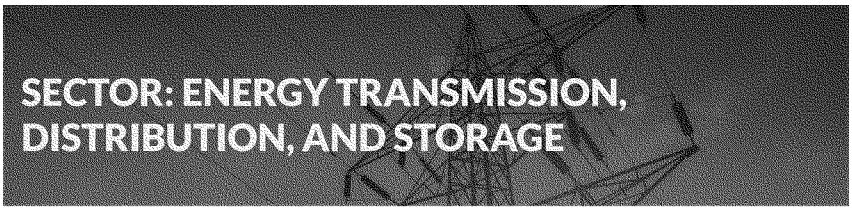
Maximize benefits to our workers and communities, especially those most in need:

- Enhance and enforce workforce training and development programs to **expand the number of skilled workers** in new and existing industries;
- Enhance and enforce hiring and procurement policies that **benefit low-income communities, people of color, and women**; and
- Increase **economic opportunities for communities and local workers**, especially for people of color and low-income communities.

Make a robust, impactful investment:

- Make a **robust, public investment** in our infrastructure systems; and
- Distribute investment **broadly**—tackling the full array of our infrastructure needs.





Priority 1: Finance, Plan for, and Build High-Voltage Transmission Lines

Need: One of the fundamental needs of our rapidly growing clean energy economy is sufficient new and upgraded transmission capacity to deliver renewable power from our nation's most resource-rich regions—such as the Great Plains for wind and the Southwest for solar—to centers of population and industry where demand for electricity is greatest. Unfortunately, our aging and inefficient network of transmission lines does not adequately provide such capacity.

Legislative Requests:

1. Increase availability of federal loan guarantees and grants for high-voltage transmission lines:

- A federal investment of $20 billion over five years in the form of loan guarantees and tax credits would leverage additional private sector investment in transmission projects that are key to enabling the continued growth of renewable energy, while reducing costs, improving reliability and resiliency, and lowering the carbon intensity of the electricity supply.
- Increase funding for the Department of Energy (DOE) to provide technical assistance to state and regional entities to identify, site, and ultimately approve transmission projects that are in the public interest.

2. Direct DOE to develop a national transmission plan:

- DOE should develop a national transmission plan and use its authority under the Energy Policy Act to designate National Interest Transmission Corridors based on the national interest in building a low-carbon electricity system. Federal loan guarantees or grants to states should be provided for transmission projects within these corridors—consistent with the national plan. FERC should similarly adopt enabling carbon pollution reductions as part of its public interest mandate along with reliability and ensuring just and reasonable rates for wholesale power.

3. Empower FERC to engage in enhanced transmission planning between regions:

- To date, FERC has not required the type of large-scale, proactive transmission planning between regions that would enable a national transmission network. Due to different planning approaches and methodologies among regions, the current process has failed to advance projects that would supercharge the transition to renewable electricity. To remedy this situation, Congress should direct FERC to develop and implement interregional planning requirements subject to baseline standards established by Congress, based on the following principles:
    - Interregional planning should be conducted on regular triennial cycles and require the use of joint or coordinated models, assumptions, benefit metrics, and approval criteria.
    - Regions should remove additional regional reviews once interregional criteria are agreed upon. This creates a "single standard for approval" for interregional projects, which is needed for effective planning.
    - FERC should develop cost allocation methodologies that account for broad and varied benefits offered by interregional transmission solutions, including the ability to integrate low-cost generation sources.

4. Strengthen and clarify federal authority:

- Strengthen Section 216 of the Federal Power Act (FPA) to clarify DOE and the Federal Energy Regulatory

through DOE's triannual transmission congestion study and subsequent identification of National Interest Electric Transmission Corridors to enable approval of transmission projects that are in the public interest of maintaining a reliable and resilient national electric supply.
- Strengthen Section 1222 of the Energy Policy Act to increase DOE authority over permitting and siting and to expedite the process of DOE permitting approval.

Priority 2: Increase Funding for Energy Storage and Grid Resiliency Research, Development, and Deployment

Need: Because some renewable energy technologies have variable outputs, storage technologies have great potential for smoothing out the electricity supply from these sources and ensuring that the supply of generation matches the demand. Energy storage is also valued for its rapid response—most storage technologies can begin discharging power to the grid very quickly. Energy storage also becomes more important the farther you are from the electrical grid.

In addition to energy storage, we have the opportunity to invest in 21st-century "smart grid" technologies, including two-way communication between utilities and consumers to manage electricity supply, demand, and usage in real time. Smart grid investments will increase efficiency and lower energy costs for consumers, reduce the impacts of intermittent power failures on the local grid, support renewable energy growth, and help to reduce pollution from power generation.

Legislative Request

1. Increase funding to DOE for storage and grid resiliency research:
- Increase funding for the Energy Storage program and Smart Grid Research and Development program in the DOE's Office of Electricity Delivery, building on its successful track record partnering with the private sector and increasing emphasis on collaboration with utilities.

2. Pursue more energy storage and smart grid demonstration projects:
- The federal government should pursue more demonstration projects in the field, utilizing states and communities as laboratories of innovation.

3. Accelerate storage deployment:
- Build on the success of the Energy Storage Technology Advancement Partnership by providing funding of $50 million annually over 10 years for competitive grants to communities for the installation of energy storage technologies—prioritizing disadvantaged or underserved communities and at critical facilities—such as hospitals and fire stations.

Relevant Legislation

S. 3376 – Advancing Grid Storage Act (Smith) (115th)
Section 2301 directs the Secretary of Energy to conduct a research, development, and demonstration program for electric grid energy storage to address challenges identified in the 2013 DOE Strategic Plan for Grid Energy Storage.

S. 1868 – Energy Storage Tax Incentive and Deployment Act of 2017 (Heinrich/Doyle) (115th)

S. 1434 – Energy Storage Deployment Act of 2015 (Heinrich) (114th)

Priority 3: Reduce Methane Leaks from Natural Gas Distribution Pipelines

Need: Tripling the rate of repair and replacement to our natural gas distribution systems could create over 2 million job-years through the economy over the next 10 years. Large-scale investment will allow us to accelerate current efforts to repair America's distribution pipelines, enhance system reliability, ensure customers are not

paying for gas they do not use, and increase public safety. Additionally, these investments will curtail the release of methane into the atmosphere, reducing contributions to climate change. Methane is more than 87 times as potent as carbon dioxide at trapping planetary heat in the near-term.

Legislative Requests:

1. Accelerate the repair and replacement of distribution pipelines:

- Create a state revolving loan fund for natural gas distribution pipeline repair and replacement to provide additional tools to states and utilities to address old, leaking distribution pipelines.
- As recommended in the DOE's *Quadrennial Energy Review*, establish a program that provides financial assistance to states to incentivize reducing emissions in the gas distribution system. This can be achieved through targeted funding to offset costs to low income households and funding for enhanced directed inspection and maintenance programs.

2. Address economic incentive to leak:

- DOE, in consultation with the Environmental Protection Agency (EPA) and the Department of Transportation (DOT), should create a challenge grant program to incentivize states to create cost effective safety and environmental improvements across the natural gas supply chain. To be eligible to receive funds:
  - Each state regulatory authority and each nonregulated gas utility must adopt leak detection and repair strategies that achieve incremental methane emissions reductions beyond the previous administration's 45 percent federal government goal; and
  - The state's Public Utilities Commission (PUC) must have adopted leak identification and repair strategies that are cost effective, technologically viable, and factor the environmental impact of leaks into repair strategies. The state's PUC must have adopted best practices for defining and reporting "lost and unaccounted for" gas, and a revenue adjustment mechanism that incentivizes minimizing this category.

Relevant Legislation

S. 1209 – Pipeline Revolving Fund and Job Creation Act (Markey) (114th)

S. 1208 – Pipeline Modernization and Consumer Protection Act (Markey) (114th)



Priority 4: Modernize Transit and Enhance Public and Jobs Benefits

Need: America's transit systems—buses, subways, streetcars, light rail, and commuter trains—provide crucial transportation and access to jobs and opportunity for millions of Americans. At the same time, with smart multi-modal, inclusive, and integrated planning, transit investment can be a powerful driver of local economic development. Demand has outstripped supply across the board, with urban, suburban, and rural residents all lacking sufficient access to the efficient and affordable multi-modal transportation options they need. In addition to the tens of thousands of Americans employed operating and maintaining transit systems, investing in transit also provides an opportunity to strengthen local economies through domestic manufacturing, maximizing the benefit of federal transportation dollars in communities across the United States. Strengthening our transit

system also has notable environmental and health benefits, such as reduced local air and climate pollution. Improved traffic congestion also has economic benefit through increased worker productivity and more efficient commerce.

Legislative Requests:

1. Increase funding and financing for DOT's Federal Transit Administration (FTA) and enhance block and competitive grant programs to spur integrated community infrastructure investment, deliver local environmental and economic development benefits, and expand clean and affordable options for transit between communities:

- These programs include DOT's BUILD (formerly TIGER), Private Activity Bonds, the National Highway Freight Program, TIFIA, and RIFF, and Capital Investment Grants (CIG)—including New Starts, Small Starts, and Core Capacity.

2. Enhance funding for programs that enable the federal government, states, and localities to increasingly test, purchase, and deploy domestically manufactured electric municipal and school buses and other public and government fleets.

- This includes programs such as DOT's Congestion Mitigation & Air Quality Improvement and Advanced Transportation and Congestion Management Technologies Deployment Program, EPA's Diesel Emissions Reductions Act (ERA), LoNo grant program, and DOE's Vehicle Technologies Program.

3. Ensure innovative mobility results in cleaner, safer transportation, and equitable access:

- While encouraging U.S. leadership in emerging autonomous, shared, and networked transportation systems, ensure that DOT (FTA, the National Highway Traffic Safety Administration (NHTSA), or other relevant agencies as appropriate) tracks and issues reports on transportation network companies (TNCs) to evaluate the impacts on emissions, traffic congestion, and communities—including access, ridership, and demographic trends, and impacts on publicly funded transit.
- Ensure that any publicly funded integration of new transit modes and technologies are held to existing transit safety, workforce, access, environmental, and other standards. Ensure enforcement of Title VI of the Civil Rights Act, which prohibits discrimination on the basis of race, color, and national origin in any programs and activities receiving federal financial assistance.
- Any revision of vehicle safety standards to address autonomous vehicles (AVs) should hold AVs to at least as stringent safety standards as today's vehicles.

Relevant Legislation

H.R. 904 – Buy American Improvement Act of 2017 (Lipinski) (115th)

H.R. 1428 – Transportation Infrastructure for Job Creation Act (Waters) (115th)

H.R. 180 – Build America Act of 2019 (Hastings) (116th)

Priority 5: Deploy Innovative and Electric Transportation Infrastructure

Need: Countries worldwide are rushing to lead in building and deploying electric vehicles (EVs) and technology. Building the next generation of clean transportation technology here in America will create good jobs and help move us to a globally competitive clean energy economy. In particular, ramping up a passenger, municipal, and commercial electric vehicle fleet will spur advanced technology investment across the automotive supply chain. Facilitating the deployment of cutting-edge charging infrastructure is critical to advanced vehicle deployment while also creating jobs in construction and accelerating our move to a smart grid–the kind of investment we need to put people to work, revitalize our economy, and ensure America is competitive in the 21st century economy. The transportation sector is currently the largest emitter of CO2 in the U.S., largely due to vehicle combustion engines.

Legislative Requests:

1. Facilitate expansion of electric vehicle charging infrastructure:

- Authorize and fund the DOE's Vehicles Technologies Office to provide competitive grants to states or utilities to ramp up financing for electric vehicle charging infrastructure, especially in typically under-served markets such as low-income communities and government-supported housing. Authorize installation of EV charging services at federal facilities.
- Include eligibility for EV charging infrastructure in financing programs–DOE's 1703 loan program, and DOT's TIFIA program, and RRIF for charging infrastructure at "mobility hubs" at rail stations.

2. Spur low-carbon freight:
- Provide direct funding and incentives through DOE's Office of Energy Efficiency and Renewable Energy (EERE) Vehicle Technologies Office (VTO) program, DOT's Private Activity Bonds, Congestion Mitigation and Air Quality (CMAQ) program, Advanced Transportation and Congestion Management Technologies Deployment program, National Highway Freight Program, Diesel Emissions Reduction Act (DERA), and others to sharply cut carbon and criteria pollution from commercial vehicles and trucking, and at ports and their associated infrastructure, which would provide emissions reductions and air quality and environmental benefits to local communities.

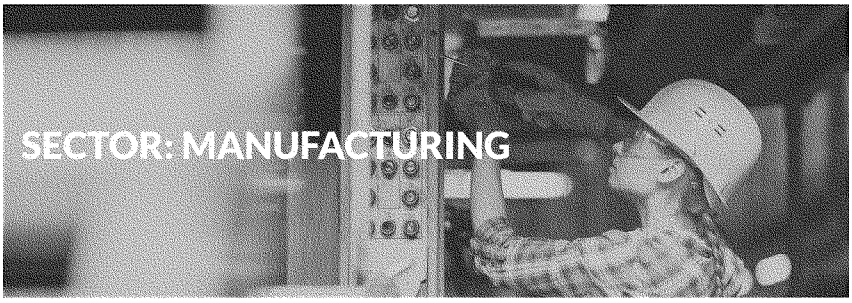
3. Encourage U.S. competitiveness and technological leadership through a national initiative to boost domestic manufacturing of advanced and electric vehicles, infrastructure technology, and related materials:
- Expand the Sec. 136 Advanced Technology Vehicles Manufacturing Loan program to include medium and heavy duty vehicles and their components.
- Fund the sec. 132 Domestic Manufacturing Conversion Grants program.

Relevant Legislation
S. 3449 - Electric CARS Act of 2018 (Merkley) (115th)

S. 674 – A bill to amend title 23, United States Code, to establish a grant program for the installation of electric vehicle charging infrastructure and hydrogen fueling infrastructure along the National Highway System, and for other purposes (Carper) (116th)

Sec. 126 & 132 of the Energy Independence and Security Act of 2007 (EISA)

Sec. 1703 of Energy Policy Act of 2005



Priority 6: Support Clean Technology Manufacturing Leadership, Industrial Energy Efficiency, and Advanced Manufacturing

Need: One immediate step to protect and grow U.S. manufacturing that shares the diverse support of the labor, business, and environmental communities is to make significant, nationwide improvements in industrial energy

efficiency and pollution reduction. Measures to help reduce energy costs, decrease pollution, and boost productivity and efficiency within the industrial sector will support U.S. manufacturers and help maintain our competitive edge in the global economy. At the same time we need to spur a major nationwide investment in manufacturing clean energy, transportation, and infrastructure technologies in the United States—keeping job growth strong and advanced technology supply chains operating here in the United States.

Legislative Requests:

1. Create a program modeled after the successful DOE Industrial Technologies Program to provide matching funds for major industrial efficiency projects, which was the direct driver for ArcelorMittal's Indiana Harbor Combined Heat and Power project.

2. Expand and adapt clean technology manufacturing loan and grant programs such as DOE's Advanced Technology Vehicles Manufacturing Loan Program and the Sec. 132 Domestic Manufacturing Conversion Grants program.

3. Renew the advanced energy manufacturing tax credit (48C) to once again support manufacturers as they expand into the clean economy.

4. Establish a revolving loan fund to provide loans to manufacturers for producing clean energy, transportation, and infrastructure technology and energy efficient products and for reducing greenhouse gas emissions from manufacturing facilities—with criteria for domestic, high-quality job creation, particularly in low-income communities.

5. Enact "Buy Clean" procurement standards requiring the federal government to buy goods in key industrial sectors from clean manufacturing firms that meet limits for local and climate pollution, and to prioritize manufacturing firms that uphold strong labor standards and create good jobs in low-income communities.

Relevant Legislation

S. 661 - Restoring America's Manufacturing Leadership through Energy Efficiency Act of 2009 (Bingaman) (111th)

S. 1617 - IMPACT Act of 2009 (Brown) (111th)

Sec. 126 & 132 of EISA 2007



Priority 7: Increase, Improve, and Expand Water Infrastructure Funding

Need: Our nation's drinking water, wastewater, and stormwater infrastructure is vital to the protection, treatment, and distribution of clean water. Yet age, strain from population growth, lack of investment,

the pervasiveness of lead pipes, and emerging threats from climate change have increased the burden on the current water infrastructure system and the health risks to our communities. Significant investments and upgrades in appropriate water infrastructure will be necessary for communities to adapt to the effects of climate change, increase access to safe drinking water, and adequately treat storm and wastewater. Climate change, shifting demographics and business activities, the need for water treatment methods that address multiple contaminants, and environmental constraints all demand a more integrated, holistic approach to water services.

Legislative Requests:

1. Create a clean water trust fund that dedicates $35 billion a year to our nation's critical water infrastructure projects, prioritizing investments to communities most in need, ensuring that all communities can begin making a feasible plan to update their water and wastewater systems.

2. Triple funds for the Clean Water and Drinking Water State Revolving Funds (SRFs) and permanently extend the Buy America provision for the Drinking Water SRF.

3. Create grant programs at the EPA to assist low-income households with water and sewer services.

Relevant Legislation

H.R. 1647 – Water Infrastructure Trust Fund Act (Blumenauer) (115th)

H.R. 939 – Buy America for Drinking Water Extension Act of 2017 (Bustos) (115th)

H.R. 1497 – Water Quality Protection and Job Creation Act of 2019 (DeFazio) (116th)

S. 3564 – Low-Income Water Customer Assistance Programs Act (Cardin) (115th)

Priority 8: Support Green Stormwater Infrastructure

Need: Green infrastructure helps stop runoff pollution by capturing rainwater and storing it—or letting it filter back into the ground—replenishing vegetation and groundwater supplies. These solutions have the added benefits of increasing biodiversity, improving outdoor recreation in urban neighborhoods, reducing urban heat island effects, heat-related illnesses and asthma, lowering heating and cooling energy costs, stimulating local investment, reducing the threat of flooding, and supporting American jobs.

Legislative Requests:

1. Through its wastewater programs, the federal government should promote low-impact development (LID) techniques like permeable pavements, vegetated roadside swales, and rain gardens that can reduce stormwater pollution while also lowering management costs and enhancing aesthetic character.

- The federal government could better support LID projects by providing them with priority funding under federal programs, or by increasing CWSRF's Green Project Reserve to boost the percentage of CWSRF funds used on low-impact infrastructure projects.

2. Leverage existing investments in federal transportation projects to improve water quality by incentivizing the inclusion of green infrastructure or other innovative technologies to capture and treat stormwater generated by a project's footprint.

3. Support grants for water quality protection projects for centralized and decentralized wastewater treatment (including replacement of combined sewer/stormwater systems), nonpoint source pollution control, and watershed and estuary management.

Relevant Legislation

S. 1137 – Clean Safe Reliable Water Infrastructure Act (Cardin) (115th)

H.R. 3906/S. 1695 – Innovative Stormwater Infrastructure Act (Heck/Udall) (115th)

H.R. 3275 – Water and Energy Sustainability through Technology Act (McNerney) (115th)

H.R. 6944 – Clean Water through Green Infrastructure Act (Heck) (115th)

H.R. 5596 – Water Infrastructure Resiliency and Sustainability Act (Carbajal) (115th)



Priority 9: Improve the Energy Efficiency of Schools and Health and Safety for Teachers and Students

Need: More than half of America's school buildings were built before 1970, which means repairs, renovations, and modernizations are needed to ensure these buildings save energy, reduce emissions, and provide a healthy environment for students and teachers today. Many of these schools also have child care facilities. There are not just issues with the permanent buildings—outdoor facilities like parking or playgrounds also require repairs and are too often sited on or next to environmental hazards. Many of these facilities have maintenance issues—such as mold and asbestos or lead in drinking water and paint—that seriously affect student performance and may have lasting negative health impacts to occupants.

Legislative Requests:

1. Direct funds to address critical school infrastructure:

- Pass the Rebuild America's Schools Act, which dedicates federal funding to school infrastructure to improve the safety and health of our students, enhance our communities, and reduce greenhouse gases, while creating quality, family-sustaining jobs at the same time.

2. Reduce lead in schools, especially those with child care operations.

Relevant Legislation

H.R. 865 / S. 266 – Rebuild America's Schools Act of 2019 (Scott / Reed) (116th)

Priority 10: Invest in the Energy Efficiency of MUSH (Municipal, University, School, Hospital) Buildings

Need: Building efficiency is a key part of any strategy to reduce pollution and GHG emissions, cut energy bills, and create good jobs. A major part of this potential is in upgrading MUSH (Municipal, University, School, and Hospital) buildings. Strategies and technologies used to green MUSH buildings include LED lighting, efficient HVAC systems and climate control, window replacement, sealing air leaks, and insulation. MUSH buildings are cost-effective targets for energy efficiency because of the massive amounts of energy that they use. Energy efficiency investments in MUSH buildings could lay the groundwork for a much broader investment in upgrading and retrofitting America's buildings. Beyond the direct impacts of GHG reductions and financial savings from energy efficiency on buildings in the MUSH sector, there is an opportunity to drive job growth through the use of energy efficient products. Investment in building efficiency will also create thousands of jobs in construction and building operations, providing opportunities for building owners to create good-paying, quality jobs in the community.

Legislative Requests:

1. Reauthorize the Hill-Burton Act:

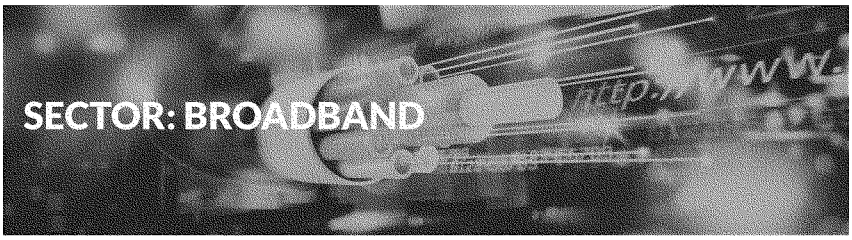
- Reauthorization will provide $2 billion over five years for hospital infrastructure, including targeted assistance to speed recovery from extreme weather events, install energy efficiency retrofits, energy storage, and implement microgrid systems to improve resilience. The reauthorization will also ensure the use of American iron and steel in funded projects.
- Provide $1 billion over five years for healthcare infrastructure projects through the IHS. Create a pilot program and provide $100 million to support laboratory infrastructure, including state laboratories involved in combatting the spread of the Zika virus.
- Create a pilot program and provide $100million to fund infrastructure development for community-based care, including teaching health centers and mental health care centers.

2. Create a DOE grant program within the DOE's Building Technologies Office to award states with matching funds to institute a comprehensive program dedicated to meeting at least a 20 percent reduction in energy use in their MUSH sector (see our analysis of Michigan and Minnesota as examples).

- Energy efficiency retrofits should be designed to be compatible and complementary to possible microgrid installations.

Relevant Legislation

S. 2447 – Smart Building Acceleration Act (Cantwell) (115th)



Priority 11: Deploy High-Speed Broadband Internet to Close the Digital Divide, Reduce Emissions, and Spur Economic Development

Need: The deployment of wired and wireless broadband is a critical element of modernizing the country's infrastructure. Our systems cannot keep pace with technology and combat their current state of deterioration without a reliable internet connection. The Federal Communications Commission (FCC) states that over 21 million Americans lack fixed broadband at 25/3 Mbps), 19 million of which are in rural areas. Smart cities and communities will create a large spectrum of benefits for citizens, and support the well-being of a city's infrastructure. A fully formed 5G network will also provide the reliable, far-reaching high-speed network connections needed to transform and strengthen our vast system of infrastructure, which can reduce emissions and spur economic development.

Legislative Requests:

1. Provide $40 billion over five years to deploy secure and resilient broadband:

- Three-quarters of this funding will be used to deploy broadband in unserved areas; the remaining funds will be given to states to distribute through state-wide reverse auctions.
- If there are no unserved areas in a state, the state may use the funding to deploy broadband in underserved areas, to deploy broadband or connective technology, to schools and libraries, or to fund the deployment of Next Generation 9-1-1.
- Include provisions that require grant recipients to respect collective bargaining agreements and workers' organizing rights.

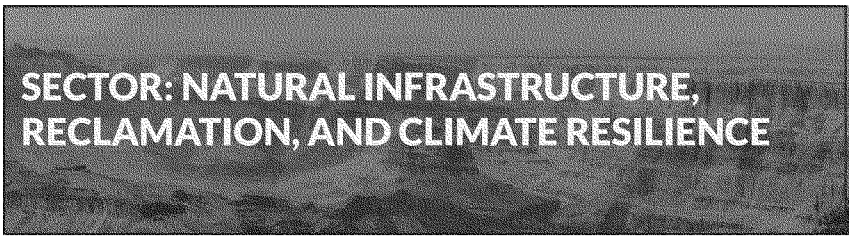
2. Restore the ability of local governments to regulate deployment of small cells in order to meet the needs of their communities:

- In 2018, the FCC limited local governments' authority to set access fees and other criteria for wireless providers' deployment of small cell equipment in public rights of way.

Relevant Legislation

H.R. 2479 – Leading Infrastructure for Tomorrow's America Act (Pallone) (115th)

H.R. 530 – Accelerating Broadband Development by Empowering Local Communities Act (Eshoo) (116th)



Priority 12: Restore our public lands

Need: America's public lands are noteworthy not just for their environmental value, but also for the deep cultural heritage and the economic opportunity they offer to the nation. America's public lands also act as critical environmental regulators. Despite the role that public lands play in our nation's economic and environmental well-being, governing agencies at all levels are challenged to support these resources. Across the country, cities and localities have increasingly been faced with declining state and federal funding for parks. For over 50 years the Land and Water Conservation Fund (LWCF) has generated funding to protect some of these public lands.

Legislative Requests:

1. Address public lands maintenance backlog:

- Establish a public lands maintenance fund to reduce the maintenance backlog by allocating from existing revenues.
- Create a guaranteed source of funding for projects that expand outdoor recreational opportunities in cities across the country, particularly in underserved areas.
- Connect veterans with employment opportunities in public lands maintenance.

Relevant Legislation

H.R. 1225 – Restore our Parks and Public Lands Act (Bishop) (116th)

S. 500 – Restore our Parks Act (Portman) (116th)

H.R. 134 – Outdoor Recreation Legacy Partnership Grant Program Act (Barragan) (116th)

H.R. 2274 – Veterans Conservation Corps Act (Neguse) (116th)

Priority 13: Reclaim Abandoned Mine Lands, and Clean Up Hazardous Waste and Brownfield Sites

Need: Along with protecting public lands, the federal government plays a large role in environmental remediation. Established through the Surface Mining Control and Reclamation Act in 1977, the Abandoned Mine Land (AML) Program provides funding to states and tribes to clean up legacy coal mine pollution, while regulating current mining to ensure that reclamation occurs simultaneously. The federal government also supports cleanup of

hazardous waste and other contaminated sites through existing programs such as EPA's Superfund and Brownfields programs. These programs provide an opportunity not only to clean up our environment, but spur new economic opportunities in hard-hit communities.

Legislative Requests:

1. Remediation and economic diversification:

- Federal efforts have been put forward that would expedite the use of existing funds in the AML Fund to reclaim abandoned mines and stimulate economic development on that reclaimed land. Not only would efforts like this benefit communities by restoring the natural environment, they would also invest long-term in the economic diversification of these communities.
- Increase federal funding for waste cleanup programs such as EPA's Superfund and Brownfield programs, including financing to identify new waste sites and to hire and train local workers for safe, family-sustaining remediation jobs.

Relevant Legislation

H.R. 2156 – The RECLAIM Act (Cartwright) (116th)

Priority 14: Plan, Manage, and Build for Climate Resilience

Need: As the risks from global climate change intensify, the consequences for our environment and humanity will also intensify. This includes disruptions to food, water, and energy supplies, as well as increased damages from extreme weather and rising sea levels.

Legislative Requests:

1. Reestablish Federal Flood Protection Standards that apply to all federal infrastructure spending:

- Ensure that all federal agencies' grants that support the construction of public buildings, facilities, and infrastructure provide an additional margin of safety for flood risk; account for the future impacts of climate change; and guide federal investments away from floodplains and coastal areas vulnerable to sea-level rise.

2. Update flood maps:

- Ensure that flood maps are updated, with community consultation, to include property level data and future projections of flood risk attributable to extreme weather events and sea-level rise.
- FEMA should create Advisory Flood Maps for coastal communities impacted by the recent hurricanes that account for future conditions that exacerbate flood risk.
- For impacted coastal communities with flood maps that are at least five years out of date, FEMA should issue Advisory Flood Maps that include a future conditions information layer and provide an updated assessment with community consultation.

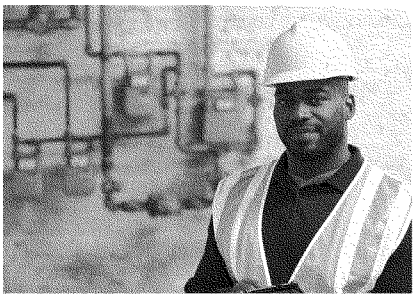
3. Significantly increase federal funding for FEMA's Pre-Disaster Mitigation Grant Program, a continuation of HUD's Competitive National Disaster Resilience Grant (NDRG) Program, and NOAA's National Coastal Resilience Fund.

4. Establish a new revolving loan fund and grant program for climate resilient infrastructure investments across the country, with an emphasis on natural solutions that boost resilience, such as restoring wetlands, dunes, and native forests.

Relevant Legislation

S. 1798 / H.R 7024 – Federal Flood Management Act (Van Hollen / Raskin) (115th)

S. 2783 – Coastal Communities Adaptation Act (Nelson) (115th)



Endnotes

1. BlueGreen Alliance, *Making the Grade 2.0 Investing in America's Infrastructure to Create High-Quality Jobs and Protect the Environment.* 2017. Available online: http://www.bluegreenalliance.org/wp-content/uploads/2017/09/MakingTheGrade-2.pdf

2. For a complete list of BlueGreen Alliance infrastructure policy recommendations, or for any questions or requests for further information regarding the policy priorities listed here, please contact Jessica Eckdish, **jeckdish@bluegreenalliance.org**.

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Mr. PALLONE. Thank you so much.

I next recognize for 5 minutes Professor—is it Professor? Professor Lyons, yes.

STATEMENT OF DANIEL A. LYONS

Mr. LYONS. Thank you.

Chairman Pallone, Ranking Member Walden, and members of the committee, thank you for allowing me to appear before you today.

My name is Daniel Lyons. I am a visiting fellow at the American Enterprise Institute, and I am a professor at Boston College Law School, where I study telecommunications and internet policy.

My remarks are focussed on the LIFT America Act's broadband provisions. According to the FCC's latest estimates, approximately 20 million Americans lack access to high-speed fixed broadband networks.

That means a little more than 1 in 20 Americans are sitting on the wrong side of the digital divide solely because of where they live.

The LIFT America Act addresses this problem by allocating $40 billion to subsidize broadband network construction in unserved areas.

The program reflects a key recommendation of the FCC's national broadband plan that government assistance should take the form of one-time construction aid rather than the ongoing carrier subsidies that mark the telephone era high-cost fund.

The act adopts many of the best practices developed at the FCC while experimenting with similar subsidies through the Connect America Fund. Perhaps most significantly, it uses a reverse auction mechanism to distribute funds.

This helps assure that taxpayers will get the biggest bang for their buck by awarding funds to projects that will connect an area at the lowest expense, and it also mandates that funds be distributed on a technology-neutral basis.

This is important both because unserved areas are geographically diverse and also because innovations like 5G networking and low Earth orbit satellites could bring disruptive new forms of competition to broadband markets.

Studies show that wired deployment typically plateaus at about 70 percent of the country. So making room for disruptive new technologies can help us reach that last 30 percent more efficiently, the way that satellite companies helped fill in the rural gaps in the pay television market.

FCC Chairman Ajit Pai has explained that, with the Connect America fund, the reverse auction structure and the technology-neutral limitation or mandate sparked competition that reduced their estimated subsidy costs by 70 percent. Areas they expected to wire for $5 billion they instead are wiring for $1.5 billion.

And I also appreciate that the act sets aside one-quarter of its funds to be administered directly by States. Back when I was applying for professor positions, my job talk focused on the importance of State regulators, and it turns out that for law professors, telecommunications

ralism isn't a super-sexy topic like constitutional rights. So I am actually really glad to see that you are taking it seriously here on the Hill.

State regulators have local knowledge, and they are often in a much better position than their Federal counterparts to know where the gaps in coverage are in particular locations and how to best go about fixing them.

There are, I think, a few places where I would push back on the draft bill. The first is a requirement that the State funds be allocated in direct proportion to the population of each State.

This, I think, could steer funding in suboptimal ways, because total population is not a good proxy for broadband need. Broadband service is most economically delivered in population-dense areas where there are more customers per square mile, and so that means that unserved areas of the country that are targeted by the act are more likely to skew rural.

Allocating dollars based on State population could have the unintended consequence of favoring rural areas in States that also happen to have a big city over those States that don't have a big city, even though the existence of a city probably doesn't tell us much about the State's funding need.

It would be better, I think, to allocate funds on the basis of each State's unserved population, which I think better directs the money toward those who the act is designed to benefit.

I think this is especially problematic when coupled with the act's inclusion of funds to aid underserved areas. Unlike unserved areas, where internet access is lacking, underserved has an existing provider.

So subsidies to underserved areas effectively subsidize a new company to come in and challenge an existing broadband provider. In a sense, this would punish companies that invested private dollars to serve a challenging area by making it harder for them to compete.

And although the act says that States can only fund underserved areas if all of the unserved areas in the State are addressed, the allocation of funds on the basis of population could lead to some States quickly filling their unserved areas and then pouring money into underserved areas, while some other States with smaller populations are still struggling to connect anybody at all.

And I think this one related issue is the act's minimum service standards. The act requires recipients to provide 100 megabits download service. I think before picking a benchmark, it is helpful for the committee to think about how much service the average consumer needs, because otherwise you risk overinvesting in specific projects at the cost of completing fewer projects.

I previously have proposed that policymakers adopt an activity-based approach: Identify the core activities that are essential to participating in online society and then figure out how much speed you need in order to be able to do those things.

And finally, I think it is important to remember that availability is only one driver of the digital divide. Issues like affordability and digital literacy also become a really important part in the need to close the digital divide and make sure we have universal connectivity.

Thank you.
[The prepared statement of Mr. Lyons follows:]



Statement before the House Committee on Energy and Commerce
On LIFT America: Modernizing Our Infrastructure for the Future

Solving the Rural Broadband Gap

Daniel A. Lyons
Visiting Fellow, American Enterprise Institute
Professor, Boston College Law School

May 22, 2019

The American Enterprise Institute (AEI) is a nonpartisan, nonprofit, 501(c)(3) educational organization and does not take institutional positions on any issues. The views expressed in this testimony are those of the author.

Chairman Pallone, Ranking Member Walden, and members of the Committee, thank you for the opportunity to appear before you at today's hearing on the LIFT America Act. I am a visiting fellow at the American Enterprise Institute and a professor at Boston College Law School, where I teach and write about telecommunications and internet policy. I will focus my remarks today on the act's broadband provisions, particularly the Broadband Internet Access Service Program, which seeks to fund new network construction in unserved areas.

My testimony today proceeds in three parts. First, I want to summarize some key insights about America's broadband accessibility gap. Second, I will highlight the strengths of the LIFT America Act approach to addressing this problem. Third, I will briefly discuss some areas where the act could be improved and share some thoughts on how the act fits into the broader issue of narrowing the digital divide.

Analyzing America's Broadband Availability Gap

I applaud the committee's focus on the important issue of addressing America's broadband availability gap. Over the last two decades, the internet has largely displaced the telephone as our country's primary telecommunications network. From news to commerce to jobs and education, an increasing amount of our daily activities are moving online, meaning that internet access is increasingly important to civic participation in the 21st century.

Unfortunately, not everyone is poised to take advantage of this revolution. According to the Federal Communications Commission, approximately 20 million Americans lack access to high-speed fixed broadband networks.[1] The Commission has been addressing this gap through the Universal Service Fund, a telephone-era subsidy program that the agency has repurposed for the broadband age. These efforts have yielded important insights, some of which are reflected in the LIFT America Act. But I, and many others, have long argued that the Universal Service Program is suboptimal due to lack of transparency and the limits of the program's arcane funding mechanism. The problem would be better addressed through the appropriations process, which would allow Congress to target the problem with a rightsized subsidy subject to direct congressional oversight.

It is important to understand the contours of the broadband availability gap. What analysts often refer to as the "unserved" part of the country actually reflects two distinct territories. In some unserved areas, network installation costs make market entry uneconomical, but if those one-time construction costs could be covered, the network could cover its monthly operating expenses. But in the hardest-to-reach areas, even providing a network for free would be insufficient, as there are insufficient consumers to support the company's costs.

To narrow the broadband availability gap, the government should prioritize those territories where a one-time investment will yield sustainable network growth. This was a key recommendation of the National Broadband Plan, which the Federal Communications Commission developed in 2010 to address this problem: Government subsidies should focus on upfront network construction costs rather than the ongoing carrier subsidies that marked the telephone-era High-Cost Fund.[2] Economist Scott Wallsten showed that almost 60 percent of

High-Cost Fund dollars went to "general and administrative expenses" such as planning, government relations, and personnel.[3] These generic corporate overhead costs do not contribute directly to network construction and therefore only indirectly affect the availability gap.

The LIFT America Act as a Solution

The LIFT America Act reflects an important and valuable step toward solving this problem. It provides $40 billion in appropriations, primarily to fund network construction in unserved areas. It contains several measures designed to increase the likelihood that its large price tag will lead to appreciable gains for this population.

Perhaps most significantly, the act adopts a reverse-auction mechanism to disburse funds. This helps assure that taxpayers will get the biggest bang for their buck by awarding funds to projects that will connect the most households using the least amount of money. The Federal Communications Commission adopted a reverse-auction mechanism to distribute funds made available in Phase II of the Connect America Fund. Commission Chairman Ajit Pai explained that this design sparked competition that improved the overall efficiency of the program: Areas that the Commission estimated would cost $5 billion to serve were ultimately covered by a $1.5 billion subsidy.[4]

Similarly, the act explicitly provides that the funds will be distributed on a technology-neutral basis, without favoring one method of broadband delivery over another. This is crucial, as unserved areas exhibit significant geographic diversity, making a one-size-fits-all plan difficult. A wireless solution may work well on the Kansas plains but not in the mountainous terrain of West Virginia. Traditionally, most consumers receive fixed broadband by wire. But there are natural limits on the effectiveness of wired deployment: A recent study of the history of telephony, electricity, and cable shows that wired deployment typically plateaus at roughly 70 percent of the country, which implies significant subsidies to close the remaining gap.[5]

In the pay television market, satellite providers such as Dish Network and DirecTV closed the gap through intermodal competition. In the broadband context, Connect America Fund Phase II's commitment to technology-neutral solutions prompted many nontraditional bidders to compete for funds, including satellite companies, wireless carriers, and electric utilities.[6] This intermodal competition increases the chances of finding the most efficient way of serving individual pockets of unserved consumers. And the benefits of intermodal competition are likely to increase as companies push the technological envelope through 5G development, satellite deployment, and other innovations.

As a long-time scholar of regulatory federalism, I also appreciate that one-quarter of the program's subsidy dollars will be distributed directly by the states. State regulators have local knowledge and are often in a better position than their federal counterparts to understand the challenges to deployment in a particular area. Many states currently administer their own state-level universal service programs. So vesting some administration at the state level can leverage existing experience and complement ongoing state initiatives. The FCC has recognized this wisdom: In January 2017 the agency granted a waiver that allowed New York to administer its Connect American Fund Phase II funds in coordination with the state's own New NY Broadband

Program.[7] Other states have expressed interest in receiving similar waivers. State officials are closer to the constituents they regulate and therefore are more likely to respond to local concerns, suggesting they are more motivated to monitor compliance with buildout projects and move quickly to completion.

Potential Questions and Additional Thoughts

While on the whole the LIFT America Act provides a much-needed boost to efforts to close the broadband availability gap, a few areas raise questions. The first is the requirement that state funds be allocated in direct proportion to the population of each state. This methodology may prove suboptimal. Broadband service is most profitably delivered in population-dense areas, where there are more customers per square mile of network deployment. This means that the unserved areas of the country targeted by the act are likely to skew rural. Allocating dollars based on state population would have the unintended consequence of favoring rural areas that happen to be in a state with a large urban area over rural areas that lack a big city—even though those urban areas are likely to have service and thus tell us little about the state's availability gap. It would be better to allocate funds on the basis of each state's unserved population, which better directs the money toward those who it is designed to benefit.

Similarly, I question the act's inclusion of funds to aid underserved areas, which is defined as those areas with access to 25 Mbps download service but not 100 Mbps download. Unlike unserved areas, where internet access is lacking, these areas have an existing provider. I appreciate that the act deprioritizes underserved areas, allowing funding only through state initiatives and only if no unserved areas exist in the state. But subsidizing a new company to compete directly against an unsubsidized competitor raises different issues than providing service where none currently exists, and it can effectively punish companies that invested private dollars to connect hard-to-serve populations economically. I would urge the committee to pause before extending the program in this way.

This debate raises a larger question about the act's minimum service standards. The act requires fund recipients to provide a 100 Mbps download service. This can be more than the average consumer needs and thus risks overinvesting in specific projects at a cost of fewer projects. Rather than picking round numbers as benchmarks, I have previously proposed that policymakers adopt an activity-based approach to defining broadband need: Identify the core activities that are essential to participating in online society and estimate the minimum speed necessary to engage in those activities.

For example, Skype recommends that its users have 1.2 Mbps to engage in high-quality videoconferencing. Similarly, Netflix recommends 5 Mbps for its high-definition offerings. At the far end, Netflix recommends 25 Mbps to stream high-resolution 4K video, although it is unclear that the ability to stream 4K video (as opposed to HD) is so essential to digital participation that it warrants a public subsidy. Of course, it may be wise to set a benchmark that exceeds current use cases, as a way to "future proof" the Committee's $40 billion investment. But I would urge the committee to consider carefully the appropriate minimum standard, given the potential trade-off between speed provided to an unserved area and the number of unserved areas the program might reach.

Finally, it is important to remember that availability is only one driver of the digital divide. Even in areas where broadband is currently available, survey data by Pew Research suggest that adoption rates are reduced by other factors, such as the cost of monthly service, the cost of computer equipment to get online, and a lack of interest. While a comprehensive approach is beyond the scope of today's proceeding, tools such as low-income assistance and digital literacy training will also be important in the fight to achieve universal connectivity.

Mr. Chairman and Members of the Committee, this completes my testimony. I look forward to answering any questions you may have.

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[1] Federal Communications Commission, "Report: America's Digital Divide Narrows Substantially," press release, February 19, 2019, https://docs.fcc.gov/public/attachments/DOC-356271A1.pdf.
[2] Federal Communications Commission, *Connecting America: The National Broadband Plan*, xiii, https://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf.
[3] Scott Wallsten, "The Universal Service Fund: What Do High-Cost Subsidies Subsidize?," (unpublished manuscript, February 14, 2011), https://ssrn.com/abstract=1927933.
[4] Wolters Kluwer, "Pai Announces Plan to Create Rural Digital Opportunity Fund," April 12, 2019, https://lrus.wolterskluwer.com/news/tr-daily/pai-announces-plan-to-create-rural-digital-opportunity-fund/77313/.
[5] Brad Smith, "The Rural Broadband Divide: An Urgent National Problem That We Can Solve," Microsoft, December 3, 2018, https://blogs.microsoft.com/on-the-issues/2018/12/03/the-rural-broadband-divide-an-urgent-national-problem-that-we-can-solve/.
[6] Smith, "The Rural Broadband Divide."
[7] Connect America Fund, 32 FCC Rcd. 968, (2017) (ETC Annual Reports and Certifications).

Mr. PALLONE. Thank you, Professor.

Next we have Mr. Guith. You are recognized for 5 minutes.

STATEMENT OF CHRISTOPHER GUITH

Mr. GUITH. Thank you, and good morning, Chairman Pallone, Ranking Member Walden, and members of the committee.

The Chamber appreciates the opportunity to testify today on the importance of bolstering the Nation's clean energy and water infrastructure.

America's energy infrastructure provides a complex system of vital arteries, making real-time deliveries of electricity, natural gas, and liquid fuels and products to every corner of the country to satisfy consumer demand.

With more than 2.7 million miles of pipeline and 7 million miles of electric lines, the United States has the largest, most advanced, and most interconnected energy system in the world.

With some limited exceptions, America's energy infrastructure has been privately funded and privately built and financed. It serves as an economic engine that literally fuels and powers the entire economy from coast to coast.

As the U.S. energy landscape continues to change, the need to site, permit, and build new energy infrastructure predictably and transparently is increasingly important to capture the economic and environmental benefits provided by American innovation.

Unfortunately, the permitting process is neither, which discourages investment and often delays or prevents new energy infrastructure from being built, robbing the country of the economic environmental benefits.

As Congress considers infrastructure legislation, it is imperative that permit streamlining be included as part of it. As general principles within infrastructure, the Chamber believes the time has come to enact a Federal infrastructure modernization plan to provide every American a 21st century system. We urge elected officials in Washington to take charge and tackle the problem with both adequate funding and a long-term plan. This morning, an oped written by Chamber president Tom Donohue and AFL–CIO president Richard Trumka in the Washington Post notes that "Rebuilding and modernizing our Nation's crumbling infrastructure will benefit every business, every worker and every family in the United States."

Last year, the Chamber laid out four pillars the administration and Congress should consider, including an infrastructure modernization debate, and today I am going to focus on just one—streamlining the permitting process.

There is a growing consensus that the Federal permitting regime is moribund and inefficient, discouraging capital investments in new and upgraded infrastructure the market is demanding.

This reduces the economic security and environmental benefits Americans could realize from these new investments. Ignoring permitting reform would prolong an inadequate, inefficient, and often counterproductive system of bureaucratic review that provides decreasingly less certainty to project sponsors and investors and ultimately defeats the goal of these legislative efforts to build infrastructure.

Any infrastructure proposal that fails to reform the permitting system risks losing Chamber support. As our president, Tom Donohue, has said, it should not take longer to approve a project than build it.

The Chamber believes that all Federal infrastructure approvals should be completed within 2 years and shepherded by a single lead agency. The administration has implemented the one Federal decision and a 2-year review via Executive order, and now it is up to Congress to codify these provisions so that we have long-term certainty that projects can be completed in a timely and efficient manner.

Additionally, we need Congress's continued commitment to the reforms it created in FAST–41. The Permitting Dashboard and Federal Permitting Improvement Steering Council created by FAST–41 have already paid dividends for dozens of clean energy infrastructure projects, ranging from wind to solar to hydroelectric to natural gas, in addition to flood mitigation and coastal restoration.

In total, more than half of the projects tracked on the PFISC Dashboard are clean energy projects, and passage of FAST–41 represented a major bipartisan accomplishment, garnering support from both environmental organizations and the business community.

Congress should permanently reauthorize FAST–41 in any infrastructure passage.

And now turning to the LIFT Act. The Chamber appreciates the introduction of the LIFT America Act and recognizes Chairman Pallone and members of this committee for their leadership and efforts to deliver what we believe could be historic legislation.

While Chamber members have significant interest in this entire legislative effort, I have focused testimony on clean energy infrastructure and drinking water infrastructure.

While we continue to analyze this legislation, there are many parts of it that could benefit the U.S. economy and foster cleaner lower-emitting technologies.

Specifically, we support reauthorization of the diesel emissions reduction program and the weatherization assistance program as well as authorized increases in water infrastructure investments and brownfields redevelopment.

The creation of the assistance for community water systems affected by PFAS is also welcome. And finally, on the general topic of funding, we would be concerned if moneys appropriated for these activities come at the expense of existing were crucial to fostering innovation through the Federal complex.

In general, however, the Chamber is supportive of many of the authorized and reauthorized programs created in the LIFT Act, and as we continue our analysis and member consultation, we commit to working with the committee to ensure that this legislation provides the greatest improvements in energy infrastructure while minimizing unintended consequences.

In conclusion, the U.S. is in the midst of a historic energy shift, both from scarcity to abundance but also to lower-emitting and environmentally sustainable. The ability to build new infrastructure

and facilities harnessing this innovation is crucial to bring economic and environmental benefits to America.

To bring these technologies and innovation to bear, Congress must make the Federal permitting process more transparent and predictable. Only when that happens will the Nation benefit from increased investment in traditional surface infrastructure but also the energy infrastructure that will help facilitate continued economic growth and a cleaner future.

Thank you.

[The prepared statement of Mr. Guith follows:]

Statement of the U.S. Chamber of Commerce

"LIFT AMERICA: MODERNIZING OUR INFRASTRUCTURE FOR THE FUTURE"

Christopher Guith
Acting President
Global Energy Institute

U.S. House Committee on Energy & Commerce

May 22, 2019

Good morning Congressman Pallone, Ranking Member Walden, and members of the Committee. My name is Christopher Guith and I am the Acting President of the Global Energy Institute, an affiliate of the U.S. Chamber of Commerce ("the Chamber"). The mission of the Global Energy Institute is to unify policymakers, regulators, business leaders, and the American public behind a common-sense energy strategy to help keep America secure, prosperous, and clean. The Chamber appreciates the opportunity to testify today on the importance of bolstering the nation's clean energy infrastructure.

Introduction

America's energy infrastructure provides a complex system of vital arteries making real-time deliveries of electricity, natural gas, and liquid fuels and products to every corner of the country to satisfy consumer demand. With more than 2.7 million miles of pipeline and 7 million miles of electric transmission and distribution lines, United States has the largest, most advanced, and most interconnected energy system in the world. With some limited exceptions, America's energy infrastructure has been privately built and financed. It serves as an economic engine that literally fuels and powers the entire economy from coast to coast.

As the U.S. energy landscape continues to change, in some cases dramatically, the need to site, permit, and build new energy infrastructure predictably and transparently is increasingly important to capturing the economic and environmental benefits provided by American innovation. Unfortunately, the permitting process is neither predictable nor transparent, which discourages investment and often delays and in some cases prevents new energy infrastructure from being built. This in turn robs the U.S. economy of the economic benefits of these delayed or unbuilt resources as well as the environmental benefits they would accrue through emissions reductions. As Congress considers potential infrastructure legislation, it is imperative that permit streamlining be included as part of it.

LIFT America Act

The Chamber appreciates the introduction of H.R. 2479, the "Leading Infrastructure for Tomorrow's America Act" or LIFT America Act, and recognizes Chairman Pallone and members of this committee for their leadership and efforts to deliver what we believe could become historic legislation. While Chamber members have significant interests in this entire legislative effort, I will be focusing on the sections of the LIFT America Act relating to "Clean Energy Infrastructure and "Drinking Water Infrastructure."

This legislation represents a meaningful contribution to the process of creating a comprehensive infrastructure package. While we continue to analyze this legislation, there are many parts of it that could benefit the U.S. economy and foster cleaner, lower-emitting technologies.

Specifically, we support the reauthorization of the Diesel Emissions Reduction Program, which has proven to be a model example of the cooperative, solutions-focused framework that is central to the Clean Air Act's success: bringing together a broad and diverse coalition of regulators, manufacturers, and emissions control providers to work together to improve air quality.

Similarly, we encourage Congress to also include H.R. 1166, the "Utilizing Significant Emissions with Innovative Technologies Act" (USE IT Act), a bipartisan effort led by Representatives Peters (D-CA), McKinley (R-WV) and others to support carbon utilization and direct air capture research.

We also support the legislation's reauthorization of the Weatherization Assistance Program, which has brought meaningful upgrades to the homes of more than seven million American families, reducing their energy bills an average of $283 annually. However, we are concerned that the legislation would divert funding from the program's successful focus on efficiency and weatherization improvements with its inclusion of renewable energy technologies which it addresses elsewhere.

Additionally, we are supportive of the authorization increases contained in the proposed legislation as a solid step in meeting the $82 billion annual gap in water infrastructure investments at all levels of government. We would also support similar increases for programs such as the Water Infrastructure Finance and Innovation program (WIFIA) and the new technology innovation grant program.

The Chamber is also supports the authorization of $20 million annually for three years for the Indian Reservation Drinking Water Program. This effort offers a solid example of the important partnership between industry and labor in implementing these projects.

Similarly we support the authorization of $2.7 billion over five years for EPA's Brownfields redevelopment grants, which will jumpstart communities, build economic growth, and bring valuable land back into development.

The creation of the Assistance for Community Water Systems Affected by PFAS (per- and polyfluoroalkyl substances) also is welcome. A new PFAS program, however, should not come at the expense of existing drinking water programs. New funding is needed.

The legislation's creation of a Strategic Transformer Reserves program is a commendable effort, though seemingly unnecessary. Several industry efforts are already in place to address the issue of transformer stockpile and deployment in response to electricity interruption. Moreover, in 2015 Congress directed the Department of Energy to analyze the need for such a reserve. Oak Ridge National Laboratory conducted a technical analysis and DOE ultimately reported to Congress, "DOE does not recommend creation of a federally-owned reserve. Rather the most efficient and effective approach is one which builds on industry-based approaches and their ongoing efforts to achieve greater transformer resilience in the face of evolving threats."

As such, the $75 million annual authorization for this part should instead be focused on the implementation of the Transformer Resilience and Advanced Components program, which aims to reduce the vulnerabilities of large power transformers and develop equipment designs that are both more flexible and resilient to evolving threats. [1]

The Chamber is concerned about the creation of various refined products reserves. Unlike crude oil storage, a products reserve requires constant inventory rotation as refined products degrade over time. Additionally, given the different regional, state, and seasonal specifications, managing the inventory and rotation of various products would be challenging. Moreover, the fuel manufacturing industry continues to invest in hardening its physical assets against weather interruptions and mitigating consumer impacts.

Finally, on the general topic of funding, we would be concerned if monies appropriated for these activities come at the expense of the crucial applied and general research, development, and demonstration work carried out by the Department of Energy and its National Laboratories in partnership with the private sector and academia.

In general, however, the Chamber is supportive of many of the reauthorized and new programs included in the LIFT America Act, and as we continue our analysis and member consultation, we commit to working with Congress to ensure that this legislation provides the greatest improvements in energy infrastructure while minimizing unintended consequences.

General Infrastructure Principles

For almost one hundred years, America's infrastructure has been the envy of the world. From the transcontinental railroad to electric streetcars, from subways to the interstate highway system, freight rail connections to the world's most advanced aviation system, our history of providing state-of-the art transportation infrastructure is impressive.

While our infrastructure continues to evolve, Congress must appreciate the fact that most of this system was built 60 to 150 years ago. The Chamber believes the time has come to enact a federal infrastructure modernization plan to provide every American a 21st Century system.

The Trump Administration has been vocal about the need to rebuild and vastly improve our infrastructure, and Congress, on a bipartisan basis, has also indicated its willingness to work on solutions.

The time is now for elected officials in Washington to take charge and tackle the problem with both adequate funding and a long-term plan.

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[1] Strategic Transformer Reserve Report to Congress, U.S. Department of Energy, March 2017

For years, the Chamber has supported meaningful action to reinforce our once unequalled infrastructure, and we have continued to offer a slate of potential solutions to prove it.

Last year, the Chamber laid out four pillars the Administration and Congress should consider including in the infrastructure modernization debate:

1. Increasing the federal fuel user fee by 5 cents a year for the next 5 years for surface transportation projects.
2. Implementing a multi-faceted approach for leveraging more public and private resources.
3. Streamlining the permitting process at the federal, state, and local levels.
4. Expanding the American workforce through work-based learning and immigration reform.

While all four pillars are inter-related and all essential to rebuilding America's infrastructure, for the remainder of my testimony I am focusing primarily on number 3, Streamlining the Permitting Process.

Permitting Certainty & Predictability

There is a growing consensus that the federal permitting regime is moribund and inefficient, discouraging capital investments in new and upgraded infrastructure the market is demanding. This in turn reduces the economic, security, and environmental benefits Americans could realize from these new investments.

One pillar of the Chamber's infrastructure proposal is streamlining the permitting process. Ignoring permitting reforms would prolong an inadequate, inefficient, often counterproductive system of bureaucratic review that provides decreasingly less certainty to project sponsors and investors and ultimately defeat the purpose of the legislation. Any infrastructure proposal that fails to reform the permitting system, therefore, risks losing Chamber support.

As our president and CEO Tom Donohue has said, it should not take longer to approve a project than to build it. Environmental reviews and public input remain crucial to the process—but they cannot go on and on forever. Let us stop holding private investment hostage while projects are held up by permitting delays.

The oil and natural gas industry alone is poised to invest up to $1.34 trillion dollars through 2035, or about $71 billion per year, to bring clean, affordable, and secure energy to Americans and, increasingly, to global markets. History indicates, however, that not all of that investment will be realized without a sober evaluation of our current permitting process.

The Chamber believes that all federal infrastructure approvals should be completed within two years, which is plenty of time to address relevant issues. State and local projects benefiting from federal funding or financing should also adhere to a two-year timeline, which should run concurrent to the federal process.

As an additional method to help streamline permitting and eliminate duplicative and sequential reviews, we would like to see a provision to require a single lead agency to shepherd a project through the process from start to finish.

The Administration has recognized the need for reform from day one and has implemented the "One Federal Decision" reform by Executive Order (EO) 13807. This EO also cut permitting time for infrastructure down to two years.

Now, it's up to Congress to codify these provisions of this EO into law so that we have long-term certainty that projects can be completed in a timely and efficient manner.

Codifying the "One Federal Decision" and two-year timeline can be aided by Congress' continued commitment to the reforms it created in Title 41 of the Fixing America's Surface Transportation Act (FAST-41). FAST-41 is key to modernizing America's infrastructure by maximizing the use of limited resources. It ensures that environmental reviews and permit decisions are not unnecessarily delayed by facilitating greater coordinating efforts, minimizing duplicative effort, and eliminating waste, not by cutting corners or reducing necessary protections of health and the environment.

The permitting dashboard and Federal Permitting Improvement Steering Council (FPISC) created by FAST-41 have already paid dividends in reducing the uncertainty and increasing transparency for dozens of clean energy infrastructure projects ranging from wind to solar to hydro-electric to natural gas, in addition to flood mitigation and coastal restoration. In total, more than half of the projects receiving assistance from FPISC and being tracked on the dashboard are clean energy projects or transmission projects to deliver generation from clean energy facilities to customers.

Passage of FAST-41 represented a major bipartisan accomplishment garnering support from environmental organizations and the business community. Despite the success of FAST-41's reforms, the need has continued to grow. Congress should permanently reauthorize FAST-41 in any infrastructure package.

Finally, another important opportunity for permitting improvement could be addressed through improving the efficiency and efficacy of reviews under the National Environmental Policy Act (NEPA). Far too often, well-intentioned environmental reviews and authorizations – including NEPA reviews – have become untethered to the scope and requirements for review and instead serve as unnecessary barriers to important projects. The Chamber has provided detailed comments on how to strengthen NEPA reviews through reforms that improve scoping and re-focus agency analysis on information that is meaningful and potential effects that are reasonably foreseeable and proximate to the federal action under consideration. While these changes are already consistent with the statute, Congress can aid in providing greater clarity that restores NEPA's purpose as a decision-making tool and environmentally protective "shield" and limits its abuse as a "sword" used to block or delay permitting.

Clean Energy Infrastructure

Global climate change is one of the most complex and far-reaching issues facing governments and the businesses community. The Chamber recognizes that the climate is changing, humans are contributing to these changes, and these changes pose risks. The question for businesses and policymakers is how to best manage these risks, capture opportunities, and maintain our global economic leadership. Inaction is not an option.

The Chamber believes there is much common ground on which all sides of this discussion could come together to craft a practical, flexible, predictable, and durable approach to climate change that acknowledges the costs of action and inaction and the competitiveness of the U.S. economy.

We believe that technology and innovation, supported by sound and durable policies, offer the best solution for managing climate risks and reducing emissions across the United States and the globe.

Breakthroughs in commercially-viable technologies are necessary to enable significant cuts in GHG emissions without harming economic growth or the competitiveness of energy-intensive trade-exposed industries. Indeed, the development of technology and its commercial adoption are among the most important factors determining how quickly and at what cost greenhouse gas emissions can be reduced. Existing technologies have started us on this path, but they are not capable of significantly reducing greenhouse gas emissions on a global scale and at an acceptable cost. New, and in some cases revolutionary, energy technologies will have to be developed and adopted commercially along with the infrastructure to support them. There is a great deal of uncertainty about how fast, or even if, all of these technologies will progress.

The U.S. must maintain a leadership role in developing and commercializing technologies, such as advanced nuclear, energy efficient systems and building materials, large-scale renewables, energy storage and batteries, high-efficiency low-emission power plants, and carbon capture and storage and utilization by supporting an aggressive, broad-based public- and private-sector technology portfolio. It is also important to support a vibrant scientific enterprise more broadly. Advances in fields as varied as materials research, nanotechnology, supercomputing, and biotechnology, to name a few, may hold the keys to breakthroughs in many emerging energy technologies.

Energy efficiency remains a crucial component of this approach to energy and climate change. Energy efficiency generally has been the fastest, least expensive way to improve the energy supply picture and reduce GHG emissions. It, too, must play a central role.

A technology-neutral solutions-focused climate change policy is best positioned to stand the test of time and deliver cost-effective, achievable, and meaningful greenhouse gas emissions reductions. When alternate technologies are able to compete on price, reliability, and scalability, the range of politically and economically acceptable policy options to address climate change will broaden accordingly.

Strong Public Support for Technology and Innovation & Infrastructure

An energy policy that promotes continued economic growth and environmental progress through sustained focus on technology development—what we call the "cleaner, stronger" approach—is much more popular with the voting public compared to an approach centered on expanded government regulation.

GEI commissioned a telephone survey[2] of 1,000 likely 2020 voters across the United States conducted by FTI Consulting from March 7-12, 2019 found:

- 73% of voters support a "cleaner, stronger" energy agenda that uses more American energy and continues environmental progress;
- 89% of Americans support using American's energy resources responsibly, including domestic natural gas, oil, nuclear, coal and renewable resources;
- 79% of voters agree that the best way to address climate change is through investments into innovation and technology;
- Utilizing innovation and technology has a 24-point advantage over increased government regulation as an approach to address climate change; and.
- 79% of voters support streamlining or expediting the permitting process to improve, modernize or construct critical energy infrastructure like renewables, pipelines, power plants, transmission lines and export facilities.

Our new survey demonstrates that voters are concerned about energy, the environment, and climate change, but they are also concerned about the costs and practicality of an approach to those issues driven primarily by government regulation. Given the current state of technology, a regulatory approach involves significant price increases.

These results underpin the Chamber's efforts to promote federal policies and investments that spur research and development of energy technologies that can reduce environmental impacts and compete on price and reliability.

Business Building Clean Energy Infrastructure

It will be largely up to the business community to develop, finance, build, and operate the solutions needed to power economic growth worldwide, mitigate greenhouse gas emissions, and build resilient, lower-carbon infrastructure. Thousands of businesses already have made emissions pledges and are taking action to reduce emissions in their own operations and along their value chains by investing in technology solutions and enhancing their efficiency. The

[2] Poll results are available at: https://www.globalenergyinstitute.org/american-energy-cleaner-stronger.

Chamber is providing a platform for these companies to share their experiences and learn about technology developments, and operational innovations.

Energy Innovates: To draw attention to what the energy industry is doing, last year GEI launched a new initiative to highlight the technologies and people in the energy industry that are improving our modern way of life. "*EnergyInnovates*" is a multi-platform initiative that showcases innovators, projects, and technologies that have shaped and will shape America's energy landscape. *EnergyInnovates* highlights specific innovative projects and technologies, as well as the forward thinkers, engineers, and manufacturers responsible for their development. Some of the initiatives we are featuring include:

- San Diego Gas & Electric Company (a Sempra Energy utility) has built a lithium ion battery storage facility in Escondido, California, the largest in North America and a key component of the smart grid technology that will maximize the potential and availability of intermittent renewable energy resources.

- NuScale's small modular nuclear reactor with a simplified design, making it safe, scalable, cost efficient, and able to perform a wide range of applications, including desalinating, supporting renewables, and providing highly reliable power.

- NET Power's innovative power plant leverages technology designed to capture carbon dioxide emissions at no extra cost, before compressing and recirculating the gas into the system. Called the Allam Cycle, the system will allow efficient, zero-emission energy production using fossil fuels.

- Alabama Power's Smart Neighborhood™ features a collection of 62 homes that feature high-performance, efficient systems, cutting edge interconnectivity, and a dedicated micro-grid featuring solar, battery storage, and natural gas power supplies. The project is a public-private partnership between Southern Company, Signature Homes, the U.S. Department of Energy's Oak Ridge National Laboratory, and others.

America's companies and entrepreneurs will continue to lead by bringing innovation, technology, and ingenuity to this challenge, just as they have done with other environmental challenges.

Water Infrastructure

Water is among our most precious resources, one that is essential to health and human life. Businesses and communities depend on it to drive the American economy, and significant investments in water infrastructure are needed in the U.S. and around the world. While many organizations have worked over the years to advance water infrastructure investments, an integrated coalition led by businesses and other key water and finance sector partners is required.

The U.S. Chamber of Commerce recently launched the Business Task Force on Water Policy to catalyze support for water infrastructure investments in the U.S. and elevate water in the national

policy discussion. Business as usual and relying on government funding alone will not solve this fundamental challenge.

Principles
Below are policy principles that will meet American businesses water and wastewater infrastructure needs for generations to come and make the U.S. a leader in bringing clean water and sanitation to the world:

- ***Increased and sustained funding and expanded opportunities for financing***—promoting increased federal, state, and local investments in infrastructure modernization and mobilizing private capital.

- ***Regulatory flexibility and efficiency of service***—proposing commonsense, flexible policies to improve the enabling environment for businesses to continue creative and innovative approaches.

- ***Resilience***—facilitating resilient infrastructure, including water and watershed management and flood control, through funding and policies to support predisaster mitigation and engaging experts and stakeholders.

- ***Small communities and small business needs***—providing investments and policy solutions specifically focused on the needs of the agricultural sector, small communities, and small businesses, including improving access to water and sanitation in rural areas.

- ***Technology innovation***—increasing innovation and its adoption by reducing barriers to implementation, promoting effective utility management, and helping communities achieve the scale and expertise necessary to deploy technology through additional technical assistance and cooperative arrangements. This effort also supports funding the creation of a National Water Infrastructure Test Bed Network (TBN), establishing a national program for collaborating and sharing best practices, and promoting exports of water technologies, products, and services.

Conclusion

The U.S. is in the midst of a historic energy shift. Both from scarcity to abundance, but also to lower-emitting and environmentally sustainable, and all made possible by innovation. The ability to build new systems and facilities harnessing this innovation is crucial to bring the economic and environmental benefits to American businesses and households, and in many case to the world.

America's business community is ready, willing, and able to provide the solutions to reduce emissions while growing the economy. Our companies and entrepreneurs will continue to lead by bringing innovation, technology, and ingenuity to this challenge, just as they have done with

other environmental challenges. With a sensible policy environment that plays to America's strengths and business leadership, we can continue to make our economy cleaner and stronger by leveraging America's edge in energy, technology, and innovation.

To bring these technologies and innovations to bear, Congress must make the federal permitting process more transparent and predictable. Only when that happens will the nation benefit from increased investment in traditional surface infrastructure, but also the energy infrastructure that will help facilitate continued economic growth and cleaner future.

Mr. PALLONE. Thank you, Mr. Guith.

And then finally we have Mr. Auerbach recognized for 5 minutes.

STATEMENT OF JOHN AUERBACH

Mr. AUERBACH. Good morning, Mr. Chairman, Ranking Member, and members of the committee.

I am John Auerbach, the president and CEO of Trust for America's Health. We are an independent, nonpartisan, nonprofit public health policy research and advocacy organization, and we are grateful that the LIFT America Act includes the needs of public health and healthcare in the consideration of the Nation's essential infrastructure.

Such an investment will literally save lives. The Centers for Disease Control and Prevention as well as State, local, Tribal, and Territorial health departments and community partners need a well-functioning infrastructure to prevent and respond to major public health threats in order to protect the American public.

That infrastructure includes the facilities and equipment such as governmental laboratories, up-to-date data and information systems, and a highly skilled and qualified workforce, including those who are on the front lines when a deadly infectious disease or a dangerous environmental hazard needs to be contained.

Over my 30-year career, I have held senior positions in public health as Boston's health commissioner during 9/11, as the Massachusetts health commissioner during the H1N1 outbreak, and at CDC during the Ebola and the Zika crises, and I have led efforts to combat opioid addiction, the obesity crisis, and environmental contaminants, and I have seen through the years the importance of public health in preventing disease and injury and saving lives during emergencies and outbreaks.

But all too often, health departments are underresourced and understaffed, and inhibited by a crumbling infrastructure.

Public health is traditionally funded with scores of line items, each one representing a distinct disease or condition. But some resources are needed that extend beyond a single health issue. That is where infrastructure funding is so crucial.

An investment in core public health infrastructure gives public health the foundation needed to tackle a wide range of health issues and reduce preventable deaths.

The public health system now faces unprecedented 21st century challenges ranging from the opioid epidemic to extreme weather to emerging infectious diseases, and is doing so in many cases with 20th century infrastructure.

My organization released a report last month, "The Impact of Chronic Underfunding on America's Public Health System," where we found that outdated and underfunded resources are preventing the public health system from adequately tackling leading health threats and contributing to the startling fact that the U.S. life expectancy rate has declined for the third year in a row.

Let me offer some examples. As public health departments are on the ground working across sectors to prevent and respond to health threats such as food contaminated with salmonella, Zika, Ebola, and now measles, there are many times when there are dan-

gerous delays in responding due to the weakness of the public health infrastructure.

During the Zika outbreak, health departments in most States were not able to conduct the confirmatory laboratory tests, so that samples would have to be flown by commercial airlines to the CDC in Atlanta.

And even CDC lacked the resources to respond immediately to the volume of requests. As a local and State health commissioner, I sometimes waited for days for a crucial test result due to a lack of capacity.

Technology is now constantly improving and offering state-of-the-art potential approaches such as advanced molecular detection. But without continued investment, we can't fully access these breakthroughs.

In addition, the success of public health relies upon accurate and timely data. But it is shocking to continue to hear stories of reports of diseases that are filled out by hand—those reports are filled out by hand by doctors and faxed at the point that a fax machine becomes available, rather than real-time reporting through the internet.

There are parts of the country that are still communicating such time-sensitive information the way we did a half-century ago. Just 2 days ago I met with local health officials from coast to coast, and I heard horror stories of the lack of adequate health information technology.

Rural public health departments without regular internet access, urban health departments that weren't receiving essential information from electronic medical records of nearby hospitals, missed opportunities to inform the public with social media, which is the key way we receive information now, and health department after health department highlighted the need for highly skilled personnel to oversee these systems.

This committee has worked tirelessly on the Pandemic and All-Hazards Preparedness Act, which aims to strengthen capacity to find health risks before they grow out of control.

Yet, this goal remains aspirational without a major investment in the public health infrastructure.

Thank you for including public health and healthcare in the LIFT America Act. Doing so is well worth it in terms of lives saved, illnesses and injuries and expensive healthcare costs that are averted.

Thank you.

[The prepared statement of Mr. Auerbach follows:]



Written Statement of
John Auerbach, MBA
President & CEO, Trust for America's Health

House Energy & Commerce Committee
Full Committee Hearing on "LIFT America: Modernizing Our Infrastructure for the Future"
May 22, 2019

Chairman Pallone, Ranking Member Walden and members of the Committee: I am John Auerbach, President and CEO of Trust for America's Health. We are a nonpartisan public health policy, research and advocacy organization that promotes optimal health for every person and community and strives to make the prevention of illness and injury a national priority. I will note, we do not represent any particular group or constituency, nor do we accept government or industry dollars. We therefore are an independent voice on the importance of public health and prevention.

Thank you for the opportunity to testify today on the proposal to invest in the nation's public health infrastructure through several provisions in the Leading Infrastructure for Tomorrow's America (LIFT America Act). I will focus my testimony on provisions related to building public health infrastructure. That means that the Centers for Disease Control and Prevention (CDC) as well state, local, Tribal and territorial health departments and community partners have the necessary tools to prevent and respond to major public health threats in order to protect the American public. That infrastructure includes the facilities and equipment – such as governmental laboratories; up-to-date data and information systems – such as those needed to identify cases early to prevent spread; and a highly skilled and qualified workforce - including those who are the front lines when a deadly infectious disease or dangerous environmental hazard needs to be contained.[1]

Over my 30-year career, I have held senior positions in public health at the federal, state and local levels, including as Associate Director of the Office for State, Tribal, Local and Territorial Support (OSTLTS) at CDC and Commissioner of Public Health for Massachusetts and Boston's director of public health during the 9/11 emergency response. These experiences have demonstrated to me that public health is an invaluable and powerful tool for preventing disease and saving lives during emergencies and outbreaks when it has the resources. But all too often, health departments are under-resourced and under-staffed.[2]

Public health funding is usually allocated with scores of line items, each one representing a distinct disease or condition. But some resources are needed that extend beyond a single health issue. That is where infrastructure funding is so critical. An investment in core public health infrastructure gives public health the foundation needed to tackle a wide range of health issues. In fact, investing in public health is cost effective. Public health systems and program spending have been shown to have a positive return on

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[1] Healthy People 2020, Public Health Infrastructure. https://www.healthypeople.gov/2020/topics-objectives/topic/public-health-infrastructure

[2] *Public Health Workforce Interests and Needs Survey*. de Beaumont Foundation, 2018. http://www.debeaumont.org/ph-wins/

investment and improvement in health outcomes – including reducing preventable deaths.[3, 4, 5] These investments just make sense. They are investments not just in health but in our economic security – ensuring our workforce is healthy and reducing healthcare costs and unemployment rates– and in national security, as public health has a vital role to protecting communities from natural and manmade threats.

Mounting Challenges

The public health system faces unprecedented 21st century challenges, ranging from the opioid crisis to extreme weather to emerging infectious diseases, and is doing so with, in many cases, 20th century infrastructure. The types of investments proposed in the LIFT America Act would help public health face many of these threats with appropriate tools.

In November 2018, the CDC announced that U.S. life expectancy had declined for the third year in a row, the longest sustained decline in expected life span since 1918.[6] This startling statistic should be a wakeup call that we can no longer neglect the country's public health system. The challenges currently being faced by public health are growing:

- Public health departments are on the ground working across sectors to prevent, detect, contain and respond to outbreaks. What do Zika, Ebola, and measles have in common? None of these disease outbreaks was anticipated. And when they hit, there were dangerous delays in responding due to the weakness of the public health infrastructure. States often lacked the state laboratory capacity to conduct testing for such diseases, instead relying on sending specimens to CDC in Atlanta. That delayed the test results for days. Imagine patients who go to the emergency room of a hospital with strange and potentially deadly symptoms of an unknown cause. Then imagine it takes four days to get confirmation back on what that pathogen is. I do not have to imagine, because this happens regularly in every state, including during my time in Massachusetts and with CDC. During the Zika outbreak, health departments in most states were not able to conduct a confirmatory laboratory test, so the samples would have to be flown by commercial airlines to the CDC in Atlanta. And even CDC could not keep up with the volume of requests due to their own limited laboratory equipment and skilled staff. In addition, the technology for using and storing Advanced Molecular Detection and other sophisticated laboratory equipment is constantly evolving and improving. Without continued investment, these tools become outdated.

  As we prepare for the next big outbreak – whether pandemic influenza or a drug-resistant superbug or a new virus – public health needs modern tools from highly functioning public health laboratory systems to trained workforce to health information systems.

- Public health departments often face geographic barriers to assisting the residents of the nation, such as those in frontier states or rural areas. Many have seen the value of utilizing vans and other mobile facilities to serve their constituents. Such vehicles can provide a wide range of

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[3] *The Return on Investment of Public Health System Spending.* Academy Health, 2018. https://www.academyhealth.org/sites/default/files/roi_public_health_spending_june2018.pdf

[4] Mays, Glen P. and Sharla A Smith. *Evidence Links Increases in Public Health Spending to Declines in Preventable Deaths.* Health Affairs, Vol 30, No. 8, 2011. https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2011.0196

[5] Masters, R et al. Return on investment of public health interventions: a systematic review. *J Epidemiol Community Health* 71(8):827-34, 2017. https://jech.bmj.com/content/71/8/827

[6] Centers for Disease Control and Prevention. Life Expectancy. 2018. https://www.cdc.gov/nchs/fastats/life-expectancy.htm

services to isolated areas where transportation is a challenge. From these vehicles public health workers can offer vaccinations, in-person WIC services, screening for diseases and harm reduction services.

- Weather emergencies such as hurricanes, wildfires, heat waves, and floods are becoming more frequent and severe. There were 32 declared public health emergencies in 2017 and 2018, compared to 29 declared emergencies for the prior 10 years combined.[7] Thanks to investments made by Congress and CDC over the past 18 years, state and local health departments are much better prepared for disasters than they were before September 11th. However, CDC funding for state and local public health emergency preparedness was down by about a third between FY2003-FY2019. And the requirements for All-Hazard emergency preparedness has exceeded the funding levels. Resources are needed to ensure that states and locals have the necessary tools for emergencies including stockpiled medications, pesticides, protective equipment and redundant communication and internet capacity.

- The public expects to be quickly informed whenever there is a public health threat, be it a recall of possibly contaminated food; a threat to the water supply; an unusual flu season or a cluster of suicides. This requires real-time traditional and social media messaging. Without such messaging the public will receive information from the internet that may or may not be accurate. Many health departments have relatively primitive communication tools, crippling their capacity to provide the public with up-to-date, accurate and informative information.

The Need for Public Health Investment

Public health is starving for a real, transformative investment to bring it into the 21st century and face these growing challenges. My organization released a report last month, *The Impact of Chronic Underfunding on America's Public Health System*, where we found that chronic underfunding has presented a consistent obstacle that is preventing the public health system from adequately tackling leading health threats. America spends about $3.5 trillion on healthcare, less than three percent of which supports governmental public health.[8] That equates to less than $280 per person. In fact, a study out of the University of Kentucky estimated a total shortfall of about $13 per person – or $4.5 billion for the entire nation – to implement comprehensive public health capabilities.[9] This analysis resulted in a group of experts called the Public Health Leadership Forum – of which I was a member - recommending a Public

[7] *Public Health Emergency Declarations*. U.S. Department of Health & Human Services Office of the Assistant Secretary for Preparedness and Response. https://www.phe.gov/emergency/news/healthactions/phe/Pages/default.aspx

[8] *The Nation's Health Dollar ($3.5 Trillion), Calendar Year 2017, Where It Went*. Centers for Medicare and Medicaid Services, 2018. https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/PieChartSourcesExpenditures.pdf

[9] Mamaril et al. *Estimating the Cost of Providing Foundational Public Health Services*. Academy Health PHSR Interest Group Meeting, June 25, 2016. *http://www.publichealthsystems.org/sites/default/files/presentations/NCCIntramural_Research/cbm%20poster_academyhealth_25Jun16.pdf*

Health Infrastructure Fund for state, territorial, local and tribal governmental public health to address the gaps in sustainable financing.[10]

There are also wide disparities in public health infrastructure between geographic regions. Our recent report found that CDC funding to states range from a low of $17.09 per person in the Chairman's home state of New Jersey to a high of $63.28 per person in Alaska.[11] Although per capita funding does not tell the full story of the funding gap in each state, it is an illustration of the variation we are seeing.

Another analysis found that only about half of the U.S. population is served by a comprehensive public health delivery system, and in some states, that number is closer to zero.[12] Targeting infrastructure investment in areas of greatest need can help strengthen health departments that have traditionally lacked resources, especially those with large rural and/or low-income populations. The LIFT America Act proposal would prioritize funding for states with a higher burden of preventable disease and disability as well as infrastructure gaps, helping to close the gap between states and regions.

The Importance of Public Health Data Infrastructure

We are also very supportive of the proposal to invest in public health data system transformation at CDC and state, local, tribal and territorial public health departments. Public health surveillance is supposed to be a multidirectional, interoperable system of public health working with healthcare providers and laboratories to detect disease outbreaks and trends in disease patterns. Data truly is the lifeblood of public health – we need to know when the opioid epidemic shifted from a prescription drug problem to a heroin problem; we need to know that black women are dying in childbirth at alarming rates; we need to know when an Ebola case shows up at a U.S. hospital.

The success of public health relies upon accurate and timely data, but it is shocking to continue to hear stories of hand-written notes, faxes, screenshots and phone calls as ways that health departments and clinicians are reporting public health data and communicating between agencies [See ADDENDUM].[13] Public health information systems remain archaic – depending on outdated technology, systems that do not talk to each other, and lack of adequately trained workforce. This Committee has worked tirelessly on the Pandemic and All-Hazards Preparedness and Advancing Innovation Act, which calls for real-time disease detection to find health threats before they grow out of control. Yet this capability remains aspirational without a major investment in the public health data infrastructure. We have joined with 80 organizations in support of funding for CDC's data initiative in the FY2020 Labor, Health and Human Services Appropriations bill[14] and were pleased to see a $100 million down payment in the bill that recently passed the House Appropriations Committee.

Conclusion

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[10] DeSalvo, Karen and Jeffrey Levi, et al. *Developing a Financing System to Support Public Health Infrastructure.* Public Health Leadership Forum at RESOLVE. 2018. https://www.resolve.ngo/site-healthleadershipforum/developing-a-financing-system-to-support-public-health-infrastructure.htm

[11] TFAH, 2019.

[12] National Longitudinal Survey of Public Health Systems. In *Systems for Action*, 2018. http://systemsforaction.org/national-longitudinal-survey-public-health-systems

[13] Statement of Janet Hamilton, Director, Science and Policy, Council of State and Territorial Epidemiologists before the House Appropriations Subcommittee on Labor, Health and Human Services, Education and Related Agencies Public Witness Hearing. April 9, 2019. https://cste.sharefile.com/share/view/sc5e20318a5a49a1a

[14] Data Strategy FY2020 Request Letter. https://cste.sharefile.com/share/view/sd4546bd27a349a78

I would be remiss if I did not add two important points that are critical to achieving the goals of this legislation:

1) **Congress must raise the budget caps.** CDC and public health face dire cuts if there is not a budget agreement this year that raises budget caps for defense and nondefense discretionary programs in parity with each other. We hope you all work across the aisle and with your leadership and the President to pass an effective budget deal this year.
2) **Congress must appropriate funding for the programs authorized in the legislation.** All too often, we see a pattern of funding cuts, followed by a disaster or outbreak, which may lead to an influx of one-time money, followed by an erosion of funds. Public health cannot function with short-term, expiring dollars, after an outbreak starts. They cannot hire and retain a competent workforce if health departments are not sure the money will be there next year. We do not hire firefighters and build firehouses after a fire breaks out, so similarly we must sustain public health funding over time.

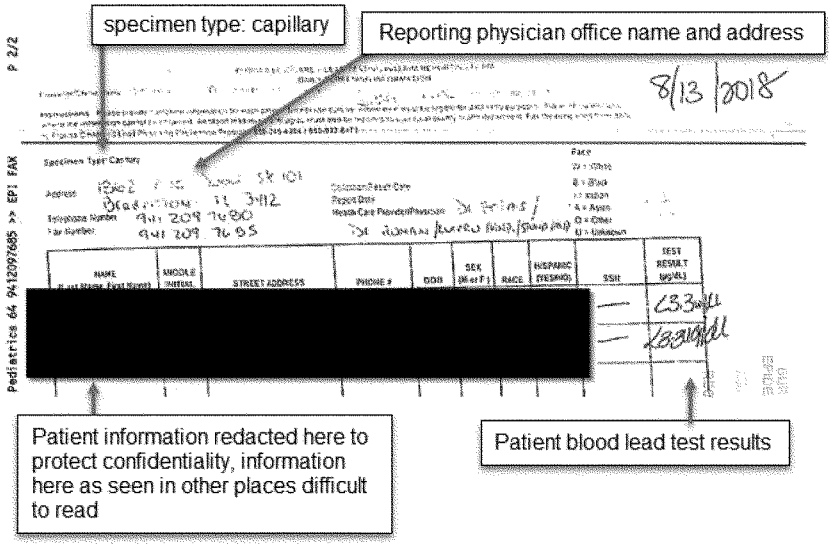
Investing in the nation's health means we are investing in the future. Again, I thank you for the opportunity to be here today, and I look forward to your questions.

ADDENDUM

(Source: Testimony of Janet Hamilton, April 9, 2019 Statement of Janet Hamilton, Director, Science and Policy, Council of State and Territorial Epidemiologists before the House Appropriations Subcommittee on Labor, Health and Human Services, Education and Related Agencies Public Witness Hearing. April 9, 2019.)

Example: Lead test results received by the Florida Department of Health as submitted by a private provider to fulfill required lead test result reporting, August 2018, January 2019.

Patient information, test results, and reporting provider information difficult to read and creates delays in identifying the patient as well as recording the data in the health departments data system necessary to identify any community increases in blood lead, respond and implement control measures. While these examples are lead data, data across all diseases and conditions are regularly submitted and received via paper by private providers to public health.



Mr. PALLONE. Thank you, Mr. Auerbach, and thank all of our witnesses. That concludes our openings, and now we are going to move to Member questions. Each Member will have 5 minutes to ask questions of our witnesses, and I will start by recognizing myself for 5 minutes.

There are two vitally important goals that we want to accomplish with the LIFT America Act. One is to rebuild and modernize our infrastructure to sustain a high standard of living for Americans and a competitive, efficient economy, and then second, to redesign and reorient our infrastructure to deal with the climate change that we can't avoid and to prevent further damage to the climate system, our society, and our economy.

So I want to start with Ms. Eckdish. Are the direct and indirect employment effects of increasing Federal support for infrastructure projects significant and does the BlueGreen Alliance see a linkage between infrastructure investments and reducing greenhouse gas pollution?

I know you have touched on that in your opening, but if you would develop it a little bit. Not too much because I have to ask other questions.

Ms. ECKDISH. Sure. Thank you, Chairman Pallone, for the question.

Yes, we absolutely see significant employment opportunities through infrastructure investments as well as opportunities to address greenhouse gas emissions. As I mentioned in my testimony, we see a nearly 15 million job creation opportunity from investing in infrastructure from the construction side through manufacturing of components that go into these infrastructure systems.

We also see a significant nexus with climate benefits, both in terms of the investments that can reduce greenhouse gas emissions—I will give one quick example. The LIFT America Act addresses grid modernization: "Full implementation of a national smart grid could reduce U.S. CO_2 emissions by 12 percent." That is just one example of the emissions reductions we could see from infrastructure investments.

We also know that investing in infrastructure can help in terms of the impacts that we know are coming and already here from climate change, including extreme weather events, sea level rise, storm surges.

Every dollar invested in prevention today reduce costs by $6 in the future. So a significant return on investment and making our communities more resilient to climate impacts.

Mr. PALLONE. Thank you.

Let me go to Mayor Wahler. Do you believe that the infrastructure investments are one way to meet—well, let me say this, Mayor.

Mayors and other local government officials have taken a strong position in fighting climate change, including yourself, and calling on the Federal Government to do more to meet the challenge of climate change.

So, Mayor, do you believe that infrastructure investments are one way to meet that challenge, and how will additional Federal support for infrastructure help cities accelerate the transition to a low-carbon economy?

Mr. WAHLER. One of the advantages of this bill is it lays out a 5-year program, and one of the things that towns and cities and counties need to do is be able to lay out a long-term plan.

In the past, when there was just a one-shot funding there, that didn't allow communities to do that. There are a lot of things that towns and cities can do.

For instance, over the last 10 years between water and infrastructure projects within communities, towns and cities have spent over $80 billion in funds there. So towns and cities do have skin in the game.

We are just asking for a partnership to help along with some long-term planning and in cases—a lot of cases that towns and cities need seed money to leverage that public-private partnership to accomplish those goals.

Mr. PALLONE. Thank you.

I am going to turn now to Ms. Clyburn on the broadband.

According to a 2017 FCC study, we can build out incredibly high-speed broadband internet access to 98 percent of the country with the $40 billion that we have in the bill. For that price, we are talking about in-home broadband that could deliver gigabit speeds. To achieve that goal, we authorize $40 billion to connect the unconnected.

So in your experience, Commissioner—I will still call you that. Once a Commissioner, always.

[Laughter.]

Mr. PALLONE. What will it mean for families in rural areas or urban broadband deserts to have access to in-home high-speed or even gig-speed internet service?

Ms. CLYBURN. It will allow individuals to make a choice to stay or to leave—that infrastructure that does not exist in those communities is forcing the young to leave these communities and causing brain drain in so many areas.

It would put a substantial down payment to address that. It will allow opportunities in telehealth and telemedicine, and remote educational opportunities that do not exist—classrooms and schools that do not have the infrastructure at present.

This is an equalizer. This would be a great equalizer for those areas that don't have the infrastructure to serve those communities.

Mr. PALLONE. And then, lastly, can you explain—well, in the LIFT America Act we have critical coordination language so that the FCC and State-administered reverse auctions don't undermine other current and future Federal investment, and you mentioned that language.

Could you just explain what could happen if we didn't include the coordinate language in the bill?

Ms. CLYBURN. Duplication, inefficiencies, and goals not being met, you know, simply put. You have got a mixture of State and Federal agencies that all mean well, but they are not talking to each other.

So, you know, a lot of conflict and, as I mentioned, duplication and goals that are not harmonized are really causing a lot of inefficiencies, and this will force everyone to speak to each other and

force efficiency, and that will allow more bang for our buck and more infrastructure being built to where it is needed.

Mr. PALLONE. Thank you, Commissioner.

I now recognize Mr. Walden for 5 minutes.

Mr. WALDEN. Thank you, Mr. Chairman, and I want to thank all our panelists. We appreciate your testimony today and your guidance and counsel as we work on these issues.

I want to ask Mr. Lyons, the RAY BAUM'S Act and the inclusion of MOBILE NOW was a big success last Congress, and it was also a lesson that streamlining and permitting are just as important for broadband deployment as spending money alone.

This is a multijurisdictional effort, and I believe there is some understanding needed on how NEPA, the National Environmental Policy Act, and the National Historic Preservation Act impact the expedited deployment schedule in this legislation.

If we are going to be successful, and we understandably want to be sensitive of both the environment and to, of course, historic properties and all, but how do we work through that and get things like 5G built out?

Your comments?

Mr. LYONS. Thanks for the question.

I think that is absolutely right that, if your goal is to add broadband to places where it is currently uneconomical, there are two ways to that, right.

Adding subsidies on the one end but also lifting existing barriers to infrastructure buildout is equally important, and we have learned through a number of FCC initiatives that activities that can lift the existing barriers to make it easier to go, for example, dig one strategy——

Mr. WALDEN. Right. I was going to ask you——

Mr. LYONS [continuing]. Can be super helpful in making it cheaper to deploy broadband and therefore more economical in places where regulatory burdens may otherwise be problematic.

You are right that we don't want to ride roughshod over, you know, environmental regulation. But we have to recognize also that the more decision makers there are in the process, the more veto gates there are to getting projects done.

Mr. WALDEN. Yes.

Mr. LYONS. And veto gates means more difficult—delays in getting the projects completed.

Mr. WALDEN. Well, and I know—and I am from the Northwest, not the Northeast—but, you know, we have this constricted flow of, for example, natural gas. There was a building I read about recently, had been built to hook up to natural and guess what? They don't have access to enough natural gas, so now they are going to use propane.

And you know all that—the blocking of the pipelines and power lines, and I realize the public needs to have a voice in these issues. But it comes to a point where we are using heating oil and we are somehow, I don't know, subsidize whatever we do with that.

The ratepayers are paying more. The environment doesn't benefit and you have these constricted flows, and it seems to me it does not benefit anybody other than the industry that is out there designed to shut down any progress on energy development.

Mr. LYONS. Agreed, and I am a—so I will preface this by saying I am a big fan of federalism. I think State regulators have a really important role to play.

Mr. WALDEN. I agree, up to a point.

Mr. LYONS. But they are focusing on what is important for their State, right, and there are some times when what is best for a particular State is not what is best for the economy as a whole, right.

So, for example, hypothetically, right, you get a pipeline that is coming down from Canada into Massachusetts. It has to traverse New Hampshire. If New Hampshire residents aren't benefiting from that, then they many not want, you know, to cut through.

Mr. WALDEN. Right.

Mr. LYONS. If it is something that is great for the whole but not so great—hypothetically—if it is great for the economy as a whole but it is not—but a particular State has a veto authority, we need to make sure that——

Mr. WALDEN. This is the balance we have to figure out.

Mr. LYONS [continuing]. The balancing act is being done at the right level.

Mr. WALDEN. Yes. We face a lot in the West with Federal public lands. I had a community that was trying to get three-phase power for the first time in this tiny little town, and I don't remember now. It took a couple of years to go through the siting process because they, as I recall, had to put four power poles on Bureau of Land Management land. It took a couple of years to go through the process.

And this is the stuff—there has got to be a better way to do this. Now, I want to flag one other issue as we deal with the communications issues and foreign issues.

In Portland, Oregon, right now, somebody is going around putting up stickers on lampposts saying that 5G is a hazard to your health that look like they are official.

The New York Times has reported on what Russian television and propaganda is doing to convince people that somehow 5G is bad.

And I think—you can go read the New York Times story. I mean, it is there. Meanwhile, in Russia, I am told, they are telling everybody that it cures cancer. Here they are telling us it is going to cause cancer.

We have got to be recognizing on 5G deployment we have to win this race, and I think this is worthy of us taking a look at what is going on by some of our adversaries.

I will show you the story. KGW–TV did a fact check on it. It is, like, this is not official stuff. But we are going to see that around the country.

We have got to win the war on 5G. We need to use our natural resources, especially natural gas. You look at 16 gigawatts of coal that has come offline because of fuel switching, principally. But if you can't get the natural gas where you need it, then you are going to inhibit that growth and that development.

So there is a lot more that we need to do. Mr. Lyons, I certainly see a component to what we are trying to do here and to work with the States, and I appreciate your testimony.

One question maybe for—is it Mr. "Guth"? "Gooth"? The underlying question, kind of what happened to the White House—you know, everybody got together and said, we got a $2 trillion thing—we all agree.

How do we pay for this? How do we pay for this, $40 billion? These are authorizations. This isn't, you know——

Mr. GUITH. The first principle or pillar within our infrastructure plan was consistent with what we have been saying for 20 years, which is raising the user fuel tax——

Mr. WALDEN. Right.

Mr. GUITH [continuing]. Because it hasn't been touched since the '80s and——

Mr. WALDEN. But you are not going to use that to pay for these things?

Mr. GUITH. Well, we will work with, certainly, Congress expressing our positions on that. But, ultimately, as Mr. Donohue stated this morning in the Washington Post, it is going to take more than even just that to get to $2 trillion. I mean, it is going to take private-sector investment, and the quickest way to get to that is to make it more transparent and more predictable as far as how we permit these roads, bridges, and energy infrastructure.

Mr. WALDEN. Very good. All right. Thank you.

Thank you, Mr. Chairman, for your indulgence.

Mr. PALLONE. Thank you, Mr. Walden.

Next, we move to Ms. DeGette, recognized for 5 minutes.

Ms. DEGETTE. Thank you so much, Mr. Chairman.

And Mr. Walden, you are exactly right about the 5G disinformation that is in Denver, and it is everywhere. I think, Mr. Chairman, we should have an O&I hearing on it, is my opinion.

But what I want to talk about in my questions is the environmental applications of this wonderful piece of legislation, because infrastructure is not just limited to roads and bridges.

It also has a lot of other components, and that is why I am really happy that there is $2.7 billion in this bill for brownfields redevelopment grants.

I have been involved in this issue back in the mists of time since I was in the State legislature when I authored the Colorado version of Brownfields.

It was called the Colorado State Voluntary Cleanup and Redevelopment Program, and it is still in use to this day and it has been used to clean up thousands of areas—old dry cleaners and gas stations and industrial sites.

And then, of course, in 2002 this committee first authorized the Federal Brownfields program. And in cities like Denver we can see how important those programs are to redevelopment in urban areas, and these funds will really allow communities to continue with the success but also to have economic development.

Mayor, I am wondering if you can comment very briefly on Brownfields and how the mayors look at this towards an economic generator.

Mr. WAHLER. Thank you, Congresswoman.

It is no secret that the United States Conference of Mayors have been very supportive of the Brownfields program. As a matter of fact, one of my colleagues from New Jersey, Mayor Chris Bollwage

of Elizabeth, New Jersey, has testified on numerous times here in front of this committee and testified recently last year when the new bill was authorized and then signed into law.

Listen, Brownfields—anytime you can clean up a property and put it back to use, whether it is for residential or commercial use, is a good thing in this country.

Nobody wants to be living next to Brownfields or Superfund sites, for lack of a better word, and I think when towns have a partnership with the Federal Government, working hand in hand to put tax revenues back to good use and to create economic activity out there, that is a great thing for both the municipal governments, the county governments, and even the State governments.

Ms. DEGETTE. And it is a good economic stimulator. Is that right?

Mr. WAHLER. Absolutely. You know, almost every community in the United States has a Brownfields site.

Ms. DEGETTE. Thank you.

Ms. Eckdish, I want—the bill also has $2.5 billion to create grant programs to install solar panels within low-income and underserved communities.

I am wondering if you can talk to me about how that impacts jobs in those local communities, both installing and maintaining.

Ms. ECKDISH. Sure. We know that investing in clean energy is, you know, not only a climate solution but a job creator. I think what we would hope to see is that these new programs include strong labor and procurement standards to make sure that not only are we creating jobs, you know, installing these solar panels or whether it is other wind, solar, clean energy opportunities—that we are not only creating jobs at the project sites themselves but that we are, A, making sure they are good jobs with labor standards and with procurement standards, that we are also thinking about the materials that are going to those projects.

Ms. DEGETTE. And that is a continuing source of employment for our communities. Is that right?

Ms. ECKDISH. Yes.

Ms. DEGETTE. Now, another question I wanted to ask you about is, you know, the LIFT Act builds on the drinking water State Revolving Fund by respecting State and local decisionmaking.

In my community right now, we are involved in a very difficult collaborative process with the State and actually the EPA because they have found lead in the water in Denver, including in the pipes that go to my house because the pipes are so old.

So I am wondering if you can talk about why it is important to respect the solutions for the cities and States when you are providing the Federal funding.

Ms. ECKDISH. Absolutely, and we know these communities exist across the country and there are millions of Americans being served by lead service lines or water systems that have lead components, and it is a tragic situation.

The State Revolving Funds are very proven, effective programs, and we commend the LIFT Act for recognizing that, and this committee had done tremendous work to ensure that those programs are effective.

And they also include strong labor and procurement standards that make sure that the investments we are making in our water systems also create good jobs both in the construction and the manufacturing of those components.

Ms. DEGETTE. Thank you. Thank you so much. I yield back.

Mr. PALLONE. Thank you, Ms. DeGette.

Next, we have Mr. Upton for 5 minutes.

Mr. UPTON. Thank you, Mr. Chairman, and I would guess—I think most of my questions are going to be directed at Mr. Guith.

I appreciated your comments about PFAS. That is one of the things this committee and certainly the subcommittee that Mr. Tonko and Mr. Shimkus lead is focused on that, not only in this Congress but also in the last one.

Michigan, we have been particularly hard hit with this. Our Governor did a really good job of working with every community in our State to find out what municipal water systems might be impacted both above 10,000 users as well as under 10,000 and, sadly, tragically, I have one in my district, and particularly those with individual wells are still going to be drinking bottled water for some time to come.

And we did have some cooperation between the city of Kalamazoo and Parchment to put together a water system so that the Parchment system now is with Kalamazoo but they were just really lucky that it was so close.

But this legislation—the LIFT legislation—does establish a nonregulatory Federal grant program to aid PFAS-affected drinking water utilities, and we know it is going to be more than just one in not only Michigan but around the country as well.

Do you find that that is a pretty good way to address the PFAS issues—and, again, it does fit in with the jobs and environment situation, but it is a really critical need that communities are going to need very much like what we saw with lead in Clinton and other communities as well.

Mr. GUITH. Absolutely. We think that because the PFAS contamination invariably hits all 50 States and Territories probably—all 435 House districts—there is a significant need for remediation in addressing the contamination.

But as I noted in my testimony, the one thing we would be concerned with is that it divert funds from existing safe drinking water funding, and as somebody from Michigan and having referenced the lead issue, that is something that I would expect many up there would not want to see happen——

Mr. UPTON. Yes, I think we are going to have to expand the pool of dollars that are available, and just like, you know, lead is bad, PFAS is a relatively new contaminant that many people still don't know about. But it is just as harmful, as we saw with the lead issue.

You know, as we talk about creating jobs and protecting the environment, again, one of the issues that this committee is going to be working on—and thanks to Mr. Rush and Pallone and, again, bipartisan, something going back to John Dingell and certainly Debbie Dingell now—is the pipeline safety authorization bill, which, as you may know, expires in September of this year.

We have been beginning hearings and to, again, work on a bipartisan basis. Creates jobs and protects the environment. We know that that's the safest way to transport oil and gas through.

There are several congressional mandates that are left over from the prior reauthorizations. They involve important rulemakings relating to gas and liquid integrity management, leak detection, safety valves, mapping of high consequence areas, other important safety rules.

We are going to be working on increased funding for infrastructure. So do you think that it is important that we link some of that funding related to upgraded safety practices as well?

Mr. GUITH. Absolutely. As this country continues to grow its production of both oil and gas, the pipeline system is expanding and it is becoming incredibly more important to the movement of those fuels and those resources.

And, you know, I think this committee pointed out when when you had the PHMSA hearing a few weeks back that, you know, modernizing PHMSA and getting it more personnel is incredibly important, and it is to keep up with the pace of a burgeoning U.S. energy sector.

Mr. UPTON. And Ms. Eckdish, as part of the BlueGreen Alliance, I mean, this is really a job creator. I mean, we had a pipeline break in my—actually, it was outside of my district—back in 2010. That gas line was completely replaced.

Four and a half million dollars a mile is what the cost to replace it was. They did it with a new standard and, you know, the one spill, again, was outside of my district, but it was a billion dollars to clean up.

So a pipeline safety bill is, you know, anywhere we look—and Mr. Shimkus has been a good leader on this as well—but more than a million miles of pipelines across the country, this is something we ought to focus on, knowing that in fact it is going to be better for the environment. Wouldn't you agree?

Ms. ECKDISH. Absolutely. Pipeline safety is not only a safety issue. It is a critical safety issue. It is also an environmental issue when you consider methane emissions from these pipelines being, you know, an extremely potent driver of climate change as well as the tremendous job creation potential that can be achieved by repairing and replacing some of these pipelines as well as through leak detection and repair.

Mr. UPTON. I know my time has expired, but I know other colleagues will talk about the importance of cybersecurity related to this, too.

Yield back. Thank you, Mr. Chairman.

Mr. PALLONE. Thank you.

Mr. Doyle recognized for 5 minutes.

Mr. DOYLE. Thank you, Mr. Chairman, and thank you for holding this hearing and introducing this important legislation which I was proud to cosponsor, and I want to thank all the witnesses for being here today also.

My hometown of Pittsburgh, like many cities, has aging infrastructure than can threaten the health and safety of residents if it is not properly updated and maintained.

I am glad to see that the LIFT Act includes investments in drinking water infrastructure as lead and PFAS contamination remain issues in our region and throughout Pennsylvania.

Also very happy to see the investments in energy, health, and communications infrastructure as well. These investments are critical to the future of our country.

Commissioner Clyburn, Chairman Pallone's LIFT America Act would invest $40 billion in deploying broadband infrastructure to communities across rural America.

Many of the members of this committee represent communities that lack access to broadband. Why is it important that Congress invest in the deployment?

What would this bill achieve that private investment and existing Federal programs won't? And what do we lose by not making this investment today, and what will those communities lose?

Ms. CLYBURN. Well, I will start with the last first. We lose our young people. They won't have the educational opportunities or access to them needed.

We lose quicker our older and those who are medically challenged because they might not have a specialist nearby, but with connectivity they are able to access it.

One of the things that you just put forth in that question is it is not so much what we will lose, it is what we can't afford to. I mean, literally, we literally can't afford because we are paying the price for the lack of infrastructure.

We are paying a price for the lack of access. We are paying a high price, and communities are not competitive. People are not getting access to goods and services they need to thrive. We lose a lot—we lose a little bit of everyone in those communities when we don't address this.

Mr. DOYLE. So can this deployment happen strictly on private investment and existing programs, or does the Federal Government——

Ms. CLYBURN. Well, if the last 5 years is any indication, and when you don't see appreciably the number of, you know, 24 million according to the FCC, million people not—that has been hovering. That number has been constant for a long time.

So the public-private partnership, while it has incrementally been doing some positive, it is not getting us to where we need to get in an expedited way. This is a targeted infusion, a promised infusion in those communities. With a public-private partnership, again, it is more of a tortoise-and-hare approach.

Mr. DOYLE. Let me ask you also about, Chairman Pallone's LIFT America Act would invest $12 billion in deploying Next Generation 9–1–1 service. It is a critical issue, and it is one that has been championed by my friends Anna Eshoo and John Shimkus.

When will NG 9–1–1 service be deployed to all Americans if we don't make this investment now, and what are the risks if we delay doing this?

And then also talk a little bit about the benefits of NT 9–1–1 service to regular Americans, and in particular what are the advantages to people living in communities that are subject to extreme storms and weathers like California and Texas and Florida and Puerto Rico? I mean, right as we speak today, throughout the

Midwest, States are just being pummelled with tornadoes 4, 5, 6 days in a row. What are the impacts of not having that service for those people?

Ms. CLYBURN. The impact of not moving to the next evolutionary phase is lives lost, both from the person who has the emergency and the critical person who is providing the service.

One of the images that I saw that I think sums it up is, one of the first responders needed a response, and I really believe if we had a video and robust texting opportunities they might have been better able to assess that emergency and really acted on it.

There are too many public safety centers that can't take texts. You know, you have to call. Now, heaven forbid if I get held up and can't, you know, talk. I am more at risk.

So not addressing this and maintaining a 50-year-old framework, which is what we are doing now and not moving ahead, really does not allow individuals to communicate in a way. It doesn't allow for interoperability, and it doesn't allow for us to be as safe as we need to be.

Mr. DOYLE. Thank you, Mr. Chairman. I yield back.

Mr. PALLONE. Thank you, Mr. Doyle.

Mr. Shimkus for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman.

A great hearing, multiple issues. I wish we had more time, but we got, obviously, a big attendance here also. So I am going to try to go pretty quick.

I want to really highlight Jerry McNerney for dropping the Nuclear Waste Policy Act Amendment of 2019. Blunt Rochester is a cosponsor. Doyle is. Flores is. Hundred-billion-dollar infrastructure plan over a hundred years paid for.

Sounds like a pretty good deal. And that is what this act would do, and it would help rail, roads getting our nuclear waste, which is all over the country—121 locations, 39 States—to a long-term repository.

So I want to thank him for that, and I want to encourage my colleagues on the committee to look at that bill and ask us questions, and then consider cosponsoring it, as the chairman is at least supportive of having a hearing and discussing this, and I appreciate that.

But it is $100 billion over a hundred years paid for because ratepayers have paid into a fund to enact this. So it is nothing—when we ask about where the money is coming from, the ratepayers in these States have already paid for this. So I want to make that——

Mr. Guith, do you think there can be a viable long-term energy and national security policy and this climate debate without nuclear power?

Mr. GUITH. No.

Mr. SHIMKUS. And I——

Mr. GUITH. There is scientific consensus around that.

Mr. SHIMKUS. All right. And, you know, nuclear being carbon-fee emissions, if we want to meet any type of objectives and keep rates somewhat acceptable, we will still have to have base load major generation. So I appreciate that.

Also, Mr. Tonko and I were able in the last Congress to reauthorize the Safe Drinking Water Act through this committee—the

Bbrownfieldsrownfields redevelopment, which the mayor talked about, and I sat through a lot of those hearings with your colleagues.

I think the only thing that gives me pause on this parts of legislation is this is authorization. Then the question is appropriation. And do we run the risk of authorizing—setting the bar so high that two things.

One is it is unrealistic because there is always going to be some buy-in and that it causes—you know, it causes a more of a pause because we are planning for all these big things but the money just doesn't show.

And I want to go with Mr. Guith, but I do want to ask also to the mayor also.

Mr. GUITH. It's an age-old friction between authorizers and appropriators, and that's how the system is set up and we think it is important to make sure that authorizers take the time to stipulate what the parameters of the program should be regularly—not, you know, every couple of decades but regularly—and then take a very active role in the appropriations process to ensure that it is backed up with the actual moneys that are needed to fund the programs.

Mr. SHIMKUS. Mayor?

Mr. WAHLER. I think one of the drawbacks of what you are saying is that, you know, backdooring the ARRA with the energy efficiency block grant program, there was some criticism of the fact that the program didn't get off the way it should have been.

But part of the problem was through the Department of Energy. They set a lot of bureaucratic regulations within that, and then we had to report ARRA standards too. Towns and cities and counties across this country are used to the model of the community development block grant programming.

And I wouldn't necessarily fault the towns and communities for that. Like in my community, we already have an 8-year program. We know what needs to get done. It is about $100 million worth of projects. But the problem is, we just don't have all the money.

Mr. SHIMKUS. Right.

Mr. WAHLER. And we need seed money in a lot of cases.

Mr. SHIMKUS. Is there not a concern of false expectations with high numbers and——

Mr. WAHLER. No. You know what? You know, we have——

Mr. SHIMKUS. If you could be quick. I got one more question I got to get in.

Mr. WAHLER. OK. We have an aging infrastructure out there. Everybody knows that.

Mr. SHIMKUS. Right.

Mr. WAHLER. At all levels of all multifacets. Something needs to be done and——

Mr. SHIMKUS. OK. Let me ask about this, because this is tied into the committee of jurisdiction and you have already talked about the PFAS issue.

So we got PFOA, PFAS—600 of these somewhat chemical chains in our, you know, in our environment. What if some of these, Mayor, are safe, because there is different formulations of this, and if the government says you have to clean up something that is safe

at that investment capital, would you or could you, or would you——

Mr. WAHLER. Well, I just want to let the record reflect I am not a medical doctor to talk like that.

Mr. SHIMKUS. Well, yes. You are talking to us.

[Laughter.]

Mr. WAHLER. But the end game is, is that nobody wants to see unsafe drinking water. My good friend Karen Weaver from Flint, Michigan, I don't—I would not—I just emphasize what the folks in Flint, Michigan, had to go through, and I am sure nobody in this room ever wants to see that in your community out there.

But we need to work with the health professionals nationally along with the counties and towns across this country.

Mr. SHIMKUS. And my time is way expired, but I would just say we got to make sure we know if it is—what is safe and what is not safe, and we got to be careful about saying "ban everything," because some of that stuff may be safe and high cost.

Thank you, Mr. Chairman. You let me go way over my time, and I appreciate it.

Mr. PALLONE. OK.

Next I will recognize Ms. Matsui for 5 minutes.

Ms. MATSUI. Thank you very much, Mr. Chairman, and welcome to the panel. Thank you for being here today.

I was pleased to see that the LIFT America Act reauthorized the popular Diesel Emissions Reduction Act, or as we call it, DERA program.

As you may know, earlier this spring I introduced legislation to reauthorize DERA and led the effort to secure robust funding in fiscal year 2020 appropriations.

Diesel engines still pose a unique problem because of the long lifespan of the equipment, with some engines operating for up to 20 or 30 years.

Because of this, the transition to newer, cleaner engines has been slow, and as a result diesel fuel consumption still accounts for a large percentage of our transportation sector carbon dioxide emissions—24 percent in 2017 alone, according to the Energy Information Administration.

Ms. Eckdish, can you quickly discuss how the nature of diesel engines poses a unique challenge to our local communities?

Ms. ECKDISH. Thank you for the question.

That specific issue is a little bit outside of my area of expertise. But I would say to your broader point about the need to address diesel and other emissions from the transportation sector, we have a long way to go and what LIFT America Act has done so far in terms of both the diesel emission reduction program as well as building out EV infrastructure is a step in the right direction, and we want to make sure that the emissions go down and that we are creating good jobs while we do that.

Ms. MATSUI. OK. Thank you.

And I think it is important, as you mentioned, that this bill is prioritizing electric vehicle, or EV, infrastructure, you know, because transportation emissions, as we said, are now the largest single source of emissions in this country.

While we thought we might get a handle on this under the Obama administration's rules on fuel economy and greenhouse gas emission standards, the Trump administration decided to roll back these standards and bring our country backwards when it comes to cleaning up our transportation sector.

This is, obviously, a critical part of our larger vision to combat climate change and create healthier, safer communities for our constituents.

While I have introduced legislation that will safeguard these standards, it is also important to provide robust investments for EV infrastructure and the purchase of EVs.

Mayor Wahler or Ms. Eckdish, can either of you discuss what some of the largest barriers to widespread adoption of EVs is today and how this bill might alleviate some of these obstacles?

Mr. Mayor?

Mr. WAHLER. I think, Congresswoman, the question is a lot of towns and cities have really stepped up to the plate because there is—for lack of a better word, there hasn't been so much of a partnership at the Federal level or, in some cases, at the State level.

So most of the initiatives that you see positively across this country has been happening at the State and local level, to a certain extent. Like in my community, we recognize that with charging stations that we have to start somewhere.

So we changed our zoning laws. Any new large development or commercial developments have to supply charging station areas as well at government facilities that we've been doing because, basically, 80 percent of the roadways in this country are municipal or county.

So if you are going to ever have a network system to reduce carbon emissions, we need to start at the local level.

Ms. MATSUI. Right. And I really believe—I think what you are saying, too, is having a Federal activity in this realm would be great.

I mean, in California we are doing it. In fact, our utilities are helping with the EV charging stations themselves, which actually activates the incentive to buy EV automobiles——

Mr. WAHLER. That is an exception, Congresswoman.

Ms. MATSUI. I know.

Mr. WAHLER. Your State is an exception.

Ms. MATSUI. But if we get it at the national level, I think that would be very helpful also.

I want to ask a question about the Remote Areas Fund. I am switching here, but this is everything here.

In 2011, the FCC acknowledged that the highest-cost, hardest-to-reach places around the country should be targeted through a Remote Area Fund—as we call it, RAF.

In 2017, the Commission reaffirmed that it aims to move forward with the RAF no later than a year after the Connect America Fund reverse auction.

Many RAF-eligible communities still do not have access to a safe and reliable broadband option. If structured properly, the RAF would reach the communities in rural America where it is truly no business case to serve.

Now, Commissioner Clyburn, mindful of the larger proposed reforms to the Universal Service Fund, do you have any idea what steps the FCC could take to ensure the RAF is a success? We have got 25 seconds here.

Ms. CLYBURN. Oh. One of the things that I think it could do is get the maps right so we can have an accurate feel for what is needed. Another is ensure that it is technology neutral so we can extract the best ideas for our buck, and leveraging what I know you will do today through this act it definitely will help move things along.

Ms. MATSUI. OK. Fine. Thank you, and I yield back.

Mr. PALLONE. Thank you.

Dr. Burgess recognized for 5 minutes.

Mr. BURGESS. Thank you, Mr. Chairman.

Mr. Auerbach, I want to thank you for mentioning the Pandemic All-Hazard Preparedness Act reauthorization. It was, indeed, a very high priority of this committee and the Health Subcommittee last Congress and due to the—an even temperament over in the other body, and I am being careful with my language.

It did finally pass on unanimous consent earlier this week. As we are just a little bit past the 100-year anniversary of the Spanish flu, it is important to get this done, and you are correct to mention some of the infrastructure needs because that is so critical.

For the first time we will authorize the system Biowatch. We had Mission Zero, which was to—it was a force multiplier for our trauma surgeons and military-trained physicians. So there is a lot of good stuff in that bill, and I am glad the Senate finally passed it.

Professor Lyons, you brought up the concept of allocation proportion, which I think is reasonable in a State like Texas where we have—what, 85 percent of the State lives within 50 miles of Interstate 35 going north to south, from the north Texas area down to Laredo, and then you got the rest of Texas.

So then allocation proportion becomes very important. In fact, I was reading some stuff in the local press and the Houston Press this morning about how concerned they are about the formulas that are being used to allocate these dollars.

And I don't know if you have any thoughts on that, but we are going to have to make sure that we keep up with the fact that it may not be as straightforward as the FCC has demonstrated in their formulas.

Mr. LYONS. I think that is right. I think the goal in allocating the dollars should be to keep an eye on what the overall purpose of the subsidy is, which first and foremost is to make sure that you are reaching unserved areas.

And so, when figuring out how to allocate the dollars that are being distributed to the States, the important thing I think is to figure out what is the population of the unserved area in each State and allocate the money that way.

That way you make sure that you don't have the unintended consequence of sending too much money to one State or another because of the fact that city might have a larger urban area.

Mr. BURGESS. So you have got a lot of geography in some areas without a lot of population, and it just makes it technically more difficult. But it doesn't mean that it shouldn't be done.

Mr. LYONS. That is right, and I think that is why the technology-neutral point is really important too, because wireless solutions may be great in Kansas. It's not going to be so great in mountainous West Virginia, right.

So giving more flexibility to bidders to figure out how best to serve individual areas makes a lot of sense to me.

Mr. BURGESS. Very good. Thank you.

Mr. Guith, you struck on something that has really concerned me since I first got here in 2003, and that is the streamlining of permitting.

At that time I was thinking more in the terms of road construction, and we had the 50-year anniversary of the interstate highway system, and I think 80 percent of it was built in the first 25 years of the—the last connectivity was built in the next 25 years because the permitting process had become so difficult.

The president has said this—it can't take longer to permit a project than it does to build a project—and I trust that your group is working on that, working with the White House, working with the Congress to make sure that we keep that top of mind.

Mr. GUITH. Very much so, and it is, like I said, a bipartisan effort. FAST–41 was the last time we touched upon this issue. It took many years. It was painful, but it was rewarding because both sides holding hands and we saw the first meaningful changes, maybe not substantive but more transparency as far as how the Federal permitting system works so that people from the outside—the project sponsors could figure out where their project is and who is reviewing it and, oh by the way, you know, this agency doesn't talk to this agency and maybe they should.

So now there is a interlocutor who can do that. So it is a huge step forward, and we are looking for a few more of those huge step forwards in this process.

Mr. BURGESS. Well, thank you and thank you for that. It is critical that we keep that in mind.

Ms. Eckdish, let me just ask you a question. I was at the White House last week and the President, as you may have heard, had an event regarding immigration and visas.

I think you correctly talk about American-made products being the ones that we want to use on these projects. You talked about a fair wage for employees.

Would you be willing to accept—if this legislation were to come through the Rules Committee, where I also sit, would you be willing to accept an amendment to require mandatory eVerify so we can be certain we are giving American jobs for American workers at American wages?

Ms. ECKDISH. I am not sure that we have a position on that as a coalition. But I would be happy to review and get back to you.

Mr. BURGESS. Thank you. Thank you, Mr. Chairman. I will yield back.

Mr. PALLONE. Thank you.

So next is the gentleman from Maryland, Mr. Sarbanes, recognized for 5 minutes.

Mr. SARBANES. Thank you, Mr. Chairman. I want to thank our panel. And I want to salute you, Mr. Chairman, for assembling this very important package of infrastructure investments. It is about

time, and our committee, I think, is very well positioned to contribute to the broad discussion we are having across the Congress about making this a priority.

Last Congress, I was very proud to be a cosponsor of the LIFT America Act, and I am certainly pleased again to do it in this Congress.

It provides, as we know from this discussion and certainly from pulling the bill together, its many components, much-needed resources for our Nation's critical infrastructure.

I know that typically when we hear "infrastructure," the first thing that comes to mind for many people is roads and bridges, and obviously those are important pieces of our physical infrastructure and are in dire need of important resources.

But we can't forget about other infrastructure that is vital to the health and well-being of Americans: drinking water infrastructure, the electric grid, and infrastructure for community health centers being among them.

I wanted to focus my attention on the electric grid, which is facing many challenges, as we know. There is growing demand. There is need for reliability, integration of new technologies, need for resiliency against climate change and extreme weather events.

These are all challenges that require that our electric grid adapt to 21st century requirements.

Ms. Eckdish, can you just talk for a moment about how modernizing our grid—our electric grid—is a smart investment, from helping obviously to address carbon emissions to promoting reliability and affordability, and any other benefits that you would like to observe?

Ms. ECKDISH. Sure. Thank you for the question.

And as you rightly pointed out, there is a lot of work to do. Many of the components of our electric grid are from a hundred years ago.

Our grid was built for an energy system of the past and not what we have today or what we are going to have in the future. So there is tremendous need for both grid modernization, smart grid updates, as well as investing in grid resiliency, all of which the LIFT America Act does.

There is also significant need to build out our transmission lines to both increase efficiency and reliability as well as facilitate the incorporation of more renewables onto our grid.

All of those will have significant impacts, benefits from addressing climate change to making our communities more resilient. There are also very significant infrastructure projects that, again, if we include strong labor standards and procurement standards can create good-quality jobs.

Mr. SARBANES. Thanks very much.

Mr. Wahler, you certainly know firsthand about the importance of a resilient and reliable grid, as your community was devastated by Superstorm Sandy.

Can you talk about how these extreme weather events like what you experienced and obviously what we are seeing more and more of across the country and as it relates to being handled or is being felt, I guess, most impactfully by people who are trying to lead at the local level, what the effect of those on our grid infrastructure

is and how investments in the grid resiliency that we are talking about here are important for local communities?

Mr. WAHLER. If I may, Congressman, as well, most towns and cities are waiting for State regulators at the State level to have the transmission carriers upgrade their lines.

Towns and cities at this point are looking at the backup resources there. Like, for instance, our community, we have a lot of solar panels in our facility.

We also have backup generators on all of our pumping stations now, or the sewers. We actually have backup batteries for all 30 signalized intersections, because when the power grid goes down people still travel around the road and you have to have some safety measures.

So that has been a challenging part for a lot of communities. They don't necessarily have the money to have the resiliency done, and that is why I think we really need a partnership at the Federal level to have a helping hand out there because, in times of a crisis like during Hurricane Sandy, where you had no power in our community for almost nine days straight when the weather was getting very cold out there, and you had people calling the mayor's office, "How am I going to get heat?"

And it is a very poignant—as Chairman Pallone knows, it is a very frightening situation for most of the general public. So this is something to be taken very seriously. Mayors and county officials across the country take this very seriously, Congressman.

Mr. SARBANES. I appreciate your comments, and you talked about the importance of partnering from a resource standpoint, and I am very pleased that the bill I was able to work on and introduce, the 21st Century Power Grid Act, is included in this package because it would empower the Department of Energy to support projects that improve grid performance, security, resiliency, and it would do that through grantmaking and cooperative agreements. And those kinds of Federal investments in our grid infrastructure are essential if we are going to overcome the challenges that we are talking about here today.

So thank you very much for your testimony, and I yield back the balance of my time.

Mr. PALLONE. Thank you.

Mr. Latta recognized for 5 minutes.

Mr. LATTA. Thank you very much, Mr. Chairman. Thanks very much for having today's hearing, and thanks to our witnesses for being here today.

Commissioner Clyburn, if I could start my questions with you. First of all, welcome back in your new capacity.

Ms. CLYBURN. Thank you.

Mr. LATTA. I appreciate your comments on how you noted Commissioner O'Rielly's work on the importance of coordination. It is something we have been focused on here in committee. The ACCESS BROADBAND recently passed the House, and I am looking forward at further steps we can take to get the different existing programs working together.

Would you speak to some of the effects you have seen when coordination is lacking?

Ms. CLYBURN. One of the things that we see, and it might be a benefit to some people, but you see subsidizing of unsubsidized carriers getting money to serve the same area.

Now, while that may fuel competition, we also see broadband providers not being in certain areas because of that. You know, lack of coordination and that is—you know, that disconnect and that, again, fuels all the opportunities.

So the biggest thing is duplications—duplications, the inefficiency and, again, investments not going to areas. That is the saddest part of it—investment not going to areas where it is needed.

Mr. LATTA. OK. Thank you.

Professor Lyons, should we try to address coordination in a more substantial way as we consider further spending on broadband deployment?

Mr. LYONS. I think we have got several different programs that are sort of aiming at the same thing. But if they are not talking one another, you get a ton of overlap and inefficiency.

One difficulty with creating these types of initiatives on a one-off basis is, once it is created, it tends to stick around. So I don't know if this is beyond the scope of what this committee is considering right now, but one solution might be to think about consolidating all of these into one program that would look more comprehensively at the question of serving unserved areas with one decisionmaker who is allocating one pot of money rather than dividing among several different groups.

What I am thinking of is the Connect America Fund, which has done great work, but it is hobbled by the fact that it is laboring under restrictions of the Universal Service Fund that were created for a very different era.

It is a program that is doing the best with what it can. But closing that down and shifting the money to something like this that is focused primarily on building broadband infrastructure out I think would be an improvement.

Mr. LATTA. OK. Let me ask another question to you. I agree with your comments that funding should be distributed on a technology-neutral basis.

However, as you noted, the 100 megabit per second minimum service standard risks overinvesting in fewer projects. Does this service standard also threaten the principle of tech neutrality?

Mr. LYONS. It does in the sense—if you—which is probably true right now, that 100 megabits per second minimum is one that some technologies can hit and others cannot.

We have to think about ways to deploy good enough broadband or broadband that is going to connect people who are currently unconnected, and setting too high of a threshold may prevent the number of players who can come in and bid.

I often tell my students that the satellite guys are perpetually creating a state-of-the-art network for, like, 7 years ago. And I think that is a bit of an overstatement but the idea is that technology is great but it is advancing at the same rate that fiber is advancing and wireless is advancing. So they are perpetually just a little bit behind.

But if they are meeting the mark that they can provide basic connectivity, they ought to be in the mix of the conversation and

not be hobbled in their ability to bid in the reverse auction by the fact that they can't hit a 100 megabit target if a 100 megabit target hasn't been justified.

Mr. LATTA. Thank you.

Mr. Guith, while much of our Nation's infrastructure depends on Federal investments, the private sector needs to step up to make needed investments in our electric grid.

In your view, what is the greatest impediment to unleashing more private-sector investments?

Mr. GUITH. Within the electric grid it is relatively simple. It is the inability to site intrastate transmission lines. Unlike with natural gas pipelines, where Congress bestowed a Federal preemption to FERC, licensing and permitting of transmission lines is a State-by-State, Balkanized process, and it frequently takes north of a decade to try and get through that process, and usually it turns out negatively.

We have seen both DC and AC lines stopped by a single State, even though it may benefit, you know, 14 States.

So it would be very useful to have that Federal preemption for transmission the same way we do with natural gas, although you probably have 50 Governors who might take issue with that.

Mr. LATTA. And just in my last 10 seconds, you might answer a little bit of this. But what should Congress do to encourage more public-private partnerships? I know you just mentioned preemption.

Mr. GUITH. I am sorry. Can you repeat the last part of the question?

Mr. LATTA. Yes. What should Congress do to encourage more of the public-private partnerships?

Mr. GUITH. Fundamentally, just more transparency, more predictability. There are trillions of dollars out there both in corporations, financial service funds as well as foreign sovereign funds, who are willing to invest in all forms of infrastructure within the United States.

But it is not predictable enough right now, and providing that predictability will open the floodgates to that additional money that is not coming from the U.S. taxpayer.

Mr. LATTA. Thank you.

Mr. Chairman, my time has expired, and I appreciate the indulgence. I yield back.

Mr. PALLONE. Thank you.

Mr. McNerney recognized for 5 minutes.

Mr. MCNERNEY. Thank you. I thank the chairman. I thank the witnesses for coming in this morning and talking and preparing. It is a big effort.

My constituents and Americans across the country need broadband access to fully participate in our society. The LIFT Act will result in smart Federal investments and broadband deployment to achieve this goal.

But I am concerned that many Americans still are unable to get online because they face adoption hurdles such as not being able to afford broadband service and the necessary devices or do not have digital literacy skills.

Commissioner Clyburn, based on your experience at the Commission, what are some of the ways that the lack of adoption impacts low-income individuals in their communities?

Ms. CLYBURN. Well, one thing that I am happy about, today I consider it a very significant $40 billion down payment. This is but a first step, however.

You rightly mentioned that in order for a person to be truly connected it has to be affordable, it has to be available, and they have to know or be comfortable in using it, because if they are not comfortable accessing online, if they cannot download an app, and if you don't have those skills needed, you won't have workforce development training.

You will not be able to be retooled for the 21st century. So all of these things are necessary. It is a multiprong, definitely a stool effect that is needed—a number of legs on the stool. This is one. Digital literacy and other opportunities are others.

Mr. MCNERNEY. So you already sort of answered my second question. Would you agree that there is additional Federal investments needed for broadband skills and digital literary training?

Ms. CLYBURN. Absolutely. A very wonderful complement is a proposed digital equity act. You know, that, again, has to be a complement to this. Otherwise, America will not be truly connected.

Mr. MCNERNEY. Very good. Well, I have been working with Chairman Pallone on that and plan to introduce that soon so we get to some of these issues so the disadvantaged and underserved communities aren't left out.

Moving on to water infrastructure, the Smart Energy and Water Efficiency Act proposed by Mr. Kinzinger and myself is included in this LIFT Act, and this creates a pilot project for innovative technologies to improve energy efficiency of water, waste water, and water reuse systems.

My district is at the heart of the California delta, and I have a responsibility to be a good steward of that incredible resource.

Mr. Wahler, can you address the need for grants to improve water and waste water infrastructure in communities like yours?

Mr. WAHLER. Well, right now, cities and towns across this country and particularly mine, we float a lot of money through it—the Federal and State—and there is a very small portion of the down payment money.

Like I said before, we spend an average of $10 million a year on infrastructure even though our water has been in private hands for a number of years. I do know that the water purveyor has been making substantial public improvements out there on the roadways to make sure that the clean standards are being followed and that we don't have any areas where we have to shut down schools because of nonsafe water.

However, what I would like to say is that we need to have towns and counties that don't necessarily have the expertise out there.

Grants such as what you were mentioning would help them get that expertise and do proper long-term planning out there so, when they go to do a large capital investment of the local public dollars, they will be able to do it correctly.

Mr. MCNERNEY. Thank you.

Mr. Auerbach, you testified that Americans' life expectancy has dropped for the last 3 years in a row. Is that in line with other developed countries?

Mr. AUERBACH. It isn't. We are seeing more of a gap that is growing between the United States and other developed countries. We have looked at the reasons for that. Some of the causes of increased deaths in the United States relate to opiate epidemics, suicides, et cetera. So paying attention to those differences, I think, is part of what we need to do to understand how to close that gap.

Mr. MCNERNEY. Do you think the LIFT Act will help remedy this?

Mr. AUERBACH. It will. Our ability to respond efficiently to the challenges that we are facing now will benefit the American people in terms of better surveillance, better understanding of where there are concentrations of particular problems that may be related to the opioid epidemic.

If we have got the kind of data systems that allow us to have interoperable communication, we can target those particular areas with interventions that we know work in terms of prevention and response.

Mr. MCNERNEY. Thank you. I was going to talk about infrastructure on transmission. Just yesterday, a colleague, Bob Latta, and I hosted a grid innovation expo to highlight some of the technologies out there, and I hope that Members and staff take advantage of that information as we move forward.

Thank you. I yield back, Mr. Chairman.

Mr. PALLONE. Thank you.

Mrs. Rodgers?

Mrs. RODGERS. Thank you, Mr. Chairman, and I appreciate all the witnesses being here today. I wanted to highlight the broadband in rural areas issue, which is especially important. I think it is fundamental to our economic success and our future. It is certainly part of the infrastructure of the 21st century.

Unfortunately, too many rural areas are being left behind, including some in eastern Washington that I represent. And to make matters worse, an issue that has been highlighted this Congress is the inaccurate broadband mapping and the data that is greatly overstated—the coverage in the rural areas.

I am pleased that broadband is part of the discussion today and, as we think about an infrastructure package, that this is going to be a priority.

However, with the economic survival of our rural communities at stake, we must avoid the mistakes of the past and ensure that the limited resources we are able to provide make it to the areas that need it the most.

Forty billion dollars is a considerable amount of funding. But its ability to make a dent in the digital divide is going to be reliant on accurate data.

And that is why in the coming weeks I am planning on introducing the House version of the Broadband Data Improvement Act. This bill will ensure that the FCC is compiling the most complete and granular data on broadband access.

Mr. Lyons, how important is it for the current mapping process to be improved and made more accurate and granular before distributing new funds to deploy broadband in the rural areas?

Mr. LYONS. I think it is absolutely vital. I think that analysis is only as good as the data that is fueling the analysis, right.

You can have complex statistical models to figure out how something is going to work, but if it is bad data being fed into it, then you are going to get bad results out.

I think everybody acknowledges that the FCC's existing mapping protocols don't really work. They are based on Form 477, which was developed back in the dial-up era, right—back when most of us didn't have internet and those that did were dealing with that junky static noise, right.

The FCC is updating that, and I think it is long overdue and it is going to be valuable. I think there's also a lot of public-private partnerships that could be valuable in this space. Things like U.S. Telecom and WISPA are currently engaged in a pilot project to map within some of their jurisdictions.

Somebody mentioned crowd sourcing, which I think is also really valuable. Just getting information that is disbursed in the populace up to the FCC or some other entity that can coordinate all these separate data points into more accurate mapping is also going to be valuable.

Mrs. RODGERS. Thank you. Appreciate that.

For Mr. Guith, you may be aware that I am a strong proponent of hydropower. I come from Washington State. We are more than 70 percent dependent upon hydropower. It is clean. It is carbon free.

We also enjoy some of the lowest electricity rates in the country. Hydropower is the largest renewable in America, and its role, as we move forward, is going to be really important.

I have been working to increase the use of this important energy both nationally and internationally. Last year, we worked on legislation—bipartisan legislation—that passed the House to modernize the hydropower licensing process.

The current regulations take on average 10 years to relicense a hydropower project in America, and you compare this to a natural gas facility that is, like, 18 months.

I wanted to ask you how do you believe hydropower fits into the bigger picture of energy infrastructure.

Mr. GUITH. I think it is a great example of the United States being so rich in energy resources that it behooves us to use the resources that we have geographically.

And growing up in northern California, we also rely on hydro significantly, and we run into issues all the time trying to site incremental increases in hydro and, frankly, have to fight to keep the existing generation we have. And not just from the generation standpoint, but increasingly from the pump storage standpoint.

So I think hydro is and will remain an incredibly important part of our portfolio. But there can be more. There is certainly more capacity available in the United States, and it is not just in the Pacific Northwest, which is so blessed with hydro to begin with.

Mrs. RODGERS. Well, and because of research, because of investment in new technologies—we have fish ladders, we have turbines

that have larger outputs and we are getting to a place where dams are transparent to the fish—3 percent of the dams in America actually produce hydropower.

So there is existing infrastructure that is currently there that with investment we could be producing clean, renewable electricity.

So I wanted just to follow up. How do you believe that we reduce some of the burdensome regulations that are impacting our ability to really take advantage of this?

Mr. GUITH. Well, I think the work that Congress did with your leadership last year was a great first step. First and foremost, it is trying to identify what the issues are and then addressing them.

In this case, like I said, there's a lot—I mean, you are talking about multiple agencies that you have to go through here, and sometimes they don't even know each other, let alone have communication lines to talk to each other.

And so first, it is highlighting that, and we have seen the ability of the FIPC to address some of these issues, and it certainly applies to hydro as well.

It is not the end-all be-all, but it is what is available right now. And there are certainly some additional bipartisan reforms, whether it is one Federal decision, some reasonable NEPA reforms that I think over time people will embrace that will help spur these things, including hydro.

Mrs. RODGERS. I appreciate that, and it dominates in the Pacific Northwest, it is true. But I have always been amazed at the projects that are all over the country as well as all over the world.

So thank you very much, Mr. Chairman. I will yield back.

Mr. PALLONE. Thank you.

Ms. Castor is next, recognized for 5 minutes.

Ms. CASTOR. Well, thank you, Chairman Pallone, for holding this very important hearing on how we modernize infrastructure across America.

I agree with what I have heard from my colleagues and our terrific witnesses here today. We can boost higher-paying jobs across this country by expanding broadband, doubling down on the clean energy economy, doing some more on public health infrastructure, and I am hearing great support from folks I represent back home in the State of Florida.

They understand what the Recovery Act meant to our communities, and they would like a more robust partnership. Really, the Federal Government has got to be a meaningful partner. It can't be just all talk, no action.

I am particularly interested in how we build a 100 percent clean energy economy, going forward, and Ms. Eckdish, thank you so much for your leadership and that of the BlueGreen Alliance.

You are already building partnerships across the country to build that clean energy economy. Would you go into greater detail on a few things—smart grid investments—why do you think that those smart grid investments could be a key to building the clean energy economy, and then talk about what it means for jobs when we are talking about smart grids and a modern electric grid.

And then I would also like you to focus on energy efficiency in green buildings. I have seen what the private sector is doing. Now,

the public sector wants to do more, but it seems like they need some resources from the feds to help give them a push.

Ms. ECKDISH. Sure. Thank you for the question, and thank you for your leadership with the Select Committee.

In terms of your first question, I think grid modernization is key both from a climate resilience perspective as well as a greenhouse gas emission reduction perspective.

As I mentioned, grid modernization, grid resiliency, as well as transmission expansion can be key to facilitating electric vehicles as well as further deployment of clean energy onto our grid.

It can also help ensure that our communities are more resilient to the impacts of climate change, as you know well in your State from power outages to flooding and storm surges.

To your second question, building efficiency is key and a huge opportunity. There are already 2 million workers employed in the energy efficiency sector today.

So with further investments, we know we can dramatically expand those jobs. And many of those today are already good jobs in the building and construction trades. With domestic content requirements, we can also expand the manufacturing of energy-efficient products and materials.

There are already tremendous jobs today in the manufacturing of energy-efficient component parts. So with further Federal investment coupled with labor standards and procurement standards, there is significant opportunity to expand that.

Ms. CASTOR. So I had to step out of the hearing for a little while to sit down with one of America's mayors of a very large metropolitan area, and he explained to me how they run a municipal utility and they decided to go 100 percent clean energy over the next couple of decades.

And one of the things they set out to do, they took their coal plants offline. But he said they had to give special attention to a lot of the folks who were employed there and it—yes, it means community college training initiatives, but it can't just be a short-term focus.

This has got to be something that we focus on to ensure as we transition from the old dirty fossil fuel energy sources to clean energy sources that we just—it can't be simply a training program, temporary for a few months or a year.

Talk to me about what the model should be going forward for a just transition.

Ms. ECKDISH. Sure. Thank you.

I think your point is well taken. These facilities are not only—you can't only think about the workers at the facilities. You need to think about those workers as well as the broader impact on the communities themselves.

In many cases, these plants are huge tax base resources for the communities in which they're located. So that means resources for infrastructure, schools, first responders.

So we need to make sure, as we are thinking about addressing climate change and the clean economy of the future, that no community or worker is left behind and they shouldn't be paying the price.

We need to make sure not only that workers directly impacted are kept whole, but also that we are focusing on reinvestment in these communities that are seeing these losses.

Ms. CASTOR. And what this mayor said was, as they created jobs in the green economy, whether they are solar installers or working in energy efficiency, they became the higher-paying, more family-sustaining jobs than some of the older fossil-fuel-type jobs. Are you seeing that as well?

Ms. ECKDISH. I think a lot of the jobs that we see today in the fossil fuel economy are good jobs, and are—there is some significant union density.

I think what we need to make sure is that the jobs that we are creating in the clean economy are as good if not better, and making sure we have strong labor standards and procurement standards. Our investing in retraining is a key part of ensuring that.

Ms. CASTOR. Thank you very much.

Mr. PALLONE. Thank you, Ms. Castor.

Next is Mr. Guthrie, recognized for 5 minutes.

Mr. GUTHRIE. Thank you, Mr. Chair, and I appreciate everybody for being here today.

And my first question is for Ms. Eckdish and Mr. Lyons to comment on this—Professor Lyons to comment on this as you move—as we go.

So, Ms. Eckdish, in your testimony you agreed with our efforts to win the 5G and the $40 billion for expedited deployment of broadband, and I appreciate your commitment to that.

But attached into your testimony was advocacy for the overturning of FCC's small cell order. And so my question is, wouldn't the overturning of the small cell order be a setback for expedited deployment of 5G?

Ms. ECKDISH. We do support restoring the ability of local governments to regulate deployment of small cells, and we see that as key for these communities meeting the needs of their——

Mr. GUTHRIE. That would be a setback for expedited—I mean, I understand we need a debate before this decision needs to happen. But it would slow down the deployment of 5 because you have to deal with every locality as opposed to a national standard.

Ms. ECKDISH. I would love to follow up on that.

Mr. GUTHRIE. OK. Mr. Lyons, would you like to have a——

Mr. LYONS. Yes. I think a big driver of the FCC small cell order is the fact that 5G technology is very different than the 4G and 3G towers that were driving the original tower statutes, right.

When you are talking about whether you are going to put a large tower in a town that, you know, you can see from several miles away, having significant local input makes a lot of sense.

When you're talking about little pizza-box-sized spaces all around town, it is a different impact. And so the trade-off between how much we should give local authority and how much we should be expediting build-out of infrastructure, the calculus changes a little bit, and that is part of what was driving the small cell order.

I do think repealing the small cell order would slow things down, because it would add an additional potential veto gate into the building out of new infrastructure.

And as we saw in—from time after time, right, satellite deployment and local franchising authority in cable industry and things like that, those additional veto gates become potential road speed bumps on the path toward deployment. We think it is opportunity for more.

Mr. GUTHRIE. OK. Thank you.

And I think it is a fair debate, and so I just wanted to bring that, moving forward.

So this would be for Professor Lyons. Many Kentuckians have been able to gain access to the internet through the expansion of wireless services.

In your testimony, you mentioned the bill we are discussing today as technology neutral. I know you have mentioned something about what the speed requirements would do to threaten the ability to use innovative solutions to geographic, topographic, or economic challenges to deploying broadband in rural America.

Could you expand on how the speed requirements in the bill would threaten that and, since you have touched on that already, any other provisions in the bill that might affect deployment in rural America?

Mr. LYONS. Yes. I think the primary concern with a minimum speed requirement is you disqualify any technology that can't meet that speed, which limits the number of bidders available and therefore limits the areas you can serve and how cost efficiently you can do so.

Now, if the speed limit is justified, right—you say the bill sets 100 megabit per second download minimum—if there is a justification for that like that is the amount that we think is necessary for somebody to be connected, then that is totally appropriate.

But if the proper amount is something less than that, then it doesn't make sense to me to eliminate potential bidders who can provide service in rural areas to connect unconnected communities in ways that are going to give them the basic needs that they need by setting an artificially high premise.

Now, you might be trying to futureproof the network, and I think there is arguments for that. But if you are going to do that, you need to recognize it is a trade-off.

Mr. GUTHRIE. OK. Thanks.

And I was also going to ask you about mapping. I know Cathy McMorris—my friend from Washington just talked to you a little bit about it. Is there anything you want to expand on that about mapping and—because they probably do get overbuilding.

My area—I have lived in Bowling Green, which is a growing progressive city in the mid-South, and even in our area because of the development of building housing, even a county that has gone from 75,000 to 130,000 people in the last 20 years, still there are areas that homebuilders say, "We can't build in these areas because people aren't going to buy the kind of houses we are going to build without access to broadband," even though it is right next to a really fast-growing, developing city.

And then I have very rural counties, too, that don't have that same issue. Unfortunately, the opposite of growth. So how do—just talk about how mapping close to big cities and where they are not

being served or growing areas, but also just areas that really need some help in moving forward.

Mr. LYONS. Well, one issue you have cited is sort of outdated data, right—that data collected, no matter how accurate, if it is 1 or 2 or 3 years old, it may not reflect the situation on the ground at the time.

So I think one issue that a comprehensive mapping solution needs to undertake is how often the data gets refreshed—how often the carriers have to report back to the FCC where their build-out maps are.

Mr. GUTHRIE. Do you think mapping should go down to Census tracts, or how detailed should they be?

Mr. LYONS. So it depends on—Census tracts is useful, but it doesn't always capture exactly what you are looking for. We learned in the BDS proceeding, which was the Business Data Services, is that sometimes you need to be down on almost like a block-by-block level to understand which particular parcels have deployment and which don't.

You can have a Census tract where most of the area is wired and we might consider that wired, but there are still places within the Census tract that are being left out.

Mr. GUTHRIE. So when you get down to the—I understand we would love it even house to house, if you could. But the question is you get to cost benefit of that.

Mr. LYONS. Right.

Mr. GUTHRIE. And so at what point—what do you think is the——

Mr. LYONS. So the trade-off then becomes how expensive is it to get that granular of data, and so the ancillary question to that is what are the different ways you can try to get that granular data.

If it is too expensive to get it through carrier reports, can you crowd source it in a way that at least fills in some of the information and then discount it appropriately to understand the dirtiness of the source?

Mr. GUTHRIE. OK. Well, thank you, and that fills my questions, and I will yield my time. I don't know if somebody wants it. I will yield back.

Mr. PALLONE. Thank you. Mr. Tonko is next, recognized for 5 minutes.

Mr. TONKO. Thank you, Chairman Pallone. I will mention two statistics that I recently came across. First, China used more cement between 2011 and 2013 than the United States used in the entire 20th century. Second, China also has 421,000 electric buses in operation. The United States has 300.

That being said, a sound economy begins with sound infrastructure. We cannot afford to keep deferring maintenance or construction of what we know will be needed for a competitive and sustainable economy of the future. We have a once-in-a-generation opportunity to invest and modernize our aging infrastructure. We need a vision for what it can be, and it must be a comprehensive approach. So, Chairman Pallone, I want to commend you for the LIFT America Act. It lays out that vision, and I want to highlight a few important provisions.

This bill makes major investments in our Nation's drinking water. We made some great bipartisan progress last Congress with the Drinking Water SRF reauthorization, but we also know EPA has estimated the needs over the next 20 years at some $473 billion. If we continue to underinvest in these systems, especially as we learn more about the extent of our challenges from lead, PFAS, and other contaminants, providing clean, reliable and affordable water will only become more difficult for local governments.

So, Mayor Wahler and Ms. Eckdish, if Congress considers an infrastructure package, how important is it that water infrastructure is included?

Mr. WAHLER. Everybody wants to live a long life, and you have to drink water. So we have aging pipes throughout this country. Towns and cities have limited capital resources out there to take care of the issue. Any way or any additional tools in the toolbox for municipalities and counties to replace pipes that are suspect or contaminated is a great thing, and I hope this committee moves along with this bill to do it that way, because you can't survive without water. You need water.

Mr. TONKO. Thank you.

Ms. Eckdish?

Ms. ECKDISH. Yes, it is critically important. Thank you.

Mr. TONKO. And, Mayor Wahler, do you think it is important that Congress provide support to local governments for some of these public health crises, including lead and PFAS contamination?

Mr. WAHLER. Well, I think it is safe to say over the last 5 years what we have seen around the country is, with all these lead pipe poisoning crises going—and I hate to say it, we are probably going to see some more of that. I think if we were proactive in this room, working in collaborations with the local officials out there, we might be able to be proactive and prevent that from happening in the future.

Mr. TONKO. I am also pleased that the bill includes a reauthorization of the Weatherization Assistance Program. Buildings consume about 40 percent of our national energy demand, and many low-income families cannot afford the upfront costs for retrofits even when they are cost-effective investments.

Mayor Wahler, how have weatherization funds helped low-income families in your community?

Mr. WAHLER. Well, I think in a lot of the—especially in the Northeast—you have a lot of housing stock that is a lot older, where traditionally the building codes weren't up to the new weatherization standards. So when there are direct grants out there that towns and cities can get their residents to retrofit there, the communities—not only are they saving on energy costs, but more importantly they are saving on the carbon footprint.

Mr. TONKO. This bill also covers important aspects of the transportation sector. We all know transportation is now the largest source of greenhouse gas emissions in the United States. We will not be able to adequately address the climate crisis or accelerate the clean energy transition unless we help finance an infrastructure build-out for cleaner vehicles.

Ms. Eckdish, I already mentioned China's embrace of electric buses. Do you believe supporting zero-emissions vehicle infrastruc-

ture will lead to more American jobs in manufacturing as well as charging station installation and maintenance?

Ms. ECKDISH. Yes, and it is critical we do it the right way. We need to make sure that across the board, from grid modernization that is needed to facilitate EVs to the build-out of electric charging infrastructure to the manufacturing of the vehicles themselves, that we are harnessing that opportunity here in the U.S. and with domestic content, labor standards, we are investing and leading the world in the manufacture of those vehicles and technologies.

Mr. TONKO. Thank you. And do you agree that these investments will make our economy more competitive while reducing our air pollution?

Ms. ECKDISH. Yes, absolutely.

Mr. TONKO. And, Mayor Wahler, if given the resources, will local governments do more to ensure residents have access to this type of charging infrastructure?

Mr. WAHLER. You bet. I have to laugh. We are building a community center right now, and when they found out there are going to be charging stations there, the first question out of a lot of the residents, "Well, how much are you going to charge for me to come charge up?"

Mr. TONKO. Well, LIFT America has great provisions on transportational electrification and EV charging stations, and I hope we can continue to work on a comprehensive clean transportation package that will make sure we are reducing pollution from this sector.

Finally, this bill has strong provisions to promote grid modernization and resilience, but a 21st century electricity system must also be flexible. We need to ensure we are able to move electrons from where they are generated to where demand exists, and so it is upgrading that grid, but also enhancing storage, providing for the American intellect to carry us through a new generation of storage opportunities so that we can optimally utilize our gridding up with renewal power. With that, Mr. Chair, I yield back.

Mr. PALLONE. Thank you. Next is Mr. Olson, recognized for 5 minutes.

Mr. OLSON. I thank the chair, and welcome to our six witnesses. My question will be to you, Mr. Guith. It is going to be about pipelines and energy infrastructure.

As you all know, right now this country is facing enhanced U.S. global energy dominance. We are making more oil and natural gas than almost the entire world. One example from Texas, there is this place called the Permian Basin in West Texas. It has been predicted by our government that within 2 years that one massive shale play in Texas will produce more oil and natural gas than every country in the world except for Saudi Arabia. That is more than Russia. That is more every OPEC nation, and that is just one shale play right here in America.

Of course, this renaissance, this dominance will die if we don't have the pipelines to get the oil, natural gas, and all the things through the pipeline to where they have to go, to go to the market. FERC is in charge of approving pipelines, and they are having some problems with the excessive demands for new pipelines, for LNG export plants. They are involved in all that.

I have got a bill with Mike Doyle to address all their problems with their employees. They are the best in the business. They are getting poached by the private sector big time because they can pay almost twice the salaries of the Federal Government. We have a model to give them more pay to keep them on board, it comes from the SEC. Again, Mike Doyle and I have sponsored this bill.

My question is for you: Can you talk about why permitting certainty is so important for America's energy dominance, and does this apply to all technologies, not just oil but also LNG exports, hydropower dams, anything, could this help? Any comments about our bill and the challenge we have building pipelines?

Mr. GUITH. Absolutely. This stuff is not cheap. Whether you are talking about utility-scale solar farms, whether you are talking about multistate pipelines, I mean, many of them run in the orders of billions of dollars. Even some of the LNG facilities that we are seeing coming on line now are in excess of $10 billion.

So if you are a project sponsor or, more importantly, you are an investor who may invest in that project, you know, you have to hedge it against the certainty and handicap it against it not getting approved, even though there is a commercial demand for that to happen. And that is true across all forms of generation and energy use. And the more certainty, the more unconstrained that capital will flow to those projects.

Mr. OLSON. Next question is for you, Mr. Lyons. It is about pipelines and all the communications necessary when it is a disaster like a hurricane.

During the last Congress, I introduced H.R. 4845, which was called the Connecting Communities Post Disaster Act. As you know, disasters can destroy telecom systems at their moment of the most highest, the greatest need. In Houston during Hurricane Harvey, after Hurricane Ike came in about 10 years before, we made a big effort to dig all our power lines and put them and our communications lines underground. We did pretty well, but you have to add, that information has to flow.

First responders have to have—where are the flooded roads, where are the problems? Citizens who might be evacuated, OK, you can't go this route, go this route. These communications are a matter of life and death. And with hurricanes, the season looming just 1 short week away, what do you think Congress should do to get this process of making our telecommunication system more viable and stronger during an absolute disaster like a hurricane?

Mr. LYONS. No, I think it is absolutely right that communications are absolutely vital. We saw it in addition to in Texas, in Puerto Rico as well, right. The difficulty of communicating with those who were affected made it a lot harder to get them the relief they needed. I think things like undergrounding, like emergency power backups can help. They are expensive, right, and so it is always a trade-off.

How much are you going to invest now to harden the infrastructure, and how much is it going to pay off in the event of a natural disaster? The provisions that are being available for Next Generation 9–1–1, I think, are going to be significantly helpful in that respect in figuring out how to not just modernize the first responder network but harden it as well.

Mr. OLSON. Thank you. My time has expired. One PSA, public service announcement: The Houston Astros are in first place of the Western Division of the American League of baseball. I yield back.

Mr. LYONS. The Red Sox are not proud of how much they contributed to that.

Mr. OLSON. Three games. We won three up there in Fenway, you all won one. We will get you back in the playoffs.

Mr. PALLONE. Thanks to the gentleman. Mr. Welch, recognized for 5 minutes.

Mr. WELCH. Thank you. Thank you very much, Mr. Chairman. First of all, I want to thank you and our other chairs, Mr. Rush, Ms. Eshoo, Mr. Doyle, and Mr. Tonko. This is a great bill, and it has got some of the provisions in the HOMES Act that I have cosponsored with Mr. McKinley. And this is such a good, ambitious bill I am ready to move the bill.

Mr. PALLONE. Yes, well.

Mr. WELCH. And I am really quite——

Mr. PALLONE. Do you got any cash?

Mr. WELCH. This is the ambitious—all right, let's go. But we have been talking about infrastructure for so long, it is time to do it. We all know we need it. I am really excited about the HOMES Act that is in here. I am excited about the Smart Buildings that I coauthored with Mr. Kinzinger. But every one of us on the committee, I think, has provisions in here. And the witnesses are all here advocating things that we think make an awful lot of sense.

So my hope is—and I think all of our hopes is—that we are actually going to move on this bill and push it out. We always have the challenge of how do you pay for it, but last I knew potholes don't fix themselves. And I have indicated a willingness to support just about any revenue measure that will make this happen, because I think at the end of the day, as much as there is always resistance to paying for things, our constituents know that they don't fix themselves.

And once you start seeing the benefits of, say, broadband buildout or clean energy options or the grid resilience or fixing up the water systems, then people see that that is going to benefit them, and their willingness to accept it is enhanced enormously.

Let me start with Mayor Wahler. Are you OK with us coming up with a way of paying for this? I mean, you have a hard job right on the front lines.

Mr. WAHLER. Well, Congressman Welch, one of the big things, anytime that the Federal Government can help. We are not asking you to pay a hundred percent. Towns and cities already pay about 80 to 90 percent of everything that is going on.

Mr. WELCH. Exactly.

Mr. WAHLER. If there is even down payment money on long-term plans for communities or for when we have to go for long-term bonding for such improvements, that is a good thing. So when we go for the financial markets, if we could show that there is a consistent basis that there will be grant money targeted towards that, that it makes things easier to put——

Mr. WELCH. Right. No, I appreciate that. I met with eight of our mayors in Vermont, and they said pretty much what you said, and they vary in their political points of view.

Mr. WAHLER. Yes.

Mr. WELCH. But they know that they have incredible needs, limited tax base, huge burdens on property taxpayers, and the Federal Government has to help. So thank you very much.

Ms. Clyburn, it is good to have you back.

Ms. CLYBURN. Thank you.

Mr. WELCH. And broadband build-out is part of this. It is absolutely essential, as you know and I think many of us here know, that rural America is getting written off if we don't have the same high-speed internet that urban America has. So if we are successful in getting broadband infrastructure passed in this bill, how do we future-proof, because I don't want us to get a one-time deal where then we are constantly playing catch-up. Can you comment on that?

Ms. CLYBURN. So, with respect to my fellow panelists, I say we go big. I say minimally, you know, a hundred megabits. I say that because not only do our communities need it and they will need it in the future, it would keep us competitive internationally.

One thing, if you will allow me a couple of minutes, in 2012, China, because that was mentioned once, had 20.3 million homes that had fiber, you know, connected, fiber connected to the home. Today they have almost 400 million. If we are going to stay competitive, if we are going to give our communities and the individuals in our communities the tools that they need to stay competitive domestically and internationally, we have to go big.

Mr. WELCH. OK, thank you.

And I want to ask Ms. Eckdish from the BlueGreen Alliance, first of all, I think the BlueGreen Alliance is so good. We are getting people together—who, sometimes competing points of view—to do something that makes sense for all of us, so thank you. And your advocacy, the BlueGreen Alliance, is really essential to the potential of us being successful.

You talked about energy efficiency in public buildings. How could that help us not just to reduce carbon emissions, but who does the work on that?

Ms. ECKDISH. Sure, thank you for the question. Energy efficiency does have tremendous environmental impacts. It has tremendous job impacts as well. As I mentioned earlier, we have over 2 million workers today in energy efficiency. Those are construction workers installing HVAC, other energy efficiency upgrades.

It is also workers in the manufacturing sector. We have almost 300,000 workers that are today manufacturing energy-efficient component parts. So there is tremendous potential. There are already good jobs today in the energy efficiency sector and tremendous opportunity for expansion.

Mr. WELCH. Great. I see my time is up, but I want to also thank the Chamber for the tremendous work that it has been doing in this area. I yield back, Mr. Chairman.

Mr. PALLONE. Thank you, Mr. Welch. Next is Mr. McKinley, recognized for 5 minutes.

Mr. MCKINLEY. Thank you, Mr. Chairman. You know, as I read through this bill, you reminded me of a kid in a candy store. You could have had anything you wanted in this legislation. You are the chairman of the most powerful committee in Congress. Your

party is in control of the House. But then you went into the candy shop, and you left with a stick of gum.

We have the opportunity to do something bold and robust on energy infrastructure, but this committee so far is aiming low. This is the Energy and Commerce Committee. After 5 months in the majority, is this really the best that this committee can do on energy infrastructure? Yes, we have aspects of modest initiatives in broadband, drinking water, in healthcare and brownfields, and some of that I will support with you, and I realize there may be jurisdictional limitations.

But with all the hype about what we need in a comprehensive infrastructure bill, why haven't we sought a bolder, broader, more comprehensive bipartisan approach to this? But not one, not when there is just 31 Democrats on the bill and no Republicans. There are numerous bipartisan bills that could have been included in this, the 48A Tax Credit by Collin Peterson, the Gas Turbine Efficiency, Paul Tonko's, or Scott Peters' the USE IT Act.

The LIFT America Act was billed as a sweeping legislation to combat climate change, and yet it glaringly omits authorizing energy research to produce innovation and solutions and research. Research including carbon capture and storage, gas turbine efficiency, methane hydrates, battery storage, fugitive methane emissions, alternative to lithium-ion batteries and cobalt, rare-earth elements, wireless power transmission, hydrogen fuel cells, small nuclear and modular coal plants.

Keep in mind, Mr. Chairman, America currently spends more money on eating potato chips than it does on researching energy. Mr. Chairman, we had a chance to put together a package that you wanted. You had the keys to the candy store. So let's be bold and include some bipartisan measures that gives this bill a chance to pass the Senate and be signed into law. The American people deserve better.

To win the big game, Michael Jordan knew he had to have the confidence to take that last shot, that game-winning shot when he had the chance. Instead of taking that risk, this committee appears to be passing the ball. It is a lost opportunity.

So, Mr. Guith, if I can ask you on this, you mentioned Scott Peters' USE IT Act in your testimony. Would more innovation and research be beneficial to addressing the infrastructure problems we have on energy and particularly as it relates to combating the climate change challenges that face—would energy and research be helpful?

Mr. GUITH. Most definitely. I mean, climate change is inherently a technology issue, but it is also an infrastructure issue. And there is significant scientific consensus that specific technologies are most likely—no guarantee—to be key to addressing, to lowering emissions and ultimately preventing emissions globally.

One of them is carbon capture utilization and storage. In order—one end of that obviously is capturing the carbon, which in and of itself is a challenge, but we are seeing significant innovation happening there. But at the other end is what you do with it, so you need to have the infrastructure to move it and then to ultimately sequester it geologically or otherwise permanently.

And the USE IT Act is a great first step in pairing with the fiscal policy that Congress has put in place in order to make it easier to site and permit those projects and also incentivize them. And that is a key step forward for U.S. innovation that will hopefully lead the globe in a move towards a much-less-emitting and ultimately not-emitting economy.

Mr. MCKINLEY. Thank you. I mean, there are so many things on capturing the carbon. We get oxycombustion. We get chemical looping. There are so many things we could do, but we have a chance in this bill and we omitted it. We could have authorized more research to go for it. So again, I yield back the balance of my time.

Mr. PALLONE. Thank you. Next is Mr. Loebsack, recognized for 5 minutes.

Mr. LOEBSACK. Well, thank you, Chairman Pallone and Ranking Member Walden. I thank the witnesses for being here today. I do want to echo my friend Peter Welch's comments about what a great bill this. I really do believe it is.

And just, if I might, to respond to my colleague Mr. McKinley, I would like to see more in this too. There is a lot more out there that we could be doing. Not to defend the particular approach that we have here, but I will say that often in this body and over in the Senate, the bigger you make a bill, the more targets there are for the opposition and the harder, therefore, it is to get it passed. But I am certainly open. I don't want to, you know, I can't speak for the chairman or the ranking member, but I am open to adding some more things to it too, if we can get bipartisan support for that. There are a lot of great ideas out there.

One of the things, one of the ideas that I look forward to discussing further is a bill that I have worked closely with Representative Mullin, Markwayne Mullin, the Communications Jobs Training Act. And this bill would provide funding to develop training programs, workforce programs, for construction and maintenance for these communication towers.

I visited one of these just recently. I didn't go up as high as a couple of our Commissioners. In fact, I didn't go up at all because those things are awfully damn tall. But I put all the equipment on, and it was really quite fascinating. We are clearly going to need more people to do these jobs down the road to construct more of these towers.

And in conjunction with the tower infrastructure we need of course broadband infrastructure, and that has been talked a lot about today. I am really happy to see that this bill includes $40 billion for this purpose. I am from Iowa, a rural district of 24 counties, probably 12 or 13 thousand square miles. We have a lot of problems there when it comes to rural broadband. And I have been for now a number of years raising the issue related to the poor quality of the FCC's maps, which has been talked about already today.

I am glad this bill does start with maps that Congress has funded at the NTIA the last few years, and I am glad that the mapping section requires the FCC to consider publicly available broadband information and that the challenge process minimizes the regulatory burdens. That is really something that I think is important.

And, Commissioner Clyburn, I would like you to speak to that issue. Why is it critical that any challenge process be conducted with the least burden, the least burden on customers and those doing the challenging?

Ms. CLYBURN. Because when you see something wrong, it should not be a heartache to point it out. It is as simple as that. And so I am glad you pointed that out, and I am proud to brag—Mr. Duncan has already left—that my State will be a part of that publicly available, you know, mapping universe, because it is producing its own broadband mapping plan. And so, in addition to that, Microsoft has, you know, an infrastructure for you to reference. It is an all-of-the-above approach, because again all eyes are not going to see everything, and it is important for us to know what is there.

Mr. LOEBSACK. And make that challenge process as transparent and as easy as possible as well.

Ms. CLYBURN. Absolutely, absolutely.

Mr. LOEBSACK. Because there are a lot of other different sources of information out there that we ought to be taking advantage of. And I will just mention, 2 times ago I think it was, when Chairman Pai was here, he—maybe 3 times ago—he mentioned that he had been traveling in Northwest Iowa, and he had a lot of dropped calls and lot of problems up in that part of the State. I am in the southeast part, but I grew up in the northwest part.

But all over Iowa, all over rural America, we have problems. And it says that we have good service in those areas if you look at the FCC map, but it is simply not the case. My view is we can't move forward if we don't have good mapping in the first—we have to know where the problems are if we are going to solve the problems, and right now we don't have good——

Ms. CLYBURN. And I am proud to brag that I was part of pushing in the Mobility Fund, Phase I and Phase II.

Mr. LOEBSACK. Yes, you were. And thank you for your service.

Ms. CLYBURN. Thank you. I appreciate that.

Mr. LOEBSACK. I really appreciate that, Commissioner.

Look, I am very proud that my home State of Iowa is a leader in renewable energy and energy efficiency. I often talk about wind energy accounting for nearly 40 percent of our electricity in the State of Iowa. And this is a key moment for the committee to play a role in addressing climate change, and this bill does make several key investments for our energy future, although I am willing to entertain more possibilities.

It does include my bill, the Renew America's Schools Act, which will help schools modernize and make critical energy efficient upgrades. It will create jobs, a really good thing, right? It will reduce emissions. It will produce long-term cost savings for our schools. This is something I have been trying to get through for a number of years as well, all while providing our students with top-notch learning environments.

We know that the environment in which our students learn and our educators teach can have an immense impact on the quality of education our children receive, and that makes, I think, this a win-win situation all the way around for workers, for students, for parents, for educators, and our administrators as well.

Ms. Eckdish, in your testimony you mentioned the importance of upgrading our Nation's inefficient and unhealthy school buildings as part of a smart infrastructure package. I know you are not an expert on education as such, but can you speak generally about the impact investing in modern and efficient school facilities would have on the health of our students and the quality of their learning environments, not to mention the jobs obviously associated with this?

Ms. ECKDISH. Yes, thank you for the question. And thank you for raising schools. We absolutely think they should be a key part of the infrastructure discussion, and I would be remiss if I didn't say we strongly support the Rebuild America's Schools Act, which has broad support across Congress as well.

We know as you said that investing in schools has tremendous impacts on students, teachers, other staff at these facilities from the health of their learning environments. Schools are—we have many schools with asbestos, lead, a host of health issues. We also know that making energy-efficient upgrades can save schools money that they can then reinvest in their schools, so there are clear economic and environmental benefits. There are also tremendous job benefits as well on both the construction side and, again, on the manufacturing side as well.

Mr. LOEBSACK. Yes, I taught at a college. My wife taught second grade for over 30 years. I know that from a curricular standpoint too we can even incorporate some of the changes that maybe did take place in a particular school setting into the curriculum, and maybe even some of those students who go home and tell their parents about how great green schools are and we could spread the good word that way as well.

Commissioner Clyburn, I know you already did talk about a future-proof rural America. Do you want to elaborate at all? I know you mentioned a hundred meg, for example.

Ms. CLYBURN. Well, again, I think we should start there and aim up, because, you know, this is an international race. And is it a race for people to be able to take advantage of telemedicine and other opportunities? You are going to need speed. You are going to need fiber. You are going to need those investments to ensure that that happens.

We cannot afford to look through today's lens, a 2019 lens. We need to look far into the future, and we don't want to come back here another 5 or 6 years from now. "Groundhog Day" was a great movie, but not, you know, the way in terms of implementing policies and procedures.

Mr. LOEBSACK. Thank you so much. Thanks to all of you. And I yield back.

Mr. PALLONE. Thank you. Mr. Griffith is next.

Mr. GRIFFITH. Thank you, Mr. Chairman. I appreciate it greatly, and I appreciate talking about rebuilding American schools in many of my counties, or in a few of my counties. The counties are having a hard time, and I just want to make sure there is enough flexibility in there that, you know, we are trying to keep the rain from coming in. If we can sneak away to do that and put some solar panels up there, I am all for it because that is the way we can have a win-win. But I did want to mention that.

Mr. Lyons, I want to appreciate you talking about crowdsourcing, because as Ms. Clyburn pointed out, sometimes—or somebody did—that maps don't always reflect—the FCC maps aren't always accurate. I can assure you the folks in my district can tell you exactly where they do and don't have service, because, you know.

And what is amazing is, in some of those counties that are having a harder time—I represent 22 counties and seven independent cities in the Commonwealth of Virginia. It is a big rural district. Some of the counties are having a hard time and they don't have service, and so we need to do something about it. But what is surprising, and this is where the maps won't show it, I have people who don't have service within a mile or two outside of the town of Blacksburg, Virginia, home of Virginia Tech.

Now, Blacksburg is one of the most wired communities out there, but I have people who work there who don't have service at their homes. And so—and I like your approach, Mr. Lyons, when you said in your written testimony that, instead of talking about the megabits or the gig or the, you know, the upload and the download speeds, let's put it in terms of what they can get. So how much do we need in those areas to make sure the kids can do their homework?

Mr. LYONS. Appreciate the question, thank you. Yes, so we can just start just by figuring out what are the things that we need to guarantee that anybody should be able to do online, right. The examples I gave in my testimony, Skype, which is two-way video conferencing, required about 1.2 megabits per second. Netflix calls for about 4 megabits per second in order to get high-definition feeds.

So a 25-megabit per second would support both Skype and multiple Netflix streams with space to spare. Now, Netflix will tell you it requires 25 megabits per second for their big 4K download, but I am not sure we should be in the business of subsidizing the ability to download "Orange is the New Black" in super 4K rather than just high definition.

Mr. GRIFFITH. Now, correct me if I am wrong because I am here to learn. That is why I love committee hearings. If you can do the Netflix, the regular stuff at 5, then that means that most of my kids could do their homework all over the district if we had at least the 25 or the 5. Is that correct?

Mr. LYONS. Yes, I think that is right. My son says 25 is a fair compromise between what the bare minimum would be and what would be a reasonable amount, right. So I don't think it is enough to just say, OK, you can do your homework and it is going to be a little bit slow, but you know, you want to make sure you are giving a little bit of a comfortable margin. Twenty-five gets you there. By the time you get to about 100 megabits per second, you are talking about things like, I don't know, 3D holographic two-way communication and stuff like that which, you know, it may be the wave of the future——

Mr. GRIFFITH. Great.

Mr. LYONS [continuing]. I am not sure that is where we should be investing all of our money now.

Mr. GRIFFITH. Well, and I would tell you my feeling is, step one, let's make sure everybody's got the 25. Then once we get there,

where everybody in the country has that, then yes, I am all for moving it up and making those speeds faster as we go across.

One of my counties recently has announced through their telephone company that they are going to go actually to a gig download and 500 upload which is just great, and they plan to have it all rolled out by 2021. And they are putting the infrastructure in and they have gotten some grant money from us, and I think that is great. But then I worry about those folks on the other side of the line who may not have anything. And so, I want to make sure they get service, so I do appreciate that.

Mr. LYONS. Thank you.

Mr. GRIFFITH. I want to talk a little bit about hydro. My colleagues have talked about that some. I had a bill and, Mr. Guith, if you could help me with this. I had a bill where we could do closed loop inside mines, and I thought that was really interesting. But recently, I visited a national historic landmark building in Wytheville, Virginia. The dam has been certified. It is fine, everything is great. The sluice is still there, if I am using the right terminology. The only thing they don't have any more are turbines.

It would seem to me that if we could figure out a way to cut through the red tape and reactivate this dam—Ms. McMorris Rodgers mentioned that I think only 3 percent of the dams have hydro capabilities—they have the spot to put them in. The owner is not opposed to that. He got it on the National Registry because he bought it and it was falling—not falling down, but it was just in bad repair and he has fixed the building up.

What can we do? Because, you know, he indicated that it might be hard to sell that electricity. He doesn't know how to do it. How can we make folks who actually have a dam that already is sitting there that was used a hundred years ago to make electricity, do it? And am I correct that having a lot of these small dams in operation would actually help improve the resiliency of our grid?

Mr. GUITH. Yes, absolutely. The reliability that a base load like hydro brings is incredibly important because it is able to cycle. So as you bring more renewables into the grid that are variable and come and go based on the availability of the sun or the wind, having resources like peaking gas or hydro is incredibly important to follow that load as it fluctuates so we can keep the grid stable and ensure that you have that reliability.

Ultimately, to your question as far as how to make it happen, it helps to have State sponsorship, but ultimately it is a NEPA question and there are a lot of folks who don't want to see those dams turned into hydroelectric generators for environmental reasons. And I think that the Pacific Northwest from the Washington border all the way through California has shown success after success where the hydroelectric generation can coexist with the environmental concerns.

Mr. GRIFFITH. Let's work together. I see my time is way over, and I need to yield back. But thank you.

Mr. PALLONE. Thank you. The gentlewoman from Delaware, Ms. Blunt Rochester, recognized for 5 minutes.

Ms. BLUNT ROCHESTER. Thank you, Mr. Chairman. Chairman Pallone, first of all, I would like to congratulate you on this comprehensive and important legislation. I also want to thank the wit-

nesses. This was a really great panel of witnesses. And commend my subcommittee chairs and members who were part of the collective leadership on the issues that are included in the LIFT America Act. This legislation to me impacts our health, it impacts our education, our security, our economy, our competitiveness as a country and also my State, but ultimately the planet. And so, I am proud to be a cosponsor.

And I want to ask a few questions about broadband maps and coverage, but first I just want to clarify something between Professor Lyons and Ms. Clyburn on the minimum standard. Now if I am understanding this correctly, Professor Lyons, you are positing that 25 would be fine for the things that are kind of the minimum things that are needed. Did I hear that correctly? And then just yes or no.

Mr. LYONS. Yes, that is right.

Ms. BLUNT ROCHESTER. OK. And then, Ms. Clyburn, I thought I heard you mention 100. Can you elaborate a little bit on why, because I understood what you said that you don't need to be streaming, you know, "Game of Thrones," but what I want to understand from Ms. Clyburn is why she says a hundred.

Ms. CLYBURN. Well, I will just simply say this. We need to do this one time. And if you want to do this one time, you need to future-proof it. And to future-proof it, you need to look to the future and look to your international competitors in terms of what they are doing. There is no one internationally that we are observing and following that is doing anything less than a hundred megabits.

Ms. BLUNT ROCHESTER. Thank you for sharing that. That is really particularly important for me, because one of the areas I am focused on is the future of work. And it is really the future of how we are living and it is happening to us right now, and so I don't want to see us start behind. Let's start ahead and be bold.

I would like to focus on the coverage maps. First and in particular, if we could focus on, you know, the committee's prioritization of unserved areas and the benchmark of the 25 megabits per second. And I am glad the bill does not rely on the FCC's inaccurate Form 477 data. For example, FCC's coverage map suggests that the entirety of Delaware has at least one provider that provides at least 25 megabits per second.

But I know that that is not true, and I hear from many of my constituents every day that they are—and stakeholders—that they are in areas that are dead zones, both in urban areas as well as rural. People might not know Delaware also has a huge rural community as well.

Ms. Clyburn, again thank you so much for your testimony, but also thank you for your former service, public service at the FCC. And I was struck by your testimony, because you mentioned the need to improve these maps, and I think it makes sense for the FCC to look to the more trusted, publicly available data as you suggest.

Can you talk about what additional recommendations you would have for the committee for both improving the coverage maps and utilizing a fairer and more accurate process for getting at those communities that are unserved as defined by the LIFT America Act?

Ms. CLYBURN. In addition, I say that the FCC could use its subscription information, you know, to look and compare. That seems really intuitive, but it is not being done. And I guess—I don't want to be repetitive. I think that is the only thing that, other than the form, they need to go ahead to order on the reforms and when it comes to Form 477.

One person having service in an area should not the whole area be considered coverage. That is a problem that makes no sense. I don't know what type of map that is, but it is not the map that is bringing and closing divides in America.

Ms. BLUNT ROCHESTER. It looks like that is consistent across the panel, I would say.

And, Mr. Wahler, I am going to switch really quickly in the last 40 seconds to drinking water, the drinking water title. Mr. Wahler, one of the issues that my State of Delaware consistently has is maintaining the drinking water infrastructure that we already have built. By some estimates, Delaware is a hundred million dollars short on an annual basis. Can you talk about why it is important to continue to invest in the drinking water infrastructure?

Mr. WAHLER. Thank you, Congresswoman. Everybody knows that, you know, anytime you are digging underground, it costs a heck of a lot more money than above ground, and that is why the large city and the expense of municipalities and counties such as your State have because of the nature where it has to be buried under the frost line.

But, more importantly, is there is a lot of extensions where it goes into the schools or it goes into your residential neighborhood. It is all encompassing, and it is a very costly measure. And, for instance, if you are only doing $10 million a year and you have $100 million worth of infrastructure, that is not—you are just not getting there where you need to get there.

Ms. BLUNT ROCHESTER. Thank you. My time has expired.

Mr. PALLONE. Next is Mr. Long, recognized for 5 minutes.

Mr. LONG. Thank you, Mr. Chairman. And my oldest daughter, our oldest daughter, Barbara, and my oldest daughter turns 33 years old today. She is a pediatrician back in Springfield, Missouri, where I hail from. When she turned 25, 8 years ago today, we had an EF5 tornado in Joplin, Missouri, that killed 161 people in a town of 50,000, so everyone knew someone that had perished in that horrific event.

Yesterday we had tornadoes that touched down in my district all across Southwest Missouri. Over in Southeast Missouri, Jason Smith's district, a lot of damage from tornadoes and that caused our Governor, Mike Parson, to declare a state of emergency. Severe weather events like these are, unfortunately, way too common in what we call tornado alley in my neck of the woods, and communities are constantly impacted.

There is money in this bill to establish a grant program at the Department of Energy to provide money to States that enhance electric infrastructure resiliency, reliability, and security. The utility industry also spends significant sums of money each year on efforts to make their infrastructure more resilient. I want to make sure that this program is not duplicative and does not hamper investments at the private sector in these capabilities.

And for you, Mr. Guith, how does this bill ensure money and resources are spent wisely on energy infrastructure resilience and not harming the investment by private companies on this work?

Mr. GUITH. I think it makes great strides in addressing the issue and trying to integrate by deferring to some extent to the Secretary. But in one specific example, which I mentioned in my written testimony on the Transformer Reserve, Congress challenged the Department of Energy to look at the need for one back when the FAST Act was passed.

Ultimately, Oak Ridge National Lab did a deep-dive analysis, and Department of Energy came back and recommended to Congress that there does not need to be a separate reserve because industry, because of its own responsibilities to its ratepayers and its customers, had established such redundancies in reserves already.

And so, we would recommend within the context of the LIFT Act that the monies that are addressed to go to the Transformer Reserve be instead focused on the research within the components, which the act also addresses, which is where we need more research in order to make the equipment that we do have or the equipment tomorrow that much more resilient against severe weather issues.

Mr. LONG. OK, thank you.

And, Mr. Lyons, when it comes to the Broadband Infrastructure Finance and Innovation Act, there is nothing included to address overbuilding or coordination language. The committee spent considerable time last Congress legislating against overbuilding and promoting coordination amongst government entities. Will this legislation present a setback there?

Mr. LYONS. I think more explicit language about coordination would be helpful. It helps that the money is being invested in the Federal Communications Commission, because it has its hand in the other pie, so it has the ability to coordinate in the various broadband reach-out initiatives that we have. But it would be helpful if Congress provided more explicit direction.

Mr. LONG. OK, thank you.

And expanding internet access in rural areas is a top priority for many on this committee, and we need to make sure we are all doing what we can to fix this problem. I have been working with Senator Marsha Blackburn, who was a former member of this committee, a lot of you remember, on a broadband infrastructure bill, the Internet Exchange Act.

The Internet Exchange Act focuses on improving broadband infrastructure in rural America by promoting more internet exchange facilities around the United States. I look forward to working with this committee in ways we can address the need to strengthen internet access in rural and other underserved areas. Mr. Chairman, I yield back.

Mr. PALLONE. Thank you, Mr. Long. Mr. Soto is next.

Mr. SOTO. Thank you, Mr. Chairman. It is pretty clear that America is eager for 21st century infrastructure upgrade. We see it all throughout our districts, both sides of the aisle. And, you know, we are the most productive, most powerful nation in the world, yet this seems to continue to be a problem. We are at GDP of 21.5 trillion with China quickly gaining at 14.2 trillion, and I

kind of—we have to imagine what we would be able to do if we actually had a modern infrastructure to work with and what that would mean for the future of our economy.

And it seems to me the biggest hurdle has been political dysfunction over the past couple years, particularly with regard to how to pay for it. We have seen no increase in the gas tax since 1993. Tax cuts for the rich and big corporations blew a $2.3 trillion hole in the revenue outlook for the next 10 years. Infrastructure proposals were only 25 percent of the Federal funding where it is going towards it, which failed from the start.

Even the term "Infrastructure Week" has become a running joke sometimes in Washington. So the big question, then, I ask my committee members in both sides of the aisle is, so what are we going to do? Are we going to do this, or what? Are we going to actually put forward a major infrastructure project, or are we just going to sit around and say we are going to and then never do with the revenue issues that we have to?

I want to start with rural broadband and broadband in general. I represent areas not only in suburban Orlando, but in rural Osceola County and Polk County. And I was really struck by a really wise member of the U.S. House, Majority Whip Clyburn, who told me a story about his district, where most of the kids in a class that he recently went to failed because the homework was being given online and they didn't have access to it. And he used that to talk about this, how rural communities are falling behind in technology.

So, Commissioner Clyburn, it would be great to hear from you. How important is the LIFT Act and broadband internet build-out across the country to rural communities in closing that productivity and education gap?

Ms. CLYBURN. This will address the most pervasive gaps that I have seen in my regulatory lifetime. It will serve to better equalize those communities without. It will recalibrate and reshape the narrative when it comes to what is possible, what is accessible, and address what is needed. And it is very targeted. It is seeking to go to areas with the most need, not where the business case is not being made. It decouples from that, and I think it is very important. The role of government is to be proactive in areas where the private sector is not, or is not incented to do so. This does that.

Mr. SOTO. And being the great equalizer. So thank you for that, Commissioner.

Ms. CLYBURN. And I agree, he is a pretty great guy.

Mr. SOTO. He is a pretty great guy.

Ms. Eckdish, how important is Davis-Bacon in ensuring that we have both a boost to our economy and fair wages and that we really get the job done right?

Ms. ECKDISH. Thank you for the question. It is critically important. It makes sure that, as workers are doing the work to repair our infrastructure, that they are being paid a family-supporting wage. So it is critically important, and there are a number of areas in the LIFT America Act that include Davis-Bacon in a number of areas where it could be expanded.

Mr. SOTO. And now, according to EPA, transportation is the biggest emitter of CO_2 emissions at 29 percent versus 28 percent for electricity, and that is even numbers from 2 years ago. So does this

transportation, the aspects of the transportation package that are in this bill, will that help then the curve of CO_2 emissions in the transportation sector, particularly electric cars and things of that nature?

Ms. ECKDISH. Yes, I think electric vehicles are a key part of how we bend that curve, coupled with investments in transit, strong fuel economy standards. But EVs will be a key part of how we tackle emissions from the vehicle sector. And this bill takes a significant step toward the expansion of the EV infrastructure and what we——

Mr. SOTO. Thank you.

And Mr. Guith, or "Gueeth"—sorry if I am mispronouncing your name—does the U.S. Chamber believe that the America's economy is being held back by an aging infrastructure?

Mr. GUITH. Absolutely. We have been leading the charge for the better part of a couple decades, and we know that there is political support there, it is just getting apparently folks into a room and making it happen, which seems to be difficult today.

Mr. SOTO. Do you think there are any revenue sources that the business community would be supportive of in our quest to get an infrastructure package together?

Mr. GUITH. We are supportive of wherever it comes from, more or less. I mean, we have proposed increasing the fuel use fee, but we have said that, look, we are open to other ideas. In fact, we held a contest very recently to get other ideas. We don't think that is the only way. In fact, we probably need several ways, but it is certainly one of the most logical ways given, to your point earlier, that it hasn't been touched since 1993 while some 35 States have raised their own State revenues through fuel use fees. And it is untapped. The Highway Trust Fund continues to dwindle, and our infrastructure is aging.

Mr. SOTO. Thank you.

Mr. PALLONE. Did the gentleman yield back?

Mr. SOTO. Oh yes, sorry.

Mr. PALLONE. OK, thank you. Mr. Bucshon is recognized for 5 minutes.

Mr. BUCSHON. Thank you very much, Mr. Chairman. I just want to—well, I know I am kind of late in the game here because I am down the dais, but I am going to—a couple subjects that I really touched upon and I will just say briefly, rural Indiana, we need broadband. You can't have schools. You can't have economic investment.

And I think many people have talked to that. I am not going to spend much more time on it, but we need broadband infrastructure in rural Indiana. The U.S. Energy Information Administration—yes, there is such an agency—recently reported that 32 dams currently that do not generate electricity are planned to be converted to hydroelectric dams in the next few years.

And the reason I point that out is because last year, Congress passed and the President signed the American Water Infrastructure Act of 2018. And many of you may or may not know that legislation that I was involved in and Senators on the Senate side were involved in streamlined the process for converting nonhydroelectric dams to hydroelectric dams through FERC.

It doesn't eliminate any environmental review, and this was bipartisan. Both sides agreed to all of this. But through FERC there is now a 2-year process when you want to get approval to convert a nonhydroelectric dam into hydroelectric power. So if people right now should be looking at that, and I think there is going to be a lot of investment over the next 5 to 10 years in this particular process.

As was mentioned, it is a consistent, sustainable, clean-energy source that Canada utilizes, our Pacific Northwest utilizes and, believe it or not, in Southwest Indiana there are six dams we could convert. And so, I just wanted to point that out, that that is very important. I mean, I am an all-of-the-above energy supporter, and I think, just like your personal investment portfolio, we should diversify our energy portfolio and make sure we are not putting all our eggs in one basket.

With that being said, the legislation before us I don't see is supporting all-of-the-above energy, and that is in the area, the absence of fossil fuel, energy research development, and innovation. And that was mentioned, I think, by Mr. McKinley also. I believe it is critical that we continue to encourage strong public-private partnerships in the ongoing advancements of technological innovations in the fossil fuel energy area on our grid today.

And as electrical utilities connect to more intermittent renewable energy into the electrical system, there is a growing need for new technologies to ensure reliable and affordable power, and I think the Europeans are experiencing this most as we speak with untenable energy costs, particularly in Germany.

So, Mr. Guith, can you speak to the role of the ongoing innovation that—and you may have mentioned this earlier, but what is needed to ensure spending decisions don't lock in practices that impede new innovative technologies, particularly in the fossil fuel space?

Mr. GUITH. Yes, I think that is a great question, thank you. Twofold. One, a greater commitment from Congress to spending on energy innovation. As a former DOE employee, I realize it is an incredible asset to the country, but unfortunately it has 535 constituents up here and it tries to be everything to all of them, where we know that there are specific technologies that every scientific community that has looked at this are most likely going to be required to address climate change globally.

And so, we have been working with Mmbers of Congress to come up with some approaches with DOE to maybe concentrate a little bit more on those technologies with some specific metrics and goals and demonstrations to get there. And I think that is the greatest path forward to developing those—that innovation that we need.

Mr. BUCSHON. And I will make a quick comment on that because you realize that we are, what, 20 percent of the world's CO_2 emissions, roughly. China, India, or—China is the biggest. It is unlikely, in my view, that they are going to convert to clean energy sources as quickly as America has. Since 2005, we have reduced emissions more than any other country in the world, and it is not really close. We are going to continue to do that.

So I think in this area of fossil fuel—and some of us on the panel will disagree, obviously—but in fossil fuel, thinking that the rest of

the world may not get to where we may get with renewables, if we have some innovation that is transferable to other countries that they could use that we could make economically feasible for those countries and they begin to pick that up, I think then we could have a global—our leadership in that area could have a global impact. That is my personal view.

Also, expanding a little bit on that, Mr. Guith. When the Chamber reviews some of the programs in the bill that reflect efforts to support the build-out of renewable infrastructure, do you all look at and monitor what happens with the electrical rates and what happens when they go up?

Mr. GUITH. Yes, most definitely. I mean, we look at the impacts on both the generators as well as the consumers. We represent both. And, frankly, a hundred percent of the economy is a consumer, so when rates go down it benefits even if it doesn't necessarily benefit the upstream generator. And we analyze it with our members and we consult with them and try and come up with the best policy and triangulate where the business community is.

Mr. BUCSHON. Yes, and I would agree with that because, again, if you look at the European experience, particularly in Germany, where the costs of energy are—and I don't have the graph in front of me—are roughly 3 times what they are, on average, in America. As particularly I see it for our seniors and for our lower-income rural, in areas in my district that would be rural American. Other people's districts that could be urban America. Honestly, different locations, very similar problems. I could see the cost aspect really causing us a lot of trouble if we don't continue to innovate across the spectrum, and so I am hopeful that we can do that.

Again, I would like to point out I am an all-of-the-above energy person. I think we should innovate and advance technology all across, and that includes fossil fuels. Because I do think looking at the world and the fossil fuel use, that is an area potentially if we could, for example, commercialize carbon capture like we are in Houston, for example, in the Houston area, and find ways to use the CO_2 or to store the CO_2 underground. Worldwide, I just feel like that could have such a dramatic impact.

And the last thing is also in the area of recycling and looking at the entire life cycle of renewable energy, particularly in the solar panel space. I am beginning to look at the entire life cycle of those panels because 25, 30 years from now we are going to have to figure out what to do with those. And at this point in America we landfill all of the end-of-life for that, and I think most people know that.

And so, the impact that has on the environment with some of the heavy metals like lead and other things that are in it are going to be dramatic if we don't look at how we deal with the end-of-life solar panels 25 years from now. I yield back.

Mr. PALLONE. Thank you. Next is the gentleman from Arizona, Mr. O'Halleran.

Mr. O'HALLERAN. Thank you, Mr. Chairman, for holding this hearing today to discuss the LIFT America Act and how it addresses the needs for infrastructure investments that will move our economy forward. I applaud the LIFT America Act for including robust funding for high-speed broadband and clean drinking water

programs, pushing our energy sector to more resiliency, and ensuring our hospitals and healthcare facilities meet the needs of patients.

Rural America cannot be left behind. In fact, I don't know that it can survive without getting in this process moving forward, whether it is healthcare, education, economic competitiveness—this is a necessary element of the infrastructure of America for rural America. I hope to see these investments particularly for broadband deployment target areas of this country that need it the most.

Ms. Clyburn, I have a question here that I had before, but you mentioned earlier about a communications issue within the process. Can you refine that a little bit and tell me what you mean?

Ms. CLYBURN. The communications issue, are you talking in terms of other State agencies?

Mr. O'HALLERAN. Agencies, right.

Ms. CLYBURN. Right. What I wanted to point out was that and it has been said a couple of times that you have State agencies and the States and Federal agencies that are doing much of the same things. I mean, everybody has grand goals and objectives that we can't argue. The problem is they are either stepping on each other, not speaking to each other, or spending money in a lot of the same places.

So you have places that are getting double or triple the amount of investment that may or may not be needed, and then you have other areas in this country where there is no flow, there is no provider, there is no investment and, again, there are no, you know, Next Generation opportunities. So fixing that, I think the bill encourages that.

It could be said, what could be fine-tuned a little bit more? But it definitely addresses that, and that is the problem. That is an issue.

Mr. O'HALLERAN. And I am glad to sponsor the bill, it is clearly defining that. But also, I just can't believe our Federal Government at this stage of our existence cannot understand the need for agencies to communicate with one another. I don't care across the board whether it is Intelligence or Homeland Security or these agencies.

Ms. CLYBURN. For better or worse, things are pretty siloed. They are pretty siloed within certain——

Mr. O'HALLERAN. Too siloed.

Ms. CLYBURN. Yes, thank you.

Mr. O'HALLERAN. Commissioner, in your testimony that broadband funding must be targeted to places with the greatest need to ensure that these communities who have been completely left behind are connected as quickly as possible.

Ms. CLYBURN. Yes, sir.

Mr. O'HALLERAN. I look forward to introducing a bipartisan bill that was mentioned earlier that is also in the Senate on broadband mapping.

Ms. CLYBURN. Looking forward to it.

Mr. O'HALLERAN. I do appreciate the reverse auction and infrastructure financing funds offered in Title I of the LIFT America Act, but what else should be included in Title I to close the digital divide?

Ms. CLYBURN. Hmm. That is a great question. I might have to include some—answer you for the record, if you don't mind. But I think we are moving in the right direction.

Mr. O'HALLERAN. With energy infrastructure, I have heard stories from many constituents in my district in lengthy permitting reviews required before a project may begin. While reviews are necessary for environmental protection, they should also be done in a timely manner for project certainty.

Mr. Gruith, in your testimony you highlighted the bipartisan work to establish the Federal Permitting Improvement Steering Council in the FAST–41 bill. Within the LIFT America Act, how can permitting for such projects also be addressed?

Mr. GUITH. Not being a parliamentarian, I will have to defer to you to some extent as far as jurisdictional distinctions between here and Interior—I am sorry—between here and the Natural Resources Committee, which has a lot of the jurisdiction over NEPA itself. But I think if you look at what happened in FAST–41, Energy and Commerce certainly had some of it.

And I think the two big asks are to, one, make FAST–41, the FAST–41 authorizations permit because we are about to run out of authorization as well as constraining environmental reviews to 2 years and the one Federal decision. I mean, those are all things that benefit every form of infrastructure and there is significant bipartisan support for.

Mr. O'HALLERAN. Mr. Chairman, thank you. And I yield the rest of my time.

Mr. PALLONE. Thank you. Next is the gentleman from Florida, Mr. Bilirakis.

Mr. BILIRAKIS. Thank you, Mr. Chairman, I appreciate it. This question is for Mr. Guith. Last week a local article reported 22 sites in Florida were found to have PFAS contamination, including one city in my district. There are at least 610 places that have PFAS levels in the country, I understand. However, the term "PFAS" encompasses thousands of different substances with different threat levels.

Again, Mr. Guith, do we know enough about individual PFAS chemicals to know which are the most harmful? If so, should we include a priority system in the legislation based on the highest risk; if not, does more study need to be done before allocating limited funds to this cause?

Mr. GUITH. The simple answer is no. In the grand scheme of toxics, we know very little about this family of chemicals as far as what their epidemiological impacts are. We know that they are vexing. They are long-lasting. A significant portion of the population has PFAS in their blood system, but as you point out they are not all the same. And so, we have a process in place, or Congress has created a process at EPA, to review the science of these chemicals and to ascertain which of them are innocuous and which of them aren't, and that is the stage that we are at right now. But because they are so pervasive, there is understandably great concern around the country.

Mr. BILIRAKIS. OK, are children at greater risk to PFAS as far as contamination risk? Are they at greater risk?

Mr. GUITH. I personally don't know the answer to that question.

Mr. BILIRAKIS. OK. Can we find out?

Mr. GUITH. Absolutely, we can follow up with you.

Mr. BILIRAKIS. I mean, can you do some research and get back to us, follow up? Thank you very much.

All right, the next question, again for Mr. Guith. State regulators have been focused on accelerated replacement of aging infrastructure. In fact, DOE has an existing collaborative with the National Association of Regulatory Utility Commissioners to address this issue. The collaborative was designed so that DOE could focus on a demonstration of new technologies for leak detection and pipeline replacement.

Mr. Guith, how might the grant program proposed in the LIFT Act impede on States' authority to establish rate structures and criteria for the accelerated replacement of pipelines deemed no longer fit for service?

Mr. GUITH. How it might impede, I think in some areas it might be interpreted to be proscriptive as far as where the money goes and how the cost recovery comes. But I think the language could be maybe more direct to ensure that that overlap does not happen and that rate formation State-by-State is not impacted.

Mr. BILIRAKIS. All right. Thank you for that input. One more question for you, sir. I am glad to see interest in extending the school and child care program lead testing grants and the lead drinking fountain replacement programs. Lead-contaminated water in schools is a big issue in my district and probably all over the country, and we need to make sure that we protect our children.

Last month, a local news outlet reported that 68 percent of Florida school districts did not fully test for lead in drinking water. Additionally, a lot of the schools in my district tested above the Federal standard for action. Again, I want to see more testing because it is so very important. Can you comment on that, sir?

Mr. GUITH. I think within the context of my testimony and this legislation, I think the most important part to accept is that there is a great need for Federal funds across many forms of Safe Drinking Water Act programs. That includes PFAS which this legislation would create, but also the existing ones. So that is why I think it is crucial that we be careful to not cannibalize one for the other and to just increase the pot across the board, because the demand is that great.

Mr. BILIRAKIS. OK, thank you very much. And I yield back.

Mr. LUJÁN. Will the gentleman from Florida yield?

Mr. BILIRAKIS. Yes. Yes.

Mr. LUJÁN. I appreciate that. Thank you, Mr. Chairman.

Commissioner Clyburn, this morning I had the honor of meeting with the mother of Ashlynne Mike. Her name is Pam Foster. Sadly, Ashlynne is an 11-year-old Navajo girl who was murdered and raped. The importance of Amber Alert systems across the country—they work if you have broadband connectivity and coverage.

I appreciate Mr. O'Halleran raising the issue of mapping as well. The mapping that we have across the country right now is not accurate with showing where there is coverage, especially in rural parts of the country. Can you touch on how you believe the LIFT Act's provisions will help us in getting more connectivity so that, if someone needs to make that text message, that phone call, or if

someone has a smartphone on them, we can triangulate and find them?

Ms. CLYBURN. One of the things that I am happy to see is its attention on Next Generation 9–1–1. I mentioned earlier that the current systems are based on 50-year-old technology, but we are now in an increasingly connected ecosystem. That unfortunate incident and what is required and expected of us being interoperable when we use our phone, it doesn't matter which provider it is, it is interoperable, but our 9–1–1 systems are often not.

So ensuring that whatever road that the roads we traveled where we did not have connectivity in your beautiful State, we need to take care of that. In case of emergency there should be no medium that you use—video, still, voice, text—that a 9–1–1 system should not be able to take. You know, those are the baselines of today and tomorrow, and we cannot continue to rely on a system that is not interoperable, that is not up to date.

Our first responders are doing a yeoman's job, e9–1–1 works well. We need Next Gen. This takes care of that, and I am happy—I can't endorse, I don't think, but I am happy to say that whatever I can do to be a partner in moving this along, I will.

Mr. LUJÁN. Thank you.

Mr. PALLONE. All right. The gentleman's time has expired. The gentleman from California, Mr. Ruiz, is recognized.

Mr. RUIZ. Thank you, Mr. Chairman. And thank you to our panel for being here today. I support the LIFT America Act, which will support critical infrastructure projects across the country, and I am currently researching ways to make it even better.

This bill would upgrade broadband internet access, shore up critical 9–1–1 capabilities—as an emergency medicine physician, that is very important to me—improving Indian health service facilities, and help us meet our clean energy goals for a sustainable future. In addition, this bill includes robust investment in clean drinking water grant programs. This will help support projects to improve water quality in areas like the eastern Coachella Valley in my district, where I grew up. It is a very rural, agricultural-focused, farmworker community.

Clean and safe drinking water is a common good that everyone deserves access to. However, a 2017 study by the Environmental Working Group found that many of the smaller rural and lower-income areas of the eastern Coachella Valley had drinking water systems that contained contaminants, including chromium 6, nitrates, and arsenic. The Coachella Valley Water District and others have tackled this problem head-on and are in the process of consolidating many of these old and independent drinking water systems into their network.

None of this work could have been done without Federal assistance from the State Revolving Fund because that funding has a set-aside reserve for rural, resource-poor communities. In a State and district like mine with so much in need, this set-aside ensures that the communities most in need are able to access funding.

Mayor Wahler, you talked about how cities have stepped up infrastructure investment to fill the gaps, but that isn't possible everywhere. How important is Federal funding for drinking water in-

frastructure, both in your city and in low-income communities, and how have you utilized them?

Mr. WAHLER. Well, you are absolutely correct, Congressman. Not every city or county has been able to do that. It requires a lot of proper planning, but, you know, every—the costs of the install of water lines vary from different parts of the country.

I think there needs to be down payment money at the Federal level because a lot of the communities—and especially in the rural areas of this country—just don't have the resources to, quite frankly, run miles and miles and miles of line, extended period, to serve maybe a small pocket of people, but you still have to get the transfer to where the need is, and that is going to be a challenging thing even with this bill. Even if this bill passed, we are still going to have an incredible problem.

Mr. RUIZ. Great, OK. Do you have well water? Well water?

Mr. WAHLER. In our community we have a few homes that have—we have had a law on the books since the mid-'70s you have to hook up to public water because we were worried about contaminants.

Mr. RUIZ. Yes. Another important section of this bill provides funding for new solar energy investments in rural, low-income communities. The cost of solar energy has plummeted over the past decade, allowing more and more Americans to reap the benefits of clean energy.

My district has fully embraced the potential of renewable energy. If you have ever driven on Interstate 10 through Riverside County, you have seen the windmills, the wind turbines, the utility scales, solar fields, and the panels that line the roofs of neighborhoods throughout my district. And if you haven't, you have probably seen it in a movie at some point in your life.

But unfortunately, there are still communities that haven't been able to share in the benefits of solar technology. And in a region like my congressional district where the sun shines bright and long for more than 350 days a year in the Palm Springs, California, area, that means there is a lot of untapped potential. In fact, my district produces the most renewable energy on Federal land than any other district in the country, but yet many of the residents cannot access that renewable energy. The legislation we are considering today, H.R. 2741, the Leading Infrastructure for Tomorrow's America Act, establishes a program to provide loans and grants for solar installations in low-income and resource-poor areas.

Mayor Wahler, in your written testimony you refer to these provisions as "inclusive and innovative." Can you explain why the Conference of Mayors has decided to support the low-income solar grant program and how eligible communities would benefit?

Mr. WAHLER. Well, I think it is safe to say every town has dynamics to it both socially and economically. Anywhere we can help those folks save on their energy bill over the long term will allow them to stay in their homes.

Mr. RUIZ. So what are some of those barriers?

Mr. WAHLER. Well, you know, the truth of the matter is, like when you are installing solar in your community, you may have a roof that you have to replace the shingles before you install solar because you are not exactly——

Mr. RUIZ. So what can a community do to foster more in-home use of solar panels?

Mr. WAHLER. Well, I think they need to have—first of all, I think a lot of people don't have the resources to actually have a study done on their house or where they live. And by having an economic grant out there to do that, that will allow people to realize whether it makes sense or not to put that on their facility.

Mr. RUIZ. Thank you very much. My time is up. Thank you very much.

Mr. PALLONE. Thank you. Next is Mrs. Brooks, recognized for 5 minutes.

Mrs. BROOKS. Thank you, Mr. Chairman. And thank you to all of our panelists who have been sitting here now for quite some time, but you all are very much adding in significant ways to this really important discussion.

I want to start with you, Mr. Auerbach. Subtitle E, the Public Health Infrastructure, we haven't talked about that very much today, but it creates some new grants at the CDC—which I actually just recently visited in late April—to improve workforce capacity, competency lab systems, as you talked about, public health information systems, communications financing.

How do these grants differ—as one who has been very involved in coleading with Congressman Eshoo on PAHPA—how do these grants differ from the Public Health Emergency Preparedness grants that CDC already administers?

Mr. AUERBACH. Thank you. And let me start by saying thank you for your leadership on the PAHPA.

Mrs. BROOKS. Well, and thank you. We are pleased it came back from the Senate, and we are very, very hopeful that we can get it across the finish line in the very near future.

But how does this differ? And then you also said in your testimony the PAHPA goal remains aspirational. We don't want to think it is aspirational unless we have health information technology. So could you please expand on that?

Mr. AUERBACH. Sure. Well, the public health preparedness grants that come from CDC now really focus on having the right people, the right plans in place, and the right training so that health departments can respond in a variety of different ways. There is also support, of course, for some of the disease-specific and response capacity in laboratories within the States.

But they don't deal with the fundamental infrastructure issues that are crippling many of the State and local health departments. Those include the status of the health departments themselves in terms of having the appropriate equipment, technology to respond appropriately. So an example of that is that many of the health departments don't have the advanced molecular detection capacity, for example, so that if there is an emergency and there is a rapid need to test a particular organism to determine whether or not it is a risk to the public, they are lacking that capacity.

So the funding that would be within the LIFT America Act would complement the existing grants but provide that kind of infrastructure that is necessary when you have the skills, you have the plans, but you don't have the—the equipment that you don't have, the facilities that can ensure that there is rapid response.

Mrs. BROOKS. Has that ever been mapped out, what our public health departments need relative to the type of infrastructure you are talking about?

I also want to commend the chairman for including public health infrastructure, because I don't think many people in our country think about public health as part of the infrastructure needs, and so I was really pleased to see that. But has that ever been determined, what we need across the country, public health departments relative to infrastructure?

Mr. AUERBACH. Thank you for asking that. There have been efforts to attempt to address that, to capture that information. There have been—there is information, for instance, that has been developed on laboratory capacity, information that has been developed on response to certain types of emergencies like vector-borne illnesses like we saw, for instance, with Zika.

So some of that information has been captured and there has been planning efforts to estimate what it would take to close the gap.

Mrs. BROOKS. And excuse me for cutting you off——

Mr. AUERBACH. Yes, yes.

Mrs. BROOKS [continuing]. But I want to switch to one other witness. Can you please get us the information as to where that might be mapped or where it has been recorded?

Mr. AUERBACH. Certainly, my pleasure.

Mrs. BROOKS. Thank you.

Mr. Lyons, a quick question. The State of Indiana has a program called Next Level Broadband where Governor Holcomb and the State is going to be providing a hundred million dollars to deploy broadband to underserved—unserved—unserved areas in the State. But can you speak to how the bill will complement State programs like my own State's or maybe other States that might be doing this? How can we ensure that there isn't that duplication or the guardrails with this BIFIA program?

How can we make sure that we are not duplicating and that we are covering the unserved areas?

Mr. LYONS. Yes, so part of the answer may be making sure that the money that is allocated on the State level goes to the State utility regulator as usually what is handling the State-level initiatives. There are number of States across the country that have State-level initiatives. I would envision the State part of this as complementing those.

But you are right, it has to get in the hands of the same people so you don't have right-hand/left-hand issues.

Mrs. BROOKS. OK. Ms. Clyburn, do you have any comments on that?

Ms. CLYBURN. Yes. Again, it is about communications. We talk about coordination, but it is about communications and everybody is transparent in terms of where those monies are flowing so that we are, again, are not overspending in one area and just leaving others behind.

Mrs. BROOKS. Thank you. And thank you all so much. I yield back.

Mr. PALLONE. Thank you. Ms. Eshoo, recognized for 5 minutes.

Ms. ESHOO. At last. But this has been time spent very well, I think. I arrived a little after the gavel was lowered, but I have the advantage of having listened to everyone on the committee. Thank you, Mr. Chairman, for this very important bill. Thank you to all of the witnesses. You have given us—you have enlightened us, and I thank you for it. Even though I have been here for just about all morning and now part of the afternoon, I see you looking at the clock. I know you are hungry. Your stomachs are grumbling.

I am really excited about this bill. I think it should be called the LIFT UP America Act because that is really what this is designed to do. The American people understand what this means. It is jobs, jobs, jobs. It is American jobs. It is American equipment. It is American everything. And it really is meant to lift up our country in the 21st century and to really take care of the things that have been neglected, that have been put off, whether it is building out broadband where people—imagine, there are 21 million people in our country that don't have it, you know, shame on us. But we are correcting it and we are putting real money toward it.

Water systems, the NG 9–1–1—John Shimkus and I have been on this like white on rice for more years than I want to count, but I am excited because we are going to address it. This is all about our first responders in every single community in every single congressional district and, boy, do we need that. Our Nation's grid—I could go on and on. I think, Mr. Chairman, that we need to tighten up the section in the bill relative to mapping, because we have got to get this thing right and we haven't yet, and I want to work with you on that.

I also want to thank Mr. Auerbach for the work that you have done in supporting PAHPA. It has been very important. All of you have given very sophisticated testimony, and while PAHPA is not in this bill, there are benefits that our country will accrue from it. And our Nation's public health emergency response infrastructure is taken for granted, but it is an essential in our country.

Without this reauthorization, I mean, one of the Assistant Secretaries said that they can't respond to the measles crisis that is erupting in our country. So I look forward to Congress passing this and getting it done. And I could never have asked for a better partner than Congresswoman Susan Brooks. Outstanding.

Mr. Mayor, I want to underscore something. You are here with the U.S. Conference of Mayors. I want to thank you and all of the mayors of our country for endorsing the legislation that I am carrying relative to municipalities being preempted.

Mr. WAHLER. Yes.

Ms. ESHOO. I come from local government, so I have a reverence for it. Now, last fall the FCC preempted, essentially ran over all the local municipalities, the local communities in our country from having a say in deploying small cell sites, and that is the infrastructure that is needed for 5G. And now that poor policy has led to nearly a hundred municipalities, public power utilities, and associations to sue the FCC. Say something about that to us.

Mr. WAHLER. Well, Piscataway is part of the lawsuit. Let's just face it——

Ms. ESHOO. And thank you.

Mr. WAHLER. The reality is we need to work with the telecom industry. They are the 21st century railroads. And unfortunately, as we all know history, when the railroads were being built, they just went along their merry way and do whatever they want.

Ms. ESHOO. But let me interrupt for a moment, because one of the witnesses said that this is the way it should go, and it is going to slow them down and it is going to bollocks everything up as if local municipal—that is the heartbeat of America, every city and town in our country.

So respond to what—I don't know, was it Professor Lyons? Were you the one that didn't agree? I am not asking you to comment.

Mr. LYONS. That is right. Yes.

Ms. ESHOO. Just you can say—yes, you are the one. OK.

Mr. WAHLER. Municipalities, you know, there shouldn't be reason to preempt our municipal rights-of-way. The municipal rights-of-way are the most valuable assets that communities have regardless of the—other than the people that live within the community. We maintain the rights-of-way. There is, from what I understand, from what the communications folks want to do, is that there is no guarantee that they are going to repair when they tear the rights-of-way up.

Ultimately, at the end of the day they are not the ones that get the calls to City Hall about what the heck is going on in my neighborhood. All I know is that there is a lot of very upset people, a lot of upset officials around this country. They have not been equal partners in this.

Ms. ESHOO. Hardly.

Mr. WAHLER. And something has got to give, and that is why a lawsuit was filed.

Ms. ESHOO. Well, I want to thank——

Mr. PALLONE. The gentlewoman's time——

Ms. ESHOO [continuing]. The chairman of the full committee again and thank everyone, and especially for the support you have given to this effort. I yield back, Mr. Chairman.

Mr. WAHLER. If I may, Mr. Chairman, I have to catch a train in 15 minutes.

Mr. PALLONE. That is all right. You are excused. But thank you for coming.

Mr. WAHLER. I have a ribbon-cutting of a beautiful park that we used to rebuild the community with block grant money, and we guaranteed all the kids an ice cream truck tonight.

Ms. ESHOO. Isn't that great?

Mr. PALLONE. Thank you, Mayor.

Mr. WAHLER. So, Chairman, if you get this bill through and pass final passage, I will bring the ice cream truck down here to the committee.

Mr. PALLONE. Thank you, Mayor. Safe travels.

Next is Mr. Walberg, recognized for 5 minutes.

Mr. WALBERG. Thank you, Mr. Chairman. And thanks to the whole panel for being here today. I have the privilege of representing Michigan's energy district. We have everything in it, including biomass, and it is all going well. We all have the challenges with that energy. Title 3 contemplates Federal spending in the tens of billions of dollars in our energy infrastructure.

While some of these investments are needed, I echo the concerns raised by my friend and colleague from Michigan, Mr. Upton, about the cost and nature of these programs, whether they are the best way to approach the problem or whether they will work the way they are intended, given the overlap amongst many of them.

Mr. Guith, the bill authorizes a Federal Strategic Transfer Reserve. I understand the need to ensure recovery from major power outages, especially after a cyber attack. But it is my understanding that Congress authorized DOE to conduct a study into the need for such a strategic reserve and the best approach to ensuring resiliency and availability, replacements of transformers pursuant to the FAST Act.

Mr. Chairman, if I could, I would like to enter this report into the record.

Mr. PALLONE. Have we seen it? Have we seen what Mr. Walberg wants to enter into the record?

Without objection.

[The information appears at the conclusion of the hearing.]

Mr. WALBERG. Thank you. Thank you, Mr. Chairman. I think you should have seen that.

Mr. Guith, in your own testimony you report the Department of Energy determined that the Strategic Transfer Reserve would not be necessary and did not recommend the formation of a federally owned reserve. If we are to enhance electricity-sector resilience, does it make sense to follow DOE's statutory required recommendations?

Mr. GUITH. Yes. I mean, if you look into what the country has available when it comes to rapid response for critical situations of power outages, whether it is because of weather or some other interruption, it is incumbent upon the Nation's utilities to bring those, to have those assets stockpiled and be able to bring them to bear collectively at the drop of a hat, and that is what DOE determined.

And that is why we would recommend taking the authorized funds for the Transformer Reserve Program and applying them to the Transformer Resilience and Advance Components Program also in the bill, because that is where the most work can be done, is how to make the transformers themselves more resilient to extreme conditions.

Mr. WALBERG. So probably before moving forward we ought to make sure that these recommendations are captured. I would assume that from your—thank you.

Mr. Lyons and Commissioner Clyburn, can you please comment on the provision of the bill that allows entities not designated as eligible telecommunications carriers to receive funding under this bill?

Ms. CLYBURN. I think it would promote innovative ideas and opportunities as long as those companies are well-vetted and meet the standards. I think it should be an all-inclusive, all-of-the-above approach so we can get the best ideas, the best technologies to the market.

Mr. WALBERG. Mr. Lyons?

Mr. LYONS. I agree with that. I think the more people you have bidding in the reverse auctions, the better, as long as they can

meet the minimum technical standards of what the auction is requiring.

Mr. WALBERG. OK. Mr. Lyons, do you see the potential for a bottleneck in deploying this funding when it comes to skilled professional workforce that can actually use the funding considered in this bill to actually go out and build the networks?

Mr. LYONS. I think that is possible. There are certainly a number of folks, particularly in the wireless, the fixed wireless space, who have talked about the need for more workers than we can get. When you are talking about deploying in rural areas where populations are relatively small, you are going to need to find trained people somewhere.

Mr. WALBERG. That is a challenge these days.

Commissioner Clyburn, is there more the Commission or we in Congress can help to reduce this problem?

Ms. CLYBURN. Yes, coordination, certainty, and focus. I really think if we keep our eyes on the what the potential for this, it will—it sounds like a big price tag, but it will pay for itself in multiples.

Mr. WALBERG. OK, thank you. I appreciate that. I yield back.

Mr. PALLONE. I thank the gentleman. Next is Mr. Engel, recognized for 5 minutes.

Mr. ENGEL. Thank you very much, Mr. Chairman.

Mr. Auerbach, I have a few questions I would like to ask you. And I am going to make a statement, and I would like you to comment on it. Community-based hospitals are often the cornerstone of healthcare systems, and many of them operate on very thin margins—I know that is true in my district—and therefore lack the resources to invest in new facilities.

I am pleased to be an original sponsor of the LIFT America Act, which does include $2 billion to modernize hospitals, and it marks an important first step, but considerably more funding obviously is necessary to address the dire state of our Nation's hospitals. So I would like to ask you if you could please describe the negative effects that outdated and antiquated hospital facilities can have on patient care. I mean, it is obvious, but I think we should state it.

Mr. AUERBACH. Sure. And thank you very much for this question. You raise an important point. We are seeing across the country that a number of our hospitals are becoming outdated. Their facilities are in some instances literally crumbling and that that kind of an impact, as well as the impact of cutting back on services or in some instances closing, is having a very negative impact on the provision of healthcare services to the people in those communities.

It can mean it becomes more difficult to provide high-quality care. It can mean there can be additional expenses in terms of the provision of care, and it is particularly a problem for the safety net hospitals, for the hospitals that serve the lower-income residents of the country.

So paying attention to the status of the hospitals, the infrastructure of those hospitals, both the buildings themselves and the technology within those buildings, both laboratory technology and internet technology, is extremely important in terms of health outcomes and quality of care overall.

Mr. ENGEL. Well, thank you very much. I absolutely agree with you. The second question deals with lead pipes. And I want to tell you that during the 2016–2017 academic year, parents of students attending Public School 41, which is a public elementary school in my district, told me they were concerned about elevated lead levels in the school's water fixtures.

And we worked with the city's Department of Education, New York City. We were able to replace all of the affected fixtures. It was one of several schools in the city with lead-made water fixtures, and I, really, I am happy that the city replaced 91 percent of the water fixtures affected. It has commitment to achieving a hundred percent, but the good work in New York City is really an exception.

One recent nationwide survey estimates that 6 million lead service lines are still in use, posing a risk to the health and well-being of American families. So, Mr. Auerbach, let me ask you again, can you please describe the impacts of lead exposure on children's development and growth?

Mr. AUERBACH. Sure. Well, lead exposure can have a devastating impact on the health of children. As their brains are developing rapidly, the impact of lead can cause developmental delay. It can cause behavioral health problems. In some instances it results in hospitalization. If that lead exposure is high enough, it can even result in death. So lead exposure is particularly dangerous and for children, but it is dangerous for people at any age.

Mr. ENGEL. Well, thank you. And my third and final statement, which also involves a question, talks about the recent outbreaks of Zika and flu have shown our Nation is woefully unprepared for infectious disease outbreaks, and we have seen it with measles as well. Much of this can be attributed to a lack of Federal support for public health infrastructure, including disease monitoring systems and diagnostics laboratories.

I am pleased to see that the LIFT America Act will make robust investments in this area. So let me ask you again the question, how will these investments prepare our healthcare system with the threat posed by antibiotic-resistant pathogens, sometimes called superbugs?

Mr. AUERBACH. Thank you for asking that question. The threats associated with antibiotic resistance are very significant threats and likely to increase over time. We are seeing more and more instances where they are being detected in healthcare facilities and at the locations, and they pose a significant risk to the public. Public health can play a critical role, and the support through the LIFT America Act provides much of that support to do rapid testing.

Identification of what those bugs are using technology like advanced nuclear detection allows us to get a precise understanding of what those pathogens are and makes it easier for them to be isolated and makes it easier for the people that have been exposed to them to be treated. So this is a serious threat and one where this act would help in terms of both prevention and response.

Mr. ENGEL. Well, thank you very much. I think it is important to get these things on the record so people understand how important this is and how it really affects everyone. Thank you.

Mr. AUERBACH. Thank you. Thank you, Congressman.

Mr. ENGEL. Yield back, Mr. Chair.

Mr. PALLONE. Thank you, Mr. Engel. Mr. Carter, for 5 minutes.

Mr. CARTER. Thank you. Thank all of you for being here, we appreciate your indulgence. And I know you are tired and you are hungry but you are almost there, so hang in there, OK.

Ladies and gentlemen, I have the honor and privilege of representing the entire coast of Georgia, and we of course are not immune from natural disasters. In fact, we have had two hurricanes in an 11-month period and, as you can imagine, very devastating to our area.

I wanted to ask, I see a lot of programs and funding that are included in these bills and Mr. Guith, I will ask you. They seem to prioritize different uses, but I don't see them really prioritizing disaster situations. And I was just wondering how much of this bill really does actually reinforce resiliency. Is that really included? I mean, surely, we want to mitigate these types of situations. We know that they are more common now, and some would argue that they are more intense now in these storms. Are we doing anything in this bill that would help us in that respect?

Mr. GUITH. I am not going to pretend to be an expert on all 200-some pages, but I think there are aspects that absolutely address reliability and resiliency. We have talked about some of them this morning on the transformer resiliency, some of the monies that would go to DOE to help develop more resilient transformers.

But also within the scope of the smart grid funding, I think that could also be considered a reliability function, because the more automated you have the ability to dispatch electrons and make real-time differences when you have one path cut down because of a tree line or because of a hurricane and the ability to bring new generation online more quickly and to distribute that, I mean, that is one of the underlying aspects of a smart grid. So I would say that it does take steps to address reliability and resiliency.

Mr. CARTER. Well, I am glad to hear that, because I honestly believe that if we are smarter, if you will, if we just use a little bit of preparation that we can sustain these storms a lot better, and certainly that would help.

The weatherization program under the Department of Energy—and it is obviously intended to reduce costs for low-income individuals in low-income communities, of which we have quite a few in the State of Georgia as well—but are these updated in any ways to help these people? Because, I mean, it is devastating to anyone who is flooded and it is devastating to anyone who is impacted by this, but especially for low-income. Are you familiar with anything to do with that?

Mr. GUITH. The Weatherization Assistance Program is something that—it is a program that has been around, I think, for 3 decades. The reauthorization is incredibly important not only to the recipients of those grants but also to the utilities who serve them and provide the weatherization.

The one mention I make in my testimony is that we would caution against diverting funds from efficiency improvements, which is what the Weatherization Assistance Program has been focused on serving some 7 million Americans over its lifetime, and broadening

the definition to include renewable technology. That is addressed in other parts of the bill which we have also heard about this morning, specifically what Mr. Ruiz mentioned related to rural and low-income solar.

So we would prefer that this stay, that the Weatherization Assistance Program stay solely within the bandwidth of increasing efficiency around the envelope of the residence.

Mr. CARTER. Good. Thank you for that.

Professor Lyons, I wanted to ask you. I represent South Georgia, a lot of rural area in South Georgia, and I know one of the things that we have talked about is the broadband build-out. And you seemed to express concerns about the mapping process and about us making certain that we are prioritizing places that need to be, such as the rural areas. What would you suggest? I mean what can we do differently perhaps?

Mr. LYONS. So part of the issue lies with better data collection at the FCC, right, so the FCC is already in the process of trying to figure out how to improve their existing data collection efforts and have started to reach out with, through public-private partnerships, with groups like USTelecom to figure out better reporting.

I think one thing that may be helpful is, as we mentioned before—and this is something that Commissioner Clyburn mentioned in her remarks as well—is some form of crowdsourcing to get third-party information, right. The information of what services are available where is known by the American people. It is just a matter of getting it from the disparate level up to those who are coordinating this, and finding ways to do that may be very useful.

So, for example, I can go at any time on a website called speedtest.net, right. Anywhere I am as long as I have a connection, it will tell me not only that I have connectivity but what the speed is. That type of data is really valuable if you can get it in the hands of those who are mapping not only availability but also speed on a locational basis.

Mr. CARTER. Right, right. Well, thank you. And thank you all again for hanging in there with us. And I yield back.

Mr. PALLONE. Thank you. Mr. Rush, recognized for 5 minutes.

Mr. RUSH. I want to thank you, Mr. Chairman. I sheepishly come to the committee room for this hearing because I have been in the chair when Members come in in the last minute and enter the hearing, and I do know the feeling. So I feel you, Mr. Chairman. I feel the witnesses also. I am going to be brief.

But I was at an important meeting of the Congressional Black Caucus and, Ms. Clyburn, your father came in and gave us a report on what happened at the White House this morning. And one thing I just want to say that this hearing is being conducted with the White House meeting as a backdrop where the President told the Speaker and the other Democratic leaders there that they had a choice of either investigations or infrastructure, and then he walked out. So he is putting that choice before the American people, want Congress investigations or infrastructure, and he walked out and closed the door. That was the President.

And so—but I sit here as a proud cosponsor of the LIFT America Act, and I certainly want to commend my chairman, Chairman Pal-

lone, for his leadership and his endurance as well as all of my colleagues for their hard work in bringing forth this much-needed bill.

With titles on expanding broadband, increasing funding for clean drinking water, modernizing our electric grid, and making healthcare more accessible, this bill will provide enormous help to my constituents, and it goes beyond just the empty rhetoric and partisan posturing. It makes significant investments in starting to rebuilding our Nation and combating climate change.

So I am going to begin my questions with you, Ms. Clyburn. I know this is an issue that you worked on for many years now as a Commissioner. In your opinion, how well does the LIFT Act, the LIFT America Act, help modernize our telecommunications infrastructure and expand broadband to all of America, all communities in America?

Ms. CLYBURN. One of the great opportunities I had as serving as an FCC Commissioner is being part of the public-private partnership agreement that we had with industry. It brought—it leveraged limited resources with the resources of commercial enterprises. What this does is pick up where that left off, where we were so dependent on industry to—by their business plans, even though it was a partnership, this says, "Here is what has not worked in the past. Here are where the gaps are. This is where the money is going to."

So it is targeted. It is intentional. And it will allow us with that $40 billion to fill in some gaps that we have been talking about, lamenting about, and acting like we did not know that money will fix this. It will target it, you know, direct that to those places. And that is why I wanted to be here today, because, you know, I thought I was done with hearings.

Mr. RUSH. Understand.

Ms. Eckdish, I come from Chicago, and believe it or not, we have a crisis for clean water in Chicago, and it is really a crisis in urban areas throughout the Nation as we start out to rebuild the water infrastructure. And how will this bill help us to solve the problem of access to clean water across the Nation, including my city of Chicago?

Ms. ECKDISH. Sure. Thank you for the question, Congressman. From aging infrastructure, leaking infrastructure, to contaminants that we have talked about today, lead in our water, there is tremendous need, and we know communities across the country are struggling to provide clean water. This bill will be a significant step in the right direction in terms of really investing more funds in our State Revolving Funds and the Drinking Water SRF that is a very proven program and also will create good jobs.

Mr. RUSH. And there is a battle and has been for decades now in Chicago among some of the unions and contracting developers around plastic or lead pipe. Do you have any position of which one is more conducive to clean water and clean environment?

Ms. ECKDISH. You know, I think that is a really important question. I would love to follow up for the record on that one.

Mr. RUSH. Thank you so much. I yield back, Mr. Chairman.

Mr. PALLONE. Thank you, Mr. Rush. Mr. Gianforte is now recognized for 5 minutes.

Mr. GIANFORTE. Thank you, Mr. Chairman. Thank you for the committee for being here. As we look to rebuild and modernize our infrastructure, addressing the needs of our rural communities must be a priority, from rebuilding roads and bridges to maintaining dams and waterways to investing in reliable access to water.

As the internet continues to transform how we work, communicate, and connect, delivering dependable broadband to our rural communities needs to be a top priority. Reliable access to broadband is a key to opening the doors of greater opportunity and the American Dream to more Americans. The internet as we know it came to be around 1995. For 20 years it was open and free. It ushered in innovation and transformed our economy, leading to new high-tech sector and good-paying jobs.

In 1997, my wife Susan and I started a business in our home in Bozeman, Montana. We had this idea that the internet might actually make it possible for folks to work from anywhere, even from Montana. We were right. Our company grew from a room in our house to one of Montana's largest employers, with 1,100 employees and an average salary of almost $90,000 a year, in Montana.

Ours was just one example of how the internet created more high-paying American jobs, increased opportunity and prosperity. While broadband access has taken off exponentially for some in the last 10 years, our rural communities remain one of the most difficult to connect. One in three Montanans still lacks access to broadband. And the disparity is worse in our rural areas.

To bridge this digital divide, the overall cost of getting fiber to the last home must come down. Congress should cut red tape from the permitting process and empower State and local officials to efficiently deploy broadband in our rural communities. Last Congress, I worked with Representative Curtis from Utah to pass the Rural Broadband Permitting Efficiency Act through the House. This bill streamlines the deployment of broadband infrastructure in highway right-of-ways by cutting back on duplicative Federal permitting laws and regulations. These mandated reviews can cause unneeded and yearlong delays in critical projects. They also discourage providers and States from pursuing broadband deployment projects, especially in rural areas.

Reforming the Federal permitting process spans the ideological spectrum from a conservative like me to the president and founder of the Progressive Policy Institute. Three years ago he said, "An accumulation of laws and regulations largely designed to protect the environment via environmental impact reviews is bogging down the approval of badly needed transportation projects and instead causing environmental damage."

The fact is, the current permitting regime is an obstacle to opportunity. There is bipartisan agreement for permitting reform. As we build an infrastructure package, we must work together to reform the Federal permitting process to help us make timely and critical investments in our communities that need them the most.

I want to start with you, Mr. Guith, if I could. Commonsense reforms in right-of-way, the FAST–41 authority, and the environmental review process can cut down the costs and timeliness of projects. Are there other practices that we should be looking at to make the permitting process more efficient?

Mr. GUITH. Besides permanent authorization of FAST–41, I would say the two most useful tools that Congress can provide are codifying one Federal decision which was in the executive order from 2 years ago so that there is no question to a project sponsor who is shepherding or who is responsible ultimately for their project. Instead of saying, "All right, Federal Government, who is working on it now?" and you get a bunch of shoulder shrugs, you know, specifically there is one and one only. And that is also important when there are discrepancies between two agencies as to who takes the priority.

And then the other aspect is limiting the time frame to 2 years. I mean, there can always be certain exceptions made, but the bottom line is that concurrent process through the entire Federal Government as well as State and local, it shouldn't take longer than 2 years. It shouldn't take longer to permit a project than it does to build it.

Mr. GIANFORTE. Well, I appreciate that, and I see my time is coming to an end. But I just want to say thank you for being here. We need to continue to work together and, Mr. Chairman, let's find bipartisan ways to get this infrastructure built, particularly as it relates to rural broadband. And I yield back.

Mr. PALLONE. I thank the gentleman. Oh, Ms. Kuster is here. Ms. Kuster is recognized for 5 minutes.

Ms. KUSTER. Last but not least. You are almost done. Thank you for your patience, and I want to join my colleagues on both sides of the aisle to talk about rural broadband, critical issue in my district in New Hampshire. I have made this comment before, but I think the presidential primary candidates are going to have the experience, "Can you hear me now? Can you hear me now?" And I think it may become a higher priority on their agenda, I hope.

But thank you for your work, Commissioner. We appreciate it. And I do want to work with the committee on the mapping issue. I think Cathy McMorris Rodgers mentioned a bill, and I would like to work in a bipartisan way. That is a big point for us right now because the maps show that there is better coverage than there actually is, and so we have a citizen initiative going out and trying to collect the data for the FCC.

And then the other issue that I make note of is your point that population is not a good proxy for coverage, that we should maybe revisit and fix that issue, the allocation issue around the funding. But I think you have heard today broad, bipartisan support for improved access and for education, for job training; it is critically important for us in terms of the next generation of citizens and workers in New Hampshire, so I appreciate that. I also appreciate the issues around clean drinking water in the LIFT Act. I want to commend the chair for including that.

In New Hampshire we recently passed a State law requiring that schools test their water and take remediation efforts if contamination is present. A recent GAO report indicated 57 percent of American schools do not test their drinking water for lead, which I think to most parents would be pretty shocking. And so, I think it is important to address that in the LIFT Act, funding for drinking water programs including schools and child care programs.

So I want to follow up, Ms. Eckdish, from your testimony highlighting more than half of the schools across the country were built during the 1970s or before. Can you discuss the challenges that some of these schools face around lead contamination and drinking water and how this bill might make a difference?

Ms. ECKDISH. Sure. Thank you for that question, Congresswoman. And again, I think schools are a critical issue that should be part of the infrastructure conversation. As we heard from Mr. Auerbach, children are particularly susceptible to lead, so looking at lead in schools as well as lead in child care facilities is extremely important moving forward and should be part of the infrastructure discussion.

I think more broadly there could be opportunities to look at—the bill does look at the energy efficiency at schools. There are opportunities to look more broadly at the health and safety of these school facilities beyond lead, asbestos, a number of other challenges that these aging facilities are facing.

Ms. KUSTER. And I also appreciate the provisions around PFAS. We just had a hearing recently, and that has been a big issue in my district as well. And I just think, you know, as a mother, as a Member of Congress, I care about the present and future well-being of our children, and I think it is something that is, you know, critically important, so I appreciate that.

And then just turning to the significant investment in moving us toward a clean energy economy, in New Hampshire we have five towns already—Concord, Keene, Plainfield, Hanover, and Cornish—in my district that have committed to use 100 percent renewable energy by 2030. And I think so many communities are stepping up on clean energy.

Our housing authority, for example, in Keene, New Hampshire, recently installed solar arrays on a housing project, and it is going to reduce pollution equivalent to gas-powered driving vehicles a hundred and ninety, two hundred thousand every single year. So again, Ms. Eckdish, if you can discuss how the LIFT Act's grant program to support solar installations could make a difference, and then my time will be up and you will be done.

Ms. ECKDISH. Sure, thank you. So I think, again, investing in clean energy is a tremendous need both in terms of reducing greenhouse gas emissions and, if we do it right, with strong labor and procurement standards we can also create good jobs not only in the installation of these solar panels, wind infrastructure projects, but also in the manufacturing of the component parts. And I think that is an important thing to consider as well.

Ms. KUSTER. So a bipartisan win-win-win well-delivered, Mr. Chairman. I yield back.

Mr. PALLONE. Thank you. And Mr. Cárdenas is recognized for 5 minutes.

Mr. CÁRDENAS. Thank you very much, Mr. Chairman and Ranking Member, for having this important hearing. And I just want to say that I am happy to be talking about infrastructure today, and I am certain the American people are happy that we are talking about it, but hopefully we can put that talk into some actions as legislators.

Improving broadband infrastructure to make sure our students can get their homework, to modernizing infrastructure in transportation, to make sure it is smart and energy efficient to improving our healthcare, physical infrastructure, and telecommunications systems, to fixing our drinking water infrastructure—this bill takes tremendous strides towards a future we should have gotten to many, many years ago. And it is really important for us to realize that it is our responsibility. It is every generation's responsibility.

But I personally believe that the United States of America—that we who are around today, especially decisionmakers and adults—we have been resting on the laurels and the hard work of previous generations who have invested in infrastructure and we, unfortunately, have been able to take it for granted. And far too often I think that we do take it for granted.

In Los Angeles, many need to drive to get to school, work, to see their families. We are working on reducing emissions so we can breathe cleaner air in Los Angeles. We are building out our public transit, which will greatly benefit families in the San Fernando Valley. I am very proud to see it in our school districts.

In Los Angeles, we embarked on an over $30 billion infrastructure to build again an example of an infrastructure that we had foregone for decades, for generations, and now we have one of the most modern school systems in the country when it comes to the infrastructure thereof. Nearly 25 million children ride over 500,000 predominantly diesel buses to school in the U.S. every single day, which contributes to air pollution and, importantly, it also exposes our most vulnerable population to that air pollution. That is why I have introduced the Clean Commute for Kids Act, which would provide funding to replace/retrofit school bus fleets with cleaner energy sources like electricity or natural gas. I want to thank you, Mr. Chairman, for including this bill in the LIFT America Act.

I have a question. My first question is for Mayor Wahler and Ms. Eckdish. Can you talk about what converting or retrofitting a school bus fleet to cleaner energy sources like electricity can be for reducing emissions?

Ms. ECKDISH. Sure. Thank you for the question. We are talking about, obviously, emissions reductions. We are talking about air pollution benefits, so public health benefits as well. And if we do it right, and we are also looking at procuring those vehicles domestically, we are also looking at job creation benefits in the community as well.

Mr. CÁRDENAS. OK, anybody else? OK, so I guess we agree it is good for everyone. And I think it is important for us to understand that we must keep, in my mind, the common denominator is our most vulnerable, seniors and children. Seniors and children. Seniors and children, because, fortunately or unfortunately, many of us take things for granted and we don't feel or understand how dire these changes are and how they need to be made, like, yesterday.

I believe that the Clean Commute for Kids Act will reduce emissions in communities, reduce the exposure of our children to carbon emissions and particulate matter that has been shown to cause health issues like asthma, which will expose children to clean energy sources and get them excited about renewables. And again, this is an example for children. What we have seen when we were

growing up, we should not take it for granted that that is modern and clean and good for the next generation.

As we convert to cleaner, renewable sources we need to address the issue of energy storage. The current landscape of storage includes grid scale, pump storage, hydropower, and smaller lithium-ion batteries. But I understand that several new grid-scale technologies are either in laboratories or pilot phase. Now, the great additional benefit we will have from solving this problem is that we will be creating new, green jobs for Americans at the same time.

Ms. Eckdish, any perspectives on that?

Ms. ECKDISH. Yes, thank you. I completely agree we should be investing broadly and leading in these new clean technologies.

Mr. CÁRDENAS. So how are we doing in the laboratory, from your perspective? I mean, do we have some of these things coming to fruition soon hopefully? I mean, is the investment being made, as far as you are aware?

Ms. ECKDISH. I think we need to significantly increase our investments across these low-carbon technologies. I think we have made significant strides in a number of them, but there is significant much more work to be done.

Mr. CÁRDENAS. OK. And also I would just like to acknowledge and thank Commissioner Clyburn for all of your expertise and the efforts that you have constantly given not only to this committee but the Members of Congress from your perspective and your public service. So thank you.

Ms. CLYBURN. Thank you, sir.

Mr. CÁRDENAS. I yield back. Thank you.

Mr. PALLONE. I thank the gentleman. And last but not least, we have Mr. Butterfield, recognized for 5 minutes.

Mr. BUTTERFIELD. Thank you very much, Mr. Chairman. I realize the hour is late, and I will try to get through this much quicker than in 5 minutes. But thank you to the witnesses and thank you for hanging in there for the last few hours. It has been a long day.

You know, Mr. Chairman, we have been talking about infrastructure ever since I have been in Congress, but it seems that in the last couple of years we have really gotten serious about a serious and big and bold investment in infrastructure. And the good thing about it, it seems that it is becoming a bipartisan conversation here on the Hill, and so I am real excited about it.

When our leadership went to the White House a few weeks ago, I guess it was 3 weeks ago, to discuss it with the President, we initially put $1.2 trillion on the table as a beginning point, and then I understand the conversation mushroomed into 1.5 trillion and the President himself offered 2 trillion. And so that was a good opening.

Our leadership went back to the White House this morning and continued the conversation to try to find ways to pay for a $2 trillion infrastructure investment, but unfortunately the President, upon hearing some news reports that he disliked about our Democratic Caucus meeting this morning, literally walked out of the meeting and ended the conversations and said that, until there is a discontinuation of the investigations, then there will be no conversation at all with him about infrastructure.

And I don't know if the five of you know that. You have been at the table all day long. I don't know if you have seen the breaking news, but the President literally walked out of the meeting today and said that he would not continue the conversation. And so that is very unfortunate, but I am prepared to vote for any infrastructure package that we have an opportunity to vote on.

Mr. Chairman, one thing that I have been concerned about over the years is a proper definition of infrastructure. When I think of infrastructure I think of electric grid. I think of water systems, contaminated water, sewer systems, brownfields, bridges, ports, highways, high-speed rail, airports, transportation hubs, rural broadband, broadband, clean energy, pipeline safety, schools, hospitals, public health and recreation, and the list just goes on and on.

Now I know that a trillion dollars is a lot of money, Mr. Chairman, but if you try to pay for all of these projects in a big way, a trillion dollars will not be sufficient to fund all of these different projects. So that is why I want to call on us to really get serious about defining what infrastructure really is. And so let me just begin with Ms. Clyburn.

In your written testimony, you discussed the importance of educational institutions and their essential role in training and educating the next generation of our Nation's workforce. And I am pleased that the LIFT America Act would help connect these institutions at a huge speed. With that in mind, for more than a hundred years, HBCUs—and you and I have great love and affection for HBCUs—they have always been at the forefront of education for African Americans. Sadly, many HBCUs are plagued with issues like outdated technological infrastructure and equipment, limited access to digital and wireless technology, and limited funds for new faculty and academic programs.

Earlier this year, I introduced the Building Resources into Digital Growth and Education Act—I call it the BRIDGE Act—to address these problems. This legislation will establish a digital network technology program that awards grants to HBCUs and other institutions to acquire equipment and network capability and personnel and other resources.

I guess my question is, with the last 1 minute that I have, why in your opinion is the LIFT America Act support for anchor institutions and their efforts to develop the country's workforce so important?

Ms. CLYBURN. Our schools, no matter what level, our libraries, no matter where they are, how big or small, they are life-changing, game-changing ecosystems. They meet us where we are at any age, and they have a unique ability to bring us through technology, through all types of learning to take us to our next level. They are the best places, I believe, to guide us, particularly the digitally and technologically challenged, to guide us to the next level.

And HBCUs, in particular, I think, are uniquely situated to uplift themselves and the communities at the same time. I was in North Carolina earlier this year talking just about that on Johnson C. Smith's campus, so people are quietly talking about this, but this would be the impetus to move that to the next level.

Mr. BUTTERFIELD. Thank you. I needed that in the record. Thank you very much. I yield back, Mr. Chairman, yes.

Mr. PALLONE. Thank you. I think we have come to the end here. You have been here for over 4 hours. Let me just say a couple of things to follow up on what Mr. Butterfield and others have said, you know, in terms of where we are going. You know, obviously this is our first hearing, and we did have a hearing on the LIFT America Act.

But as I have said to my colleagues on both sides of the aisle, you know, we will continue to entertain, you know, different legislation that other Members have put forward. This is not the end-all, you know, just the LIFT America Act. We could obviously incorporate, you know, other legislation that Members have submitted or will submit on both sides of the aisle. Same for funding, you know, Members and ideas about funding will continue as well.

And I know that this meeting occurred today where the President walked out, but hopefully he will reconsider and hopefully we will continue to, you know, have more summits at the White House because this is an important bill. And I think that an infrastructure bill can be done on a bipartisan basis, so I am going to be optimistic today. So let me just thank our witnesses for participating for over 4 hours.

I will just remind Members that, pursuant to committee rules, they have 10 business days to submit additional questions for the record to be answered by the witnesses who have appeared. And of course, I would ask each witness to respond promptly to any such questions that you might receive.

I do have to enter into the record, this is going to take a couple of minutes here. I request unanimous consent to enter the following letters/testimony into the record, and that includes a letter from the American Wind Energy Association; a letter from the National Electrical Manufacturers Association; a letter from U.S. Green Building Council; a letter from Congresswoman Cheri Bustos; a letter from the Small Business & Entrepreneurship Council; a letter from the Diesel Technology Forum; letters from the National Association of Convenience Stores, National Association of Truck Stop Operators, the Petroleum Marketers Association of America, and the Society of Independent Gasoline Marketers of America; a letter from the American Public Health Association; a letter from the Health Care Information and Management Systems Society; a letter from the Association of Public Health Laboratories, the Council of State and Territorial Epidemiologists, the Health Care Information and Management Systems Society, and the National Association for Public Health Statistics and Information Systems; a report from the Department of Energy on the Strategic Transformer Reserve dated March of 2017; a letter from the Satellite Industry Association; a letter from USTelecom–The Broadband Association; a letter from the American Fuel and Petrochemical Manufacturers; and a letter from the MQ Foundation. And, without objection——

Mr. SHIMKUS. Reserve the right to object.

Mr. PALLONE. You are objecting?

Mr. SHIMKUS. But I don't object.

Mr. PALLONE. Oh, OK. That sounds good.

Mr. SHIMKUS. I just wanted to let you know I was here.

Mr. PALLONE. All right, I love you.

Without objection, so ordered.

[The information appears at the conclusion of the hearing.[1]]

Mr. PALLONE. And unless you have some additional comments. No? OK, the committee is officially adjourned.

[Whereupon, at 2:21 p.m., the committee was adjourned.]

[Material submitted for inclusion in the record follows:]

PREPARED STATEMENT OF HON. ANNA G. ESHOO

Mr. Chairman, thank you for holding today's hearing on the Leading Infrastructure for Tomorrow's America Act or LIFT America Act. I'm proud to be a cosponsor of this important legislation which makes critical investments in broadband deployment, clean energy, and healthcare infrastructure.

Ensuring that all Americans have access to quality and affordable internet service must be a top priority for our country. Despite gains made, over 21 million Americans still lack access to broadband. Every community in every part of our country, whether it's rural, suburban or urban, must have access to high-quality internet for modern healthcare, education, and jobs.

Congress can close the digital divide by making Federal investments in the deployment of broadband and aligning incentives for investments by government and industry. The LIFT America Act takes critical steps to ensure that sufficient public investment can be directed toward broadband infrastructure, and I strongly support the provisions of this bill that authorize the amount of spending needed to close this divide that diminishes our country.

We still need to do more to incentivize investments in broadband by municipalities, States, Federal agencies, and private entities. To that end, I've introduced four bills that create or improve incentives for equitable broadband investment. H.R. 2692, the Broadband Conduit Act, commonly known as "dig once," is bicameral, bipartisan legislation that mandates the inclusion of conduit—plastic pipes which house fiber optic cables—during road construction receiving Federal funding. H.R. 2785, the Community Broadband Act is bicameral legislation that removes roadblocks for public-private partnerships and locally owned broadband systems. H.R. 2784, the Clearing Local Impediments Makes Broadband Open to New Competition and Enhancements (CLIMB ONCE) Act helps local communities streamline the pole attachment process to make the deployment of broadband faster, cheaper, and more competitive. H.R. 530, the Accelerating Broadband Development by Empowering Local Communities Act of 2019, repeals FCC regulations that unfairly limit the ability of local governments to regulate 5G infrastructure. The committee should consider including these priorities in the LIFT America Act.

I'm also pleased the LIFT America Act includes bipartisan legislation I introduced, H.R. 2760, the Next Generation 9–1–1 Act of 2019, which authorizes $12 billion in Federal grant funding for State and local governments to deploy IP-based Next Generation 9–1–1 (NG 911) technology across the country. The upgrades are urgently needed to help move the country's legacy 9–1–1 call centers into the digital age, enabling them to handle text messages, pictures, videos, and other information sent by smartphones, tablets, and other devices when faced with an emergency. The legislation also provides technical assistance and training, while ensuring 9–1–1 is kept under State and local control.

The LIFT America Act also makes key investments in the development and deployment of clean energy technology, by investing in programs to modernize our electricity grid, retrofit homes and schools to reduce carbon emissions, reduce emissions from aging diesel vehicles, expand our renewable energy infrastructure, and install solar panels in disadvantaged communities.

The LIFT America Act also reauthorizes the Energy Efficiency and Conservation Block Grant program which provides grants to State and local governments to help them reduce fossil fuel emissions and conserve energy. This program is the largest Federal investment in clean energy at the local level, and I'm pleased to be a cosponsor of the standalone bill H.R. 2088 which is identical to this provision of the LIFT America Act.

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[1] The Department of Energy report has been retained in committee files and also is available at https://docs.house.gov/meetings/IF/IF00/20190522/109531/HHRG-116-IF00-20190522-SD014.pdf.

Finally, the healthcare provisions of the LIFT America Act make important investments in our Nation's public health infrastructure. State, Tribal, and local public health departments are on the front lines of prevention and response activities that keep Americans safe and healthy. Much of our public health infrastructure, including labs that monitor and detect outbreaks and the hospitals that respond in public health emergencies, are underprepared to respond to today's emerging public health threats. The LIFT America Act builds on existing grant programs and creates new programs to fund the development and modernization of our Nation's labs, hospitals, clinics, and public health departments.

The word "infrastructure" for many means roads and bridges, but our infrastructure needs to go beyond transportation to include energy, broadband, healthcare, clean water, and other infrastructure needs. The LIFT America Act makes critical investments to repair our aging infrastructure and address the challenges facing our Nation of closing the digital divide, addressing the climate crisis, and improving public health.

PREPARED STATEMENT OF HON. ADAM KINZINGER

I thank Chairman Pallone for holding this hearing, and I also want to thank the Ranking Republican, Mr. Walden, for his statement which outlined a lot of the great work this committee has done in recent years to bolster infrastructure in America.

After providing for our defense and national security, the most important role for the Federal Government is to facilitate interstate commerce through infrastructure.

A strong American infrastructure is vital for our country to be able to compete globally, foster local and regional economic development, and create jobs and wealth. It is imperative that the United States works to build a 21st century infrastructure system by looking for long-term solutions to our challenges and embracing American innovation.

It's no secret that bridges and roads are deteriorating across the country. In my home State of Illinois, we have more than 2,000 bridges that are structurally deficient or functionally obsolete, and 73 percent of the State's roads are in poor or mediocre condition.

It is paramount that we maintain the safety and efficiency of the roads, bridges, waterways, and mass transit systems that Americans rely on every day. We must keep our communities connected so that we may bring together the resources that drive our economy and create jobs around the country.

For decades, both Republicans and Democrats have agreed on these fundamental principles. More recently, calls have been growing within the public and here in Washington to not only repair our existing infrastructure, but to "go big" and think about the future of our infrastructure needs.

We must plan for and facilitate the safe and smooth introduction of autonomous vehicles. We must look into new construction materials so that we are building things to last rather than throw good money after bad. We must address the serious disparities for rural communities, like those in my district, regarding access to broadband services. And we must be smarter and more efficient not only with respect to the various modes of transportation, but with the ways we design and construct buildings.

I am proud of the bipartisan work Congress was able to accomplish in the past two Congresses with a 5-year, fully paid-for surface transportation bill, not to mention all other transportation and infrastructure related authorizations such as the FAA Reauthorization, WRDA, the PIPES Act, and more.

I am also proud that two bipartisan bills that I developed with two of my colleagues on the other side of the aisle are included in this package.

I worked with Mr. McNerney to reintroduce the Smart Energy and Water Efficiency Act, which would establish a pilot program to demonstrate technology-based solutions to increase the energy efficiency of water, waste water, and water reuse systems. And we were able to craft this bill in a way that it would not require new funding.

I also worked with Mr. Welch to reintroduce the Smart Building Acceleration Act, which would accelerate the implementation of smart building technology to increase energy efficiency and demonstrate the costs and benefits of these technologies when applied to Federal property. And again, we were able to write this bill at no new costs to the taxpayer.

These two provisions reflect how we can work together and make compromises with one another to achieve a greater good. I am disappointed, however, that the Federal Government has yet to enact a much-needed infrastructure package, and I believe it's safe to say I'm not the only one. I hear it all the time here in these halls,

and I hear it even more when I'm visiting with constituents back home. Republicans and Democrats agree on the needs—and I sincerely hope this bill and this hearing is an important step forward—but we cannot seem to agree on the scope of such a package and the mechanisms to pay for it.

Some difficult decisions must be made soon, and it should go without saying that both political parties are going to have to give a little in order to make progress on behalf of our constituencies.

If both sides continue sticking to the "my way or the highway" approach, I can comfortably predict there will be "no way" for this effort to materialize.

In closing, I will say that I am not thrilled about every provision contained in the legislative package being discussed today, but I think it serves as an opportunity for Members to roll up our sleeves, hash things out, and craft a deal. Not much good can happen without compromise and bipartisanship.

It hope that we can build on this hearing and move towards a strong bipartisan package that the Energy and Commerce Committee can bring to the table as we work with the other committees of jurisdiction to get this done.

I thank the chairman and ranking member, and with that, I yield back.

May 2019

Summary of the Leading Infrastructure For Tomorrow's (LIFT) America Act

COMMITTEE ON ENERGY & COMMERCE

H.R. 2741

TITLE I—BROADBAND AND NEXT GENERATION 9-1-1 INFRASTRUCTURE

Subtitle A. Broadband Internet Access Service Programs

This subtitle would fund **$40 billion in high-speed broadband internet buildout across the country**. The Federal Communications Commission (FCC) estimates indicate that $40 billion in funding is necessary to complete broadband internet service deployment so that 98 percent of the country has access to high-speed, reliable broadband.

Three-fourths of the funds would be awarded by the FCC through a national reverse auction, a mechanism that ensures efficient distribution of the funds to areas that don't have broadband internet service today. By using a reverse auction, the LIFT America Act would deploy high-speed broadband internet service to the largest portion of America at the lowest cost by requiring bidders seeking federal subsidies to compete to serve areas that aren't served today.

The FCC would be required to allocate to states the remaining one-fourth of the funds under Title I, which authorizes the FCC to conduct similar reverse auctions to build out broadband internet infrastructure in unserved areas, or to unserved anchor institutions such as schools or libraries. If a state doesn't have any unserved areas, the state may conduct a reverse auction to build out to underserved areas.

Subtitle B. Next Generation 9-1-1

This subtitle would authorize the Next Generation 9-1-1 Implementation Coordination Office to provide **$12 billion in grants over five years for the implementation of Next Generation 9-1-1 services**. Next Generation 9-1-1 service would protect American lives by making 9-1-1 service more resilient and by allowing callers to send text messages, images, or videos to 9-1-1 to help first responders better assess the nature of emergencies and protect callers when they can't speak to 9-1-1 dispatchers.

Subtitle C. Broadband Infrastructure Finance and Innovation

This subtitle would create the Broadband Infrastructure Finance and Innovation Act (BIFIA) program at the National Telecommunications and Information Administration. This title would authorize **$5 billion in federal funding for the BIFIA program to make low-interest financing available for broadband infrastructure deployment projects**.

BIFIA is modeled after two similarly authorized infrastructure programs, which were created under the Water Infrastructure Finance and Innovation Act (WIFIA) and the Transportation Infrastructure Finance and Innovation Act (TIFIA), respectively. Under the BIFIA program, a wide range of eligible entities, including State and local governments, private companies, and public-private partnerships that could apply for secured loans, lines of credit, or loan guarantees to finance broadband infrastructure build out projects.

Title II—Drinking Water Infrastructure

Subtitle A. Providing Financial Assistance for Safe Drinking Water Act

This subtitle would amend the Safe Drinking Water Act to require the Environmental Protection Agency (EPA) Administrator to establish, within 180 days of enactment, a program to award grants to water systems affected by contamination from per- or polyfluoroalkyl substances (PFAS) to pay the capital costs associated with eligible treatment technologies. These grants would provide up to **$2.5 billion over five years to affected water systems to combat PFAS contamination**. The legislation further directs the EPA Administrator to create a list of eligible treatment technologies, defined as those which can remove all detectable amounts of PFAS from drinking water.

Subtitle B. Additional Drinking Water Funding

The LIFT America Act includes provisions to extend and increase authorizations of **$18.69 billion for essential drinking water programs** including the Safe Drinking Water State Revolving Loan Fund, the Indian Reservation Drinking Water Program, School and Child Care Program Lead Testing grants, Lead Drinking Fountain Replacement, Community Water System Risk and Resilience grants, and Public Water System Supervision grants to states. This subtitle also extends Buy American requirements for drinking water projects along with the funding extension.

Title III—Clean Energy Infrastructure

Subtitle A. Grid Security and Modernization

This subtitle provides **$4 billion over five years for electric grid infrastructure, focused on grid modernization, security, resiliency, and efficiency**. Funds will support infrastructure improvements to enhance energy security, deployment of smart grid technology, and efficiency upgrades. This subtitle includes funding to establish a strategic transformer reserve, to speed electric grid recovery following extreme weather events. It also includes a study on needs and challenges to expanding interregional transmission.

Subtitle B. Energy Efficiency Infrastructure

This subtitle includes several programs to cut energy usage, benefit consumers, and address climate change. The subtitle provides **$1.85 billion over five years for home and school energy efficiency retrofits**. These retrofits will save consumers and school systems money and remove dangerous lighting containing PCBs from school environments.

This **subtitle reauthorizes the Diesel Emissions Reductions Act, providing $1.25 billion over five years to reduce emissions from older vehicles including school buses**.

The subtitle also provides **$1.75 billion over five years in weatherization grants and programs to promote smart buildings and $15 million for a pilot program to promote energy efficient water distribution systems**.

This subtitle provides grants to states, local governments, and Indian tribes to support their efforts to reduce fossil fuel emissions and conserve energy. The bill **reauthorizes the Energy Efficiency and Conservation Block Grant program to provide $17.5 billion**, including funding to deploy infrastructure for delivering

alternative fuels (including electricity). And, it provides **$500 million to support improvements to energy performance of public buildings**.

Subtitle C. Energy Supply Infrastructure

This subtitle will strengthen existing energy supply infrastructure and expand renewable energy infrastructure to increase climate resiliency and reduce greenhouse gases. To strengthen existing infrastructure, the subtitle provides **$1.5 billion in assistance for low income communities to support methane pipeline replacement**. It also provides **$4 billion for improvements to the Strategic Petroleum Reserve to make it environmentally sound**. The subtitle also establishes Northeast and Southeast refined product reserves and provides the Secretary authority to establish other regional reserves to mitigate the impacts of extreme weather events on fuel supplies.

To expand renewable energy infrastructure, the subtitle provides **$2.25 billion over five years to create new grant programs for distributed energy systems and solar installations in low income and underserved communities.**

The subtitle also increases the authorization for the Office of Indian Energy Programs at the Department of Energy to provide additional assistance to ensure reliable, affordable power for Indian communities.

Subtitle D. Smart Communities Infrastructure

This subtitle provides **$850 million over five years to spur the development of Smart Communities infrastructure** through technical assistance, grants, and training. This section authorizes the Department of Energy's proposed Cities, Counties, and Communities energy program to provide technical assistance and competitive grants for clean energy solutions in development and redevelopment efforts. It also funds technical assistance to be provided by the national labs to cities and towns looking to deploy smart community infrastructure. Lastly, this subtitle expands the Department of Commerce smart cities demonstration project to include small and medium cities and towns.

The subtitle also authorizes the **Clean Cities Coalition Network Program with $300 million over five years** which supports expanded development of alternative fuel infrastructure and expanded use of alternative fuel vehicles.

The subtitle also provides **$625 million over five years to reauthorize the State Energy Program and provides additional funds through this program to support the development of an electric vehicle charging network to facilitate greater use of electricity to fuel the transportation sector**.

The subtitle also includes policy changes to accelerate electrification of the transportation sector. It reauthorizes **$925 million over five years to provide grants to state and local governments to support projects that encourage the use of electric vehicles.**

Title IV—Health Care Infrastructure

Subtitle A. Hospital Infrastructure

The LIFT America Act reauthorizes the Hill-Burton Act to provide **$2 billion over five years for hospital infrastructure**. The reauthorization will expand access to care nationwide and promote security by design for hospital networks, records databases, and interconnected devices. The reauthorization will also ensure the use of American iron and steel in funded projects.

Subtitle B. Indian Health Service Healthcare Infrastructure

This subtitle provides **$1 billion over five years for healthcare infrastructure projects** through the Indian Health Service to continue progress in reducing health disparities across Indian Country.

Subtitle C. Laboratory Infrastructure

This subtitle creates a **pilot program and provides $100 million to support laboratory infrastructure**, including state laboratories involved in combating the spread of infectious diseases.

Subtitle D. Infrastructure for Community Based Care

This subtitle creates a **pilot program and provides $100 million to fund infrastructure development for community-based care**, including teaching health centers and mental health care centers.

Subtitle E. Public Health Infrastructure

This subtitle enhances and modernizes the Center for Disease Control and Protection's (CDC) ability to coordinate with state, local, tribal, and territorial health departments. This includes **$500 million over five years to improve the capabilities of CDC and public health departments relating to information technology, data, and data systems, as well as an additional $3.75 billion over five years to improve core public health infrastructure at CDC and public health departments.** Core public health infrastructure includes workforce capacity and competency, laboratory systems, health information systems, communications, financing, and other relevant components.

Title V—Brownfields Redevelopment

This title provides **$2.7 billion over five years for EPA's Brownfields redevelopment grants**.



May 22, 2019

The Honorable Frank Pallone, Jr., Chairman
The Honorable Greg Walden, Ranking Member
House Energy and Commerce Committee
2125 Rayburn House Office Building
Washington, DC 20515

Chairman Pallone and Ranking Member Walden:

On behalf of its members, the American Wind Energy Association (AWEA) submits this letter for the record for the Full Committee hearing entitled "LIFT America: Modernizing our Infrastructure for the Future." AWEA is a national trade association comprised of about 1,000 member companies representing a broad range of entities with a common interest in encouraging the expansion and facilitation of wind energy production in the United States. AWEA members include wind turbine manufacturers, component suppliers, project developers, project owners and operators, financiers, researchers, renewable energy supporters, utilities, marketers, customers, and their advocates.

AWEA would like to commend you and your colleagues for holding a hearing on H.R. 2741, the LIFT America Act, which if enacted would make a significant improvement to the nation's energy infrastructure. The legislation touches on every aspect of our nation's energy infrastructure, from the electrical grid, to buildings, and to electric vehicle charging to help transform our transportation system. AWEA and its members support the legislation. As the committee process moves forward, we strongly recommend adding additional provisions to address the many issues facing the transmission grid so that consumers of all types can benefit from cheaper and more reliable electricity.

The ability to get electrons from where they are generated to where they are consumed is essential to virtually everything Americans do. Yet, our electricity grid needs sustained attention and investment in order to provide reliable, affordable service to families and businesses. Consumers currently pay approximately $6 billion in annual transmission congestion costs.[1] Transmission expansion is especially critical to facilitate the electrification of our economy- transportation, building and water heating, etc. Just as other sectors of our national infrastructure have evolved to more cheaply and efficiently transport goods and services, so too must our national electric infrastructure be revitalized to support our increasingly plugged-in

[1] Available at https://watttransmission.files.wordpress.com/2018/03/watt-living-grid-white-paper.pdf

economy, reduce blackouts, enhance reliability, reduce congestion, and save consumers money.

Transmission provides dozens of quantifiable economic, reliability, and security benefits for consumers. For example, transmission facilitates access to lower-cost electricity generation, reduces the need to build additional generation to hold in reserve, facilitates robust electricity markets, provides economic development and jobs, and helps generators and utilities comply with public policy requirements, among other benefits. No matter your end goal—driving down electricity costs, improving resiliency and reliability, reducing carbon emissions, or making the U.S. more secure and economically competitive—modernizing the grid and expanding transmission is a common denominator. This is a no-regrets down payment for future energy policies and future economic growth.

While transmission does have an upfront cost, transmission more than pays for itself several times over through economic and reliability benefits. For example, the Southwest Power Pool found transmission upgrades installed between 2012 and 2014 created over $16 billion in gross savings, more than 3.5 times the cost of the transmission upgrades. Likewise, the Midcontinent Independent System Operator found recent transmission investments will provide $12-$43 billion in net benefits over the coming decades. Multiple reports by the Brattle Group have found a likely annual investment range of $12 billion to $16 billion in transmission through 2030 would stimulate $30 billion to $40 billion in economic activity and support 150,000 to 200,000 full-time jobs per year.[2]

AWEA is supportive of your efforts to address many of the issues facing our nation's energy infrastructure, but we would appreciate the chance to further discuss ways the LIFT America Act can further address the transmission issues facing our nation. If there are any questions about the statements made herein, please do not hesitate to contact Aaron Severn on our Federal Affairs team at asevern@awea.org or (202) 383-2507.

Sincerely,

Thomas C. Kiernan
CEO

[2] http://files.brattle.com/files/8209_employment_and_economic_benefits_of_transmission_infrastructure_investmt_pfeifenberger_hou_may_2011_wires.pdf

National Electrical Manufacturers Association

The Association of Electrical Equipment and
Medical Imaging Manufacturers
www.nema.org

May 22, 2019

The Honorable Frank Pallone, Jr., Chairman
The Honorable Greg Walden, Ranking Member
House Energy and Commerce Committee
2125 Rayburn House Office Building
Washington, DC 20515

Chairman Pallone and Ranking Member Walden:

On behalf of its members, the National Electrical Manufacturers Association (NEMA) submits this letter for the record for the Committee hearing entitled "LIFT America: Modernizing our Infrastructure for the Future." NEMA is the national trade association representing nearly 350 electrical and medical imaging manufacturers that make the equipment used in a variety of infrastructure sectors—buildings, electric utilities, industrial, and transportation.

One of NEMA's top advocacy priorities is to enact new or revised programs that improve our nation's energy infrastructure. And so, we commend you and your colleagues for holding a hearing on H.R. 2741, the LIFT America Act, making significant improvements in this area. The legislation touches virtually every aspect of our nation's energy infrastructure, from the electrical grid to electric vehicle charging. NEMA and its members support H.R.2741, but as the committee process moves forward, we recommend adding the following additional provisions that will further improve our energy infrastructure:

1). Improve energy efficiency at the nation's industrial and manufacturing plants by providing incentives for companies to upgrade their equipment with the latest electric motors and control equipment, which will help them reduce their energy footprint and reduce their costs and make them more competitive in the marketplace.

2). Build upon federal energy efficiency improvements by setting additional firm energy reduction goals for federal buildings and setting goals to transform federal vehicle fleets over to electric vehicles. Congress should set aggressive goals that can help show state, local governments, and the rest of the nation a way forward in this area.

3). Offer incentives for transmission upgrades to right-size transmission lines (e.g., direct loans or loan guarantees) to project developers to add capacity to transmission lines before there are customers to fill that capacity, which will help future-proof the electric grid.

4). Take additional steps to convert our vehicle transportation system to electricity, such as seaports and airports.

NEMA is supportive of your efforts to address many of the issues facing our nation's energy infrastructure, and we would welcome additional opportunities to discuss the ideas mentioned in this letter and any technical corrections that may arise as the bill moves forward. Please don't hesitate to contact me if you have questions or need more information.

Sincerely,

Philip A. Squair
Vice President, Government Relations

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May 21, 2019

The Honorable Frank Pallone
Chairman
Energy and Commerce Committee
2125 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Greg Walden
Ranking Member
Energy and Commerce Committee
2322 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Pallone and Ranking Member Walden:

On behalf of the U.S. Green Building Council (USGBC), a national nonprofit representing nearly 9,000 member companies and organizations committed to cost-effective and high-performing buildings, I write to provide comments for the hearing "LIFT America: Modernizing Our Infrastructure for the Future." We commend the committee for convening this hearing. We believe that the Committee and Congress should act swiftly to help improve the condition of infrastructure, including buildings, across the country.

USGBC is dedicated to transforming the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous world. Best known for the successful Leadership in Energy & Environmental Design (LEED) green building certification system, we leverage our education, credentials, events, communications, and policy advocacy activities to support the public and private sectors in advancing high-performance, cost-effective buildings that save energy, water and money. Reducing the contribution of buildings to greenhouse gas emissions has been a core area of our work along with a focus on supporting local economic development and job creation.

USGBC Supports Multiple Provisions in the LIFT America Act

Many programs included in the LIFT America Act are aligned with our work in advancing high-performance cost effective building and healthier communities. USGBC supports the following sections:

- Program to enhance electric infrastructure resilience, reliability, and energy security (31101)
- Grant program for grid modernization projects (31201)
- Smart Building Acceleration (32201-32207)
- Weatherization Assistance Program (32301-32303)
- Reauthorization of clean school buses program (32501)
- Brownfields Redevelopment (50001-50002)

We wish to provide comments to enhance the effectiveness or reach of other sections included in the LIFT America Act.

Section 32101, Energy efficient public buildings:

USGBC works with state and local governments across the country on improving the operational performance of their facilities. We support the goal of the program but believe that the bill could be enhanced in a number of key ways:

- USGBC supports including water efficiency savings as part of the program. Since the original program authorization, the federal, state and local government has made impressive progress in integrating energy and water savings into facility improvements. Water efficiency should be added to maximize utility cost savings (and associated emissions savings) for public facilities, as well as to reduce potable water demand which can add to strain on water infrastructure

- USGBC supports the inclusion of third party validation of energy and water reductions as a condition of program eligibility. LEED, for example, is a widely used verification tool used by government and private sector building owners that has been a helpful method to ensure that building upgrades are designed and operating appropriately. Investor Ready Energy Efficiency (IREE) is another third party certification focused on verification of specific energy efficiency measures, and is already being used by utility companies.

- USGBC supports adding benchmarking as a condition of program eligibility. Benchmarking building performance data is a critical step for facilities managers or property owners to improve the performance of a property and maintain investments overtime. Tracking energy and water performance over time can result in low cost reductions in utility consumption and financial benefits. The U.S. Environmental Protection Agency (EPA) reports buildings that use EPA's ENERGY STAR Portfolio Manager achieve an average energy savings of 7% over three years, which is associated with significant financial savings estimated at $120,000 to over $4 million.[1]

  Energy Star Portfolio Manager should be used as a common reporting platform, but the use of other tools to provide additional analytic functions and performance comparisons should also be allowable.

Section 32102, Energy efficiency and conversation block grant:

The funding of Energy Efficiency and Conservation Block Grants (EECBG) under the Recovery Act served as an incredibly valuable resource for communities across the country to save tax payer dollars through energy conservation projects in buildings, including programs to expand the use of LEED certification. USGBC was proud to support the creation of the EECBG and believe that it can play a continued role in

[1] U.S. Environmental Protection Agency, ENERGY STAR® Portfolio Manager. Data trends – Benchmarking and energy savings. 2012 Oct available at: https://www.energystar.gov/sites/default/files/buildings/tools/DataTrends_Savings_20121002.pdf



reducing energy consumption at the municipal level. We support the program but recommend some additional improvements to the legislation.

- USGBC supports clarifying that micro-grids as well as energy storage would be eligible for use under the program as part of the distributed generation section of the bill.

Section 32601, Grants for energy efficiency improvements and renewable energy improvements at public school facilities:

In 2016 the Center for Green Schools at the U.S. Green Building Council (USGBC), the 21st Century School Fund and the National Council on School Facilities released the State of Our Schools report. The report compares historic spending levels to the investment to maintain today's school building inventory and finds a projected gap of $46 billion the nation must overcome to provide healthy, safe, and adequate school facilities for our children and teachers.[2] We believe that all levels of government need to urgently help improve the condition of school facilities, including energy use, across the country.

USGBC supports the goals of the program but believe the legislation can be improved in a number of areas:

- The program should be modified to consider health and safety enhancements alongside energy efficiency and renewable energy improvements as allowable uses of grant funds. Improvements to indoor air and environments can benefit the health and safety of children and educators, and should be integrated into the implementation of an energy project.

- The application should make note of the estimates of maintenance and operations of the equipment being installed, not just the training. As a matter of best practice school districts should have a good understanding of equipment maintenance costs.

- We would also suggesting adding criteria for energy audits or having the Secretary of Energy recognize appropriate audit standards. This addition would help safeguard schools from lower quality audits and protect them from potentially poor investments.

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[2] 21st Century Schools Fund Inc., U.S. Green Building Council Inc., and National Council on School Facilities, "State of Our Schools: America's K-12 Facilities" (Washington: 2016), available at https://kapost-files-prod.s3.amazonaws.com/published/56f02c3d626415b792000008/2016-state-of-our-schools-report.pdf?kui=wo7vkgV0wW0LGSixek0N5A.

Section 34303, Model building code for electric vehicle supply equipment:

As you may know U.S. Green Building Council (USGBC), International Code Council (ICC), ASHRAE and the Illuminating Engineering Society (IES) last year released the 2018 INTERNATIONAL GREEN CONSTRUCTION CODE (2018-IgCC). The 2018-IgCC establishes minimum green requirements for buildings, providing baseline green benefits and a foundation for applying complementary voluntary systems[3]. Sections of 2018-IgCC include electric-vehicle charging or preferred parking for green vehicles.

- We recommend the legislation recognize the 2018-IgCC and the LEED rating system as existing resources for states and localities in achieving broader electrical vehicle and charging deployment.

- We recommend the 2018 IgCC serve as the basis for the development of model code language around electric vehicles.

Thank you for the opportunity to provide this information. Please do not hesitate to contact me if you have any questions or wish to discuss these issues further.

Sincerely,

Bryan Howard
Legislative Director
U.S. Green Building Council

[3]USGBC "LEED AND THE INTERNATIONAL GREEN CONSTRUCTION CODE" (November 2018), available at: https://www.usgbc.org/sites/default/files/2018%20IgCC%20Policy%20Brief.pdf.

CHERI BUSTOS
17TH DISTRICT, ILLINOIS

COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON DEFENSE
SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION
SUBCOMMITTEE ON MILITARY CONSTRUCTION AND VETERANS AFFAIRS

DEMOCRATIC STEERING AND POLICY COMMITTEE
COMMITTEE ON AGRICULTURE

Congress of the United States
House of Representatives
Washington, DC 20515-1317

May 2, 2019

The Honorable Greg Walden
Ranking Member
U.S. House Committee on Energy & Commerce
2322 Rayburn House Office Building
Washington D.C. 20515

The Honorable Frank Pallone, Jr.
Chairman
U.S. House Committee on Energy & Commerce
2125 Rayburn House Office Building
Washington D.C. 20515

Dear Chairman Pallone and Ranking Member Walden:

As Congress begins work on an infrastructure bill, I would like to share my top priorities for inclusion in any comprehensive proposal, elements of which fall under your Committee's jurisdiction. Enclosed, you will find a document outlining programs and investments that are crucial to rebuilding and restoring our infrastructure, especially in rural areas and small towns. My parents' generation left us a world-class infrastructure system, and I look forward to working with you on these important initiatives to meet that promise for generations to come.

Thank you for your leadership in crafting this important bill, and for your consideration of these programs. If you have any questions, please feel free to call me or my staff at 5-5905.

Respectfully,

Cheri Bustos

Cheri Bustos,
Member of Congress

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There is bipartisan consensus that the United States needs significant investment in our infrastructure to build a strong foundation for a successful economy. This is particularly true in the Heartland, where road, water infrastructure, broadband and community facility investments are needed. These investments would support local businesses, help get goods to market and improve quality of life all while creating good-paying jobs. We can make these investments in a fiscally responsible manner.

To realize the benefits of an infrastructure proposal in all parts of the country, any proposal should:

1) Direct federal investment to areas with demonstrated need
2) Strengthen programs that target support to rural areas and small towns, including technical assistance
3) Maintain and expand policies that support America's manufacturers and workers, including Buy American, Davis-Bacon prevailing wage requirements and the use of project labor agreements

Locks and Dams

More than 600 million tons of goods are shipped along our inland waterway system annually. But most locks and dams have far exceeded their designed lifespan, and the failure of a single lock could shut down traffic up and down the river system. By increasing federal support to the existing public-private partnership – the Inland Waterway Trust Fund – we can:

- Prioritize funding the $8.75 billion backlog of inland waterway projects
- Fund the Navigation and Ecosystem Sustainability Program and upgrade to 1200' locks on the Upper Mississippi River

Water

Clean drinking water and safe wastewater disposal are requirements for communities of any size, but maintaining the necessary infrastructure can be a significant financial burden for small communities. More than 94% of drinking water utilities in the United States supply communities smaller than 10,000 people, and the EPA projects $655 billion in water infrastructure needs nationwide over the next 20 years. The need to eliminate lead exposure through drinking water is only adding to the demand for federal resources. We can help address the needs of rural communities and small towns if we:

- Fund the USDA Water and Waste Water program's $2.5 billion project backlog
- Reauthorize and boost funding for the EPA's Clean Water and Drinking Water State Revolving Funds

Broadband

Access to high-speed internet is a necessity for today's students, families, farmers and businesses. But 23 million rural Americans don't have access to internet of adequate speed. Right now, the United States is ranked 16th in the world in terms of broadband access. To help change that, the federal government can:

- Provide sufficient direct support for programs to close the "last mile" gap and deploy sustainable broadband that will meet rural consumers' needs now and in the future
- Encourage local officials to "dig once" to upgrade broadband as they build and repair roads

Health Care

Hospitals are the economic drivers of many rural communities, employing an average of 195 people with a payroll of $8.4 million. Yet nearly 700 rural hospitals are at risk of closure, putting 236,000 jobs on the line. Hospital closures have devastating impacts on rural economies and feed health disparities between rural and urban residents. Not only do rural residents tend to be older and sicker, they often have to travel further for care and only one-tenth of the nation's physicians practice in rural areas. To support rural economies and improve access to care, we must:

- Improve access to capital for health facilities' construction and modernization, such as purchasing new equipment to promote telehealth
- Test new ways to deliver care that will allow hospitals in small towns and rural areas to keep their doors open without compromising patients' access to critical health services
- Make investments to recruit physicians and other health professionals to practice in rural areas
- Fund the backlog of construction and maintenance at Department of Veterans Affairs medical facilities

Roads and Bridges
More than seven of every ten miles of public roads and bridges across America are in rural areas, and travel on these roads is increasing. Everyday use and freight traffic has resulted in growing maintenance needs. In 2015, more than 35% of major rural roads across the country were rated in poor or mediocre condition. To boost local economies and promote public safety, the federal government should:

- Provide a sustainable funding source for the Highway Trust Fund
- Provide robust funding for the BUILD grant program
- Continue safety investments for improvements to High Risk Rural Roads

Airports
America's non-hub airports help spur investment in our local economies, but these airports have critical maintenance and infrastructure needs. The Federal Aviation Administration estimates that over the next five years, $32.5 billion in airport projects will be eligible for federal Airport Improvement Program funds nationwide, while far less funding will be available. To address these needs, the federal government should:

- Support funding for airport infrastructure projects, including the Airport Improvement Program
- Maintain the Essential Air Service program that preserves access to smaller airports in rural areas

Rail
An efficient rail network is important for the transport of goods through rural areas and the success of passenger rail. However, federal investments in passenger rail infrastructure have lagged behind even while ridership on long-distance passenger rail routes that serve the Heartland is growing. These routes stop in many rural communities without commercial airports or other intercity transportation. To invest in rural rail, we must:

- Fund passenger rail investments, including long-distance service, the Consolidated Rail Infrastructure and Safety Improvement Program and Restoration and Enhancement Grants
- Continue incentives for maintaining freight rail infrastructure
- Extend the short line "45G" rehabilitation tax credit

Energy
Connecting rural customers to stable and cost-effective electricity – and harnessing the energy that's generated in rural areas – remains a challenge today. Nationwide, our economy loses more than $25 billion annually due to avoidable power failures. To bring our energy generation and electricity into the 21st Century, an infrastructure plan should:

- Support Rural Utility Service loan programs that help accelerate grid modernization and protection
- Maintain incentives for energy sources like wind, solar and biofuels that promote our energy independence and strengthen rural economies

Education and Research
Beyond their role in education, rural schools are also major employers and community centers. But while four in every ten American students attend rural schools, those schools receive less than a quarter of federal education funding. Nationwide, America's schools need repairs, renovations and modernizations totaling nearly $200 million. In addition, the Association of Public and Land-grant Universities identified $8.4 billion in deferred maintenance for buildings and infrastructure used for agricultural research. To help rural America compete, we should:

- Invest in improvements to rural K-12 facilities
- Invest in agricultural research capacity, including those that fund facilities improvements

Housing and Community Facilities
Housing affordability is a growing concern for rural communities. Since 2000, housing costs in rural areas have increased five percent and one in four rural households pays more than 30% of their income on housing. Further, compared with the typical urban unit, housing in non-metro areas is two times more likely to have incomplete plumbing, inadequate wastewater treatment or unsafe drinking water. In addition, too many communities struggle to adequately support first responders' infrastructure needs to keep their communities safe. To bolster rural communities, we must:

- Support federal programs geared towards addressing housing and homelessness in rural areas, such as the USDA Section 502 Single Family Housing Direct and Guaranteed Loan Programs and Multi-Family Housing Programs
- Bolster programs at USDA, EPA and HUD to address public health concerns posed by unsafe conditions in housing
- Increase support for USDA's Community Facility grant programs to help support first responders and other community facilities



May 21, 2019

The Honorable Frank Pallone
Chairman
Energy and Commerce Committee
United States House of Representatives
Washington, D.C. 20515

The Honorable Greg Walden
Ranking Member
Energy and Commerce Committee
Unites States House of Representatives
Washington, D.C. 20515

Dear Chairman Pallone and Ranking Member Walden:

Modernizing America's infrastructure is vital to America's small business and entrepreneurial sector. Modern and efficient infrastructure will improve the competitiveness of our nation's small businesses, and encourage new business creation. At the same time, America's entrepreneurs can play a larger role in infrastructure build-out by ensuring that the most innovative technologies and cutting-edge approaches are being used across all areas that require modernization.

The Small Business & Entrepreneurship Council (SBE Council) and our nationwide membership of entrepreneurs and small business supporters appreciate the work of the Energy and Commerce Committee in convening the May 22 hearing on infrastructure – "LIFT America: Modernizing our Infrastructure for the Future." SBE Council members strongly believe that an infrastructure package is necessary, and that bipartisan collaboration is essential for producing a package that addresses our nation's most critical needs.

Obviously, small businesses are concerned about many areas of infrastructure: from access to broadband, to better roads and bridges, clean water, and of course the energy they need to power their businesses. The efficient and smart use of taxpayer dollars is an essential feature of any infrastructure package, especially the speed at which projects begin and end, and fair rules on project bidding to ensure the inclusion of small to mid-size firms. Vast resources will be spent on an infrastructure package, and it is therefore critical that government bureaucracy and red tape not drive costs higher, place unreasonable delays on project approval or implementation, or erect costly barriers that will prevent small firms from participating in potential projects.

Of course, private investment is the driver of infrastructure in several key industries and the federal government must encourage this investment to help improve the competitiveness of these industries and to ensure cost-effectiveness and affordable access for all consumers One critical area is energy, where new infrastructure is needed to bring small businesses affordable energy both now and into the future - especially in areas of the country where infrastructure constraints impose high and disproportionate costs on small firms, and where economic development is needed the most. Unfortunately, federal regulation and a lengthy and uncertain permitting process is a big impediment to private infrastructure investment. SBE Council would hope that an infrastructure package tackles the issue of "timely permitting" to encourage investment and to support the vast number of small businesses that play a role in America's energy industry.

For example, consider the share of employer firms in these key energy sectors (according to the U.S. Census Bureau (2015): 89.6% of employer firms among oil and gas extraction businesses have fewer than 20 employees; 77.3% of employer firms among drilling oil and gas wells businesses have fewer than 20 workers; 80.7% of employer firms among support activities for oil and gas operations businesses have fewer than 20 employees; 58.2% of employer firms among oil and gas pipeline and related structures construction businesses have fewer than 20 workers; and 51.5% of employer firms among oil and gas field machinery and equipment manufacturing businesses have fewer than 20 employees.

Improving the permitting and environmental review process for major infrastructure and energy projects is an essential component of any effort to improve our nation's infrastructure. A reasonable process is not only necessary for the construction of roads, bridges, ports, rail lines and fiber, but also for pipelines, oil and gas wells, and transmission lines.

Specific reforms to encourage private sector investment in energy infrastructure include: reasonable and timely deadlines for completing permitting reviews under the National Environmental Policy Act (NEPA), steps that promote consistent implementation and regulatory certainty with regard to Section 401 of the Clean Water Act, and modernizing regulations for the export of liquified natural gas (LNG). The President's April 10, 2019 "Executive Order on Promoting Energy Infrastructure and Economic Growth" offers some of these reforms including common sense solutions such as a single point of accountability to expedite the permitting process, greater transparency in the process, promoting timely Federal-State cooperation to expedite permits, and identifying market trends and federal guidance that could restrain the availability of capital that is needed for these important projects.

During the 21st Century, U.S. energy production has been transformed by private investment and innovation – such as the leaps forward in innovative practices made possible by energy entrepreneurs. As a result, the U.S. has been able to access energy reserves that previously were off limits, and gained incentives for further exploration leading to additional oil and natural gas finds. Of course, the U.S. is now the world's energy leader.

Now it is time to align America's energy infrastructure with its global leadership in this critical area. Modernizing and improving the permitting process and fixing regulatory areas that hamper investment will allow more of nation's citizenry to benefit from this abundancy, and ensure an ample supply of energy for future needs.

Thank you for the opportunity to submit this letter expressing our views. Please do not hesitate to call upon SBE Council if you have questions, or need additional information.

Sincerely,



President & CEO

200 Lawyers Road NW • Vienna, VA 22183
(703)-242-5840 •www.sbecouncil.org •@SBECouncil

Protecting Small Business, Promoting Entrepreneurship

DIESEL TECHNOLOGY FORUM

May 20, 2019

Rep. Frank Pallone
Chair
House Energy & Commerce Committee
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

Rep. Greg Walden
Ranking Member
House Energy & Commerce Committee
U.S. House of Representatives
2322 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Pallone and Ranking Member Walden:

We are writing in regards to clean diesel programs included in the LIFT Act that is scheduled for a hearing before the Committee. We thank you for your leadership in support of reauthorizing the Diesel Emission Reduction Act (DERA) program. This clean air program is one of the most cost effective environmental programs delivering benefits to communities across the country. Engine manufacturers are hard at work developing closer to zero emissions technology and DERA activities will be needed to help deliver these cleaner vehicles and equipment to communities. We are concerned over a portion of the proposed bill that may dilute benefits from these incentive funds. The Clean School Bus provision that only funds certain technologies may reduce benefits and exclude school districts that cannot adopt these technologies. We encourage the committee to support EPA's existing program that replace older school buses through the larger DERA program

By way of background, the Diesel Technology Forum is an educational not-for-profit organization whose members include leaders in diesel engines and equipment, vehicle manufacturers and fuel producers. Our organization serves a primary role of education along with the collection and commission of research to raise awareness of the environmental performance of the newest generation of diesel technology, including those that power school buses.

1. **Zero Emissions Requirement for Clean School Bus Replacements May Dilute Benefits**

Diesel is the technology of choice for the nation's school bus system. 95 percent of school buses are powered by diesel technology today, thanks to diesel's unique combination of features including safety (diesel is less combustible than other fuels when spilled), reliability, durability, low cost of maintenance and operation, flexible fueling and routing, and the ability to use advanced biofuels including renewable diesel fuel and biodiesel fuel.

Current technology diesel school buses meet existing U.S. EPA near-zero emissions standards while some manufacturers offer diesel school buses that demonstrate emissions that go beyond these

requirements.[1] Currently available diesel school buses offer school districts the best value and environmental performance when replacing older technology.

While zero-emissions technologies are available, these technologies are not easily adopted by all school districts. Range and ambient temperature limitations, lack of charging infrastructure and the much higher purchase price of all-electric school buses may hinder suburban, rural school districts and those that cannot afford the higher price of the technology and support infrastructure. For these districts, currently available near-zero emissions technology, including diesel, is viable.

When replacing older school buses, these currently available near-zero emissions diesel buses generate significant emission reduction benefits almost on par with all electric technologies. When replacing an older technology school bus, a new near-zero emissions diesel model reduces nearly as much fine particle emissions as an all-electric model and reduces emissions of oxides of nitrogen (NOx) – a smog forming compound – by 90 percent.[2] These significant emission reductions would occur through the purchase of much more cost effective investments in new diesel technology that do not require additional build-out of expensive charging infrastructure and are not impeded with range or ambient temperature limitations.

Far greater emission reductions are anticipated from investments in new diesel school buses than investment in zero-emissions technology, owing to diesel's cost effectiveness. Air quality officials in the State of Arizona determined that many more older and higher emitting school buses may be replaced for a fixed investment by choosing the cost effective new diesel option than more expensive zero-emission options thereby generating far greater anticipated emission reductions.[3]

We recognize the need to rejuvenate America's school bus fleet. As an alternative, we encourage you to devote funds proposed for the Clean School Bus provision to the existing school bus rebate program that already functions within the Diesel Emission Reduction Act program. This school bus rebate program awards higher funding for all-electric bus purchases for those school districts that choose this technology type. School districts that choose a new near-zero emissions diesel option are not precluded from this investment, but are awarded less funding for their choice.

2. Continued Need for the Diesel Emission Reduction Act

The Diesel Emissions Reduction Act is one of the most effective environmental programs delivering benefits to communities across the country. Between 2008 and 2016, the program has replaced 73,000 engines, vehicles and equipment with cleaner technologies to eliminate 335,000 tons of emissions of oxides of nitrogen (NOX), a smog forming compound, and nearly 15,000 tons of fine particle emissions.

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[1] Thomas Built Buses: "Facts About Fuels": https://thomasbuiltbuses.com/bus-advisor/facts-about-fuels/
[2] According to the Diesel Emission Quantifier using default assumptions provided by the U.S. Environmental Protection Agency.
[3] "Draft Beneficiary Mitigation Plan", Arizona Department of Administrative Services, June 2018: https://vwsettlement.az.gov/sites/default/files/media/VWBeneficiary-Mitigation-Plan.pdf

Every dollar invested through the program is met with $3 in non-federal matching grants to deliver $13 in health benefits. [4]

While the program is achieving great success, more can be done. Near-zero emissions technology, including clean diesel is available today across the large spectrum of heavy-duty applications from trucks and buses to much larger off-road equipment and even lager marine and locomotive engines. While new clean technologies including clean diesel are ready and available today, introducing these technologies in the fleet of heavy-duty on and off-road equipment is a lengthy process. The DERA program is a necessary tool to introduce these technologies sooner than they would occur under normal attrition rates.

Commercial Vehicles and Buses

America's fleet of trucks, school buses and transit buses are relatively old and do not come with the latest near-zero emissions technology. Today, diesel is the predominant powertrain found under the hood of America's fleet of commercial vehicles, transit buses and school buses. Seventy-five percent of commercial vehicles, 95 percent of school buses and 85 percent of transit buses are powered by diesel technology. According to vehicle in operation data compiled through 2017, about two out of every three trucks and buses on the road does not come with the latest near-zero emissions technology developed to meet the latest tailpipe emissions standard established for model year 2010. The DERA program is an effective and needed tool to provide incentive funds to encourage the owners of commercial trucks, school buses and transit buses to replace older equipment with new.

Support for a New Engine Standard

Commercial vehicles will be getting cleaner and the DERA program will help introduce these new technologies to benefit communities. Engine manufacturers and other stakeholders are working with EPA concerning a new heavy-duty engine standard that will take near-zero emissions for fine particles and NOx closer to zero while still working within stringent fuel economy standards. That program, the *Cleaner Trucks Initiative*, is ongoing and will see further reductions in emissions. If the past is any indication of the future, introducing these closer-to-zero innovations will take time and the DERA program is an important tool to deliver emission reduction benefits to communities across the country.

Off-Road Equipment

Unlike commercial vehicles, owners of off-road equipment are often not required to register equipment like the owner of a truck or car. Off-road equipment, including construction and agricultural tractors, are understood to be of a later generation of technology. These are expensive assets that owners will continue to maintain to ensure they are in the field and on job sites. Like commercial vehicles, the DERA program is an effective tool to help incentivize the replacement of equipment with new clean diesel Tier 4 technologies.

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[4] "Third Report to Congress: Highlights of the Diesel Emission Reduction Program"; U.S. Environmental Protection Agency, June 2016. Third Report to Congress: Highlights of the Diesel Emission Reduction Program(40 p

Large Engines that Power Marine Vessels and Switch Locomotives

The fleet of marine vessels and switch locomotives are powered by very large engines, which are often in service around the clock and operate in localized regions. Switch locomotives, for example, rarely leave a narrowly defined geographical region. Recent research commissioned jointly by the Diesel Technology Forum and the Environmental Defense Fund determined that these engines are older and live longer.[5]

Replacing these engines, with help from the DERA program, can introduce the latest clean diesel innovations and generate substantial emission reductions. Research confirms that marine engines remain in service upwards of 50 years as opposed to the 23 years estimated by EPA. Older uncontrolled engines may operate in sensitive communities for generations. The DERA program is a necessary tool to encourage the owners of these much larger marine vessels to replace older engines with new cleaner models. A single engine replacement, when replacing an older uncontrolled engine, can eliminate 30 tons of NOx emissions in a single year. This is equivalent to replacing 96 older Class 8 trucks. Without DERA funding, many of these older marine vessels may be in operation for many years.

Much like marine vessels, switch locomotives remain in service for about 50 years. Replacing the oldest engines that power switch locomotives, including those that were manufactured before emission controls were required of them, can reduce NOx emissions on average of nine tons per year. This is similar to replacing 29 large Class 8 trucks.

New clean diesel engines may also generate co-benefits in terms of greenhouse gas reductions and fuel savings. While Tier 4 clean diesel technologies are developed to reduce emissions of fine particles and NOx, some owners report additional benefits. One marine vessel operating in Puget Sound reported reducing 1,000 tons of greenhouse gas emissions from upgrading older engines with new clean diesel models, while a rail operator in the region reported saving 19,000 gallons of fuel per year when replacing an older engine with a new Tier 4 clean diesel model.[6]

In closing, the Diesel Emission Reduction Act is a program that works. The program **e**njoys bipartisan support in Congress and a uniquely broad-based coalition of followers including environmental and health advocates and industry representatives. The program is voluntary and incentive based, offering carrots – instead of sticks – to interested parties to participate while allowing owners to choose verified technologies that works best for their circumstances. DERA also gives states the flexibility to apply funding based on local emissions inventories to improve air quality. The program maximizes federal funds such that every single dollar spent with federal funds generates $13 in health benefits.

The need for these funds continues as the fleet of trucks, buses and equipment is still of an older generation. While truck and engine manufacturers are hard at work bringing emissions closer to zero, incentive funding opportunities provided by the Diesel Emission Reduction Act program will be needed to introduce these future technologies.

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[5] https://www.dieselforum.org/largeengineupgrades

[6] https://www.dieselforum.org/policyinsider/work-boats-working-for-clean-air
https://www.dieselforum.org/policyinsider/switch-the-switcher-from-old-to-new-clean-diesel-locomotive-power

We also encourage the Committee to invest funds set aside for the Clean School Bus program into the existing DERA rebate program for school buses. This existing rebate program allows school districts to choose the verified technology type that best fits their needs and maximize emission reductions.

Please feel free to contact me with any questions or concerns at (301) 668-7230.

Very truly yours,

Allen R. Schaeffer

Allen R. Schaeffer
Executive Director

CC: Committee on Energy and Commerce

The Honorable Frank Pallone
2125 Rayburn HOB
Washington, DC 20515

The Honorable Greg Walden
2125 Rayburn HOB
Washington, DC 20515

May 21, 2019

Dear Chairman Pallone and Ranking Member Walden,

The undersigned organizations write to express concerns regarding the Leading Infrastructure for Tomorrow's (LIFT) America Act (H.R.2741). Specifically, the Associations oppose Section 34304, which advocates for saddling low-income electricity ratepayers with the costs of electric vehicle (EV) charging infrastructure. We understand the need to develop EV charging infrastructure. In fact, our Associations' members are working to invest in that infrastructure and have been doing so for some time. But funding that development through electricity ratepayers will result in less EV charging infrastructure and will create a regressive funding scheme that is not fair to low-income Americans.

To understand why funding EV charging stations off the rate base won't work, it is important to consider the position public utility companies currently have in the provision of electricity to consumers. Generally, states grant utility companies a monopoly over the provision of electricity in a particular marketplace because it is inefficient for multiple companies to build overlapping infrastructure in order to service the same (immobile) building or home. In exchange for the loss of market freedom, utility companies are guaranteed a rate of return from ratepayers—they can even recover their investment costs if those costs are included in the rate base.

Allowing utility companies to fund EV charging stations off the rate base will simply extend their monopoly to EV charging infrastructure. It will effectively preclude private sector investment because there is no way for the private sector to compete with utility companies that have no capital costs. With a monopoly position, utility companies will be able to charge consumers more for electricity than the market would bear. And, utility companies will never be able to replicate the ubiquity and convenience of the private sector fueling market. More than 100,000 retail locations provide fuel to American consumers every day. For electric charging to reach that type of market coverage, we must have private investment. The funding contemplated by H.R.2741 will prevent that from happening and stunt the development of the EV market.

In addition to higher fueling costs, it is also important to consider the higher electricity costs that will be faced by *all* ratepayers—many of whom are lower- or middle-income—in order to fund charging infrastructure that will be primarily used by the wealthy who can afford to own EVs. That is not right. Users of EVs should pay to fuel their own vehicles just like users of gas and diesel vehicles do. EVs will stand on shaky ground if they are premised on the foundation of a regressive cross-subsidy for fueling. It is not worth the financial inequities of increasing

electricity rates for all ratepayers to pay for the needs of the few in a non-free market EV fueling environment—particularly when many Americans are already in tough financial straits.[1]

We all favor increased electric vehicle charging infrastructure. That is the future and we welcome it. But, for EVs to be successful, we need to do that the right way. Policies should be attracting private investment into EV charging so that we build and foster a dynamic, competitive marketplace for EV fueling. That type of market has served current vehicle owners well and would serve future vehicle owners well.

We welcome the opportunity to work with you toward those goals.

Sincerely,

NACS

REPRESENTING AMERICA'S TRAVEL PLAZAS AND TRUCKSTOPS
NATSO

PMAA

SIGMA
AMERICA'S LEADING FUEL MARKETERS

CC: Cosponsors of H.R.2741

Members of the House Committee on Energy and Commerce

[1] The most recent Residential Energy Consumption Survey from the Energy Information Administration (EIA) found that about 31% of U.S. households face some type of energy insecurity and approximately one in five U.S. households have reduced food or medicine intake to pay for energy costs. *See* Berry, Chip; Hronis, Carolyn; and Woodward, Maggie. (September 19, 2018). *One in three U.S. households faces a challenge in meeting energy needs.* U.S. Energy Information Administration. Accessed at https://www.eia.gov/todayinenergy/detail.php?id=37072.



AMERICAN PUBLIC HEALTH ASSOCIATION
For science. For action. For health.

May 21, 2019

The Honorable Frank Pallone
Chairman
House Energy and Commerce Committee
2125 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Pallone:

On behalf of the American Public Health Association, a diverse community of public health professionals that champions the health of all people and communities, I write to thank you and your colleagues for introducing H.R. 2741, the Leading Infrastructure for Tomorrow's America Act. This important legislation would authorize critical funding to strengthen our nation's public health infrastructure and data systems to support agencies and programs at the national, state, local, tribal and territorial levels to protect and improve the public's health. Unfortunately, chronic underfunding of our public health system and reductions in the public health workforce at the state and local level continue to strain the ability of our public health system to meet the many challenges our communities face. Your legislation would authorize important funding, that if appropriated, would provide important investments to strengthen and modernize the nation's public health infrastructure.

The LIFT America Act would authorize $3.75 billion over five years to improve core public health infrastructure at the Centers for Disease Control and Prevention and the nation's state, local, tribal and territorial health departments. These resources could be used for strengthening workforce capacity and competency, laboratory systems, health information systems, communications, financing and other key functions. A strong public health infrastructure and workforce at all levels is critical to ensuring the nation's public health system can meet the current and emerging challenges and responsibilities facing our communities, including combating the opioid, tobacco and obesity epidemics, emergency preparedness, chronic and infectious disease prevention and achieving and sustaining high immunization rates against vaccine-preventable diseases.

The bill would also authorize $500 million over five years for CDC and state, local, tribal and territorial health departments to bolster current and often antiquated capabilities related to information technology, data and data systems. Unfortunately, the nation's current public health data systems rely on obsolete surveillance methods and are in dire need of security upgrades. APHA is actively supporting a request of $100 million for CDC in FY 2020 to modernize these systems and we are pleased the FY 2020 Labor-HHS-Education appropriations bill includes this much needed funding.

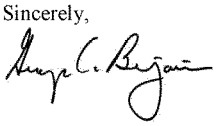
800 I Street, NW • Washington, DC 20001–3710
202-777-2742 • www.apha.org

We also welcome the authorization of funding for programs to protect the public from environmental health threats. This includes funding for initiatives to help reduce pollution that contributes to climate change by upgrading the nation's electric grid infrastructure, retrofitting homes and schools to become more energy efficient and expanding funding for renewable energy in low-income and underserved communities. Importantly, the legislation would also authorize funding to ensure Americans have access to safe drinking water, including funding to address per- and polyfluoroalkyl substances in impacted drinking water systems.

While we welcome these new authorizations, we understand that they can only become a reality if Congress works in a bipartisan manner to raise the current caps for nondefense discretionary funding. Only then will appropriators and Congress have access to the necessary funding to bring these resources to the communities that would benefit so greatly from these programs.

Thank you again for your efforts to authorize important new funding to address these critical public health issues. We stand ready to work with you and your colleagues to raise the caps on nondefense discretionary funding and to ensure that Congress has adequate funding to protect and improve the health of the public including through the important programs that would be authorized under the LIFT America Act.

Sincerely,



Georges C. Benjamin, MD
Executive Director

Healthcare Information and Management Systems Society
Statement for the Record
Hearing on "LIFT America: Modernizing Our Infrastructure for the Future"
Committee on Energy and Commerce
May 22, 2019

The Healthcare Information and Management Systems Society (HIMSS) is a global advisor and thought leader supporting the transformation of health through information and technology. As a mission driven non-profit, HIMSS offers a unique depth and breadth of expertise in health innovation, public policy, workforce development, research and analytics to advise global leaders, stakeholders and influencers on best practices in health information and technology. HIMSS membership encompasses more than 72,000 individuals and 630 corporate organizations.

On behalf of our members, thank you for holding today's hearing and for the Committee's leadership and focus on strengthening our future by addressing the nation's aging infrastructure. We share your overall goal of creating a more modern and robust America, and, in particular, wish to highlight two areas of significant importance to the health IT community addressed in the *Leading Infrastructure for Tomorrow's (LIFT) America Act*.

Making Necessary Investments to Strengthen Our Public Health Core Infrastructure

HIMSS strongly supports the unprecedented investment included in the LIFT America Act to employ a system-wide, enterprise approach to strengthening the core public health infrastructure at the CDC and at state, local, tribal, and territorial health departments as well as across the health care sector. As a founding partner of the *Data: Elemental to Health* campaign, HIMSS is committed to a future where more, better, and faster data, yielded by secure, interoperable, integrated systems will allow public health professionals and policymakers to make better decisions and get ahead of chronic, emerging, and urgent threats.

The significant funding authorized in the bill would enable critical improvements in the capabilities of the CDC regarding information technology, data, and data systems, particularly as it relates to public health data collection, transmission, exchange, and analysis. The funding will also support enhanced interoperability between data systems across the public health community. Modernizing public health data exchange and expanding a highly-skilled workforce will increase data quality, decrease administrative burden, improve connectivity and coordination between health care and public health, and ensure sensitive health data is protected from growing cybersecurity threats.

Expanding Access to Critical Broadband Services

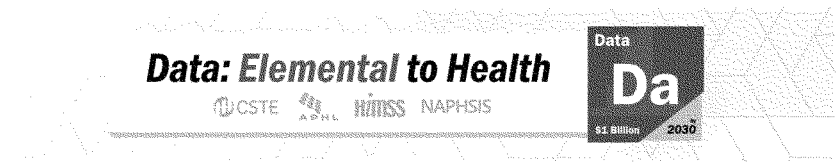
Additionally, HIMSS supports the significant provisions in the *LIFT America Act* aimed at closing the digital divide by making crucial investments in broadband deployment across

the United States. Our members understand that reliable and affordable broadband is necessary to realize the full potential of health technologies, including telehealth and remote patient monitoring. Yet, there continues to be a great disparity in access to these vital services. According to the FCC, at least 21.3 million Americans, including many in rural and underserved areas, still lack access to broadband.[1] Research shows this lack of access is negatively affecting both patients' health and clinicians' ability to provide the care needed to make their communities healthier.[2]

To address this significant gap, the bill appropriately prioritizes funding for broadband deployment projects with a goal of bringing broadband access to 98% of the country. Specifically, it would target unserved and underserved areas, unserved anchor institutions (such as schools, hospitals, and other medical providers), and tribal lands. The authorized funds would provide the resources necessary to reduce the access disparity and provide every American with the countless benefits that broadband access enables.

Again, thank you for your continued leadership and commitment to modernizing our nation's infrastructure. The impacts of prolonged lack of investment affect every community across the United States. We look forward to working with the Committee to advance policies that support increased access to care and better health for all Americans. If you would like additional information, please contact Samantha Burch, HIMSS Senior Director of Congressional Affairs, at sbburch@himss.org or 312-515-8157.

[1] https://docs.fcc.gov/public/attachments/DOC-357271A1.pdf
[2] https://www.fcc.gov/sites/default/files/connect2health.key_findings.pdf



May 21, 2019

The Honorable Frank Pallone, Jr.
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

The Honorable Greg Walden
Ranking Member
Committee on Energy and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Pallone and Ranking Member Walden,

On behalf of the Association of Public Health Laboratories (APHL), the Council of State and Territorial Epidemiologists (CSTE), the Healthcare Information and Management Systems Society (HIMSS), and the National Association for Public Health Statistics and Information Systems (NAPHSIS), we applaud efforts to strengthen the public health core infrastructure through the Leading Infrastructure for Tomorrow's (LIFT) America Act.

As organizations whose members protect the nation from public health threats, we particularly appreciate that the LIFT America Act recognizes the importance of enhancing and modernizing the public health infrastructure at the Centers for Disease Control and Prevention and at state, local, tribal, and territorial health departments. As an interconnected ecosystem that relies on collection, transmission, exchange, and analysis of health data to inform effective and efficient public health responses, it is critical that the core public health infrastructure is interoperable and keeps pace with technological advancements. The LIFT America Act would authorize an unprecedented investment in a system-wide, enterprise approach to strengthening the core public health infrastructure at all levels of governmental public health and across the health care sector. This bold initiative will allow the public health community to detect public health threats sooner and ultimately save lives.

An interoperable public health surveillance system is critical to effective and timely public health response, prevention, and policy development. We strongly support the LIFT America Act's provisions to support the modernization of data exchange with interoperable IT systems and ensure public health professionals are equipped with the training and skills to implement, operate, and maintain these systems, interpret complex data through predictive analytics and informatics, and deploy actionable interventions. These improvements are sorely needed because the nation's public health surveillance ecosystem is falling behind. Currently, data sharing between health care providers, epidemiologists, public health laboratorians, and vital records registrars depends heavily on time-consuming manual and paper-based methods and processes. Phone calls, faxes, and emails create enormous administrative burdens and leave room for data entry errors and incomplete information that compromise data quality and impede timely data exchange. The consequences of inefficient and slow data sharing are significant: delayed detection and response, lost time, lost opportunities, and lost lives.

Modernizing public health data exchange and expanding a highly-skilled workforce will increase data quality and timeliness, decrease administrative burden, improve connectivity and coordination between health care and public health, and ensure sensitive health data is protected from cybersecurity threats. Investments today will update antiquated systems and allow public health to be at the nexus of data, technology, and innovation to maximize progress and resources. The LIFT America Act would support public health taking advantage of technological advances to expand and update vital records systems, enhance nationally notifiable disease surveillance, support electronic laboratory ordering and reporting, expand the number of hospitals conducting syndromic surveillance, automate disease reports directly from electronic health records to support electronic case reporting, develop highly skilled public health informaticians and data scientists, and improve data security. This commitment to transform today's public health surveillance system will make a lasting, positive impact on Americans' health.

We thank you for your leadership and vision to improve the public health infrastructure. If you have any questions, please contact Emily Holubowich at eholubowich@dc-crd.com.



May 22, 2019

The Honorable Frank Pallone
Chairman
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Chairman Pallone,

I am writing on behalf of the Satellite Industry Association (SIA) about the subject of today's hearing, the Leading Infrastructure for Tomorrow's (LIFT) America Act (H.R.2741). SIA applauds you for introducing this legislation and proposing additional resources to facilitate new and further broadband availability throughout the United States. As this bill is considered, we encourage you to further ensure that a technology-neutral approach will be taken to allocate any new funding to increase broadband availability.

Satellite broadband services are available directly to American households today, covering all 50 states and delivering download speeds up to 100 megabits per second to approximately two million subscribers. These broadband services are available even in rural and remote areas of the country where it remains uneconomical for terrestrial services to deploy, and they provide both speeds and prices comparable to terrestrial alternatives.

The satellite industry is investing tens of billions of dollars to innovate and increase broadband connectivity in the United States and across the globe. Terabit-capacity geostationary satellites will provide orders of magnitude capacity increases and resulting consumer broadband benefits, remaining competitive with terrestrial offerings. In addition, thousands of new high-throughput (non-geostationary) satellites will soon join existing operators in Low-Earth and Medium-Earth orbits to provide even more high-speed broadband at low latency levels.

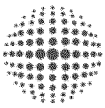
SIA supports the Lift America Act's inclusion of a national reverse auction mechanism to distribute funding for broadband projects. SIA also supports the bill's requirement that the FCC and states "may not favor a project using any particular technology". Technology-neutral reverse auctions will ensure that limited public funds are distributed competitively and efficiently. The challenge of closing America's digital divide is widespread, persistent, and complex. Public policymakers should therefore not limit any technologies that could provide broadband to more American households.

Unfortunately, one provision in the introduced bill could limit the competition and efficiency of both the reverse auctions and the technology neutrality requirement. As introduced, the LIFT America Act would limit funding only to those projects that "offer broadband with a download speed of at least 100 megabits per second, an upload speed of at least 20 megabits per second, and a latency that is sufficiently low to allow real-time, interactive applications." Rather than legislate a particular speed, SIA suggests it is more appropriate to leave performance standards to the Federal Communications Commission.

The satellite industry appreciates your continued efforts to extend the availability of broadband to all Americans, and SIA looks forward to further reviewing your legislation and offering suggested revisions to both address outstanding concerns and achieve the results you seek. Commercial satellite operators, with billions of private dollars already invested and ubiquitous broadband service coverage already available, will strongly support legislation that leverages all broadband-capable technologies to connect the most Americans in the shortest time and at the lowest cost.

Sincerely,

s/ Tom Stroup



USTELECOM
THE BROADBAND ASSOCIATION

JONATHAN SPALTER
President and Chief Executive Officer

May 22, 2019

The Honorable Frank Pallone
Chairman
House Committee on Energy & Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Greg Walden
Ranking Member
House Committee on Energy & Commerce
2322 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Pallone and Ranking Member Walden:

USTelecom and our national membership of large and small internet service providers (ISPs), suppliers and manufacturers commend you for prioritizing broadband connectivity in your work as leaders of the Energy & Commerce Committee.

Broadband is as critical to America's global competiveness as reliable roads, bridges and energy systems. We agree that pushing more connectivity into unserved parts of America will require a smart and sustained partnership between government and broadband providers that prioritizes funding to communities on the wrong side of the digital divide.

The LIFT America Act is a positive first step toward our shared goal of getting more Americans online, and our members are grateful for this major federal commitment to connectivity. As the Committee debates this comprehensive investment in broadband infrastructure, we urge your consideration of several provisions to speed broadband service to unserved communities, particularly in rural America.

1. Direct spending will be essential in parts of the country where there may not be a viable business case to deploy next-generation networks. We appreciate the Committee's plan for new broadband spending to be administered primarily by the FCC, the expert agency with experience developing and distributing targeted funding for broadband deployment.

2. Federal broadband funding should be targeted to areas of the country truly unserved by broadband and not used to construct duplicative networks that overbuild a provider's existing infrastructure.

3. Fiber is the future, and rural 5G connectivity cannot exist without a robust fiber backbone. Any infrastructure legislation should prioritize terrestrial broadband that will pave the way for a 5G future. This future includes the Internet of Things and gives us the opportunity to consider how to make infrastructure like roads and bridges "smart" in the process. We should build "broadband once" to make our infrastructure withstand the test of time.

4. Because the cost of delivering resilient and reliable broadband connectivity naturally varies (depending on geography and population), legislation should establish reasonable and realistic service parameters for speed, latency and cost—and allocate funding accordingly.

5. State and local rights of way issues can impede the efficient deployment of broadband, therefore federal legislation should include a coordinated federal government effort to standardize and streamline permitting for wired broadband, wireless backhaul and tower connectivity. We must also be mindful to ensure that the rules of the road help spur continued investment in fiber to increase speeds on existing networks and support facilities-based deployment in harder to reach areas.

6. The cost of relocating telecommunications facilities during municipal construction projects in most cases is borne by ISPs. Legislation should include mechanisms for providers to recover those outlays because every dollar of capital spent to relocate connection facilities is a dollar not spent on deploying or upgrading broadband networks.

Thank you for your bipartisan leadership on broadband policy, especially incentivizing deployment as deep into rural America as possible. Broadband investments by Congress today will pay dividends in the form of national productivity, connectivity and job growth tomorrow.

We look forward to working with the Committee on this legislation and helping pass a lasting solution that ensures our nation's broadband infrastructure can reach every American family, community and enterprise that still needs it.

Sincerely,



Jonathan Spalter
President and CEO
USTelecom – The Broadband Association

Cc: The Honorable Mike Doyle
The Honorable Bob Latta



Chet M. Thompson
President and CEO

American
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May 22, 2019

The Honorable Frank Pallone
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Greg Walden
2322 Rayburn House Office Building
Washington, DC 20515

RE: Full Committee Hearing Entitled, "LIFT America: Modernizing Our Infrastructure for the Future"

Dear Chairman Pallone and Ranking Member Walden:

The American Fuel & Petrochemical Manufacturers (AFPM) is a trade association representing high-tech American manufacturers of virtually the entire U.S. supply of fuels and home heating oil, as well as the petrochemicals used as building blocks for thousands of vital products in daily life. AFPM members make modern life possible and keep America moving and growing as they meet the needs of our nation and local communities, strengthen economic and national security, and support over three million American jobs.

AFPM supports efforts to modernize and improve U.S. infrastructure. However, as this Committee considers the Leading Infrastructure for Tomorrow's America Act, H.R. 2741, we want to address concerns with several provisions and hope that the Committee will work with AFPM and its members to address these concerns.

First, under Title III, Subsection C, we are concerned about the $4 billion being authorized for improvements to the Strategic Petroleum Reserve (SPR) to make it "environmentally sound." The language in H.R. 2741 does not define what "environmentally sound" is nor does it give direction on how the Department of Energy (DOE) would go about defining it. The SPR was created for use only in the event of an emergency supply shortage. It was designed to protect this country from future crude oil supply disruptions, including those caused by embargoes and natural disasters. We would like to work with your Committee to have a better understanding of how this $4 billion authorization would work, and to ensure that SPR crude is available when needed.

Additionally, under Subsection C, we have strong concerns about the creation of a Northeast and Southeast refined products reserve, and the grant of authority to DOE to establish other regional reserves as necessary. While the SPR's creation was prompted by crude oil supply shocks and shortages, there is no pressing need for the creation of additional refined product reserves, which could in fact have some adverse unintended consequences, including significant costs and logistical and distribution implications.

Federal and state authorities have repeatedly concluded that refined products reserves are infeasible or unnecessary. For instance, the California Energy Commission has reviewed and rejected the feasibility



of such a reserve, because it could displace private inventories and reduce the incentive for new private storage capacity. Such unintended consequences would ultimately be harmful to consumers and, in some cases, subvert the goal that the reserve was trying to achieve. The National Petroleum Council, a standing advisory body to the Secretary of Energy, also concluded that such fuel reserves are not appropriate for the U.S.

Refiners have historically reacted and adjusted to supply challenges without the need for product reserves. Indeed, petroleum markets respond to supply and demand changes with price movement that provide the incentive to increase or decrease supply to correct any imbalance. The mere presence of a refined products reserve creates market uncertainty. While barrels released from a reserve can provide immediate supply during an emergency, the product is often stored in the same location as commercial stocks, and as a result may be equally as inaccessible. Even the location of this reserve is complex, as any single location addressed only a limited number of contingencies, and multiple locations could substantially increase the costs.

Lastly, AFPM is concerned about the authorization, under Subsection C, of over $1.8 billion that will go towards supporting electric vehicles (EV) and charging infrastructure. At a time when our nation's roads, bridges, pipeline, and rail infrastructure are in desperate need of replacement and upgrades, these authorizations are merely a transfer to wealthy Americans. EVs are, for the most part, expensive luxury or performance vehicles that only the wealthy can afford. In 2016, 78 percent of the EV tax credit (Section 30D) was claimed by those making more than $100,000 a year.

While our transportation and infrastructure projects are financed by gasoline and fuel taxes, EV owners are essentially exempted from paying their fair share despite using our roads and bridges, causing wear-and-tear. AFPM believes that all vehicle owners and operators, no matter what fuel type they choose, must pay their fair share for road maintenance and repair.

It is projected for 2019 that over 61% of all EV sales will occur in California, even though California represents about 12% of the car market in the U.S. These vehicles and the infrastructure to fuel them are a wealth transfer to California at an expense to the other states.

AFPM and its members are proud that the internal combustion engines are 55% cleaner than those manufactured in 1970. We've also reduced air pollution by 73 percent between 1970 and 2016, even as vehicles miles traveled have nearly tripled, and the economy has grown by 253 percent.

The energy policies put forward by Congress must allow for a free market so that consumers are able to choose the vehicles and energy sources they desire. We should not subsidize at the federal, state or local level, the adoptions of EVs and the charging infrastructure needed to support vehicle operation for wealthy Americans. In fact, infrastructure policy should acknowledge that vehicles with internal combustion engines are driving further and staying on the road longer on a cleaner gallon of gasoline.

We look forward to working with you on these important issues as this legislative process moves forward.

Sincerely,



Chet Thompson
President and CEO
American Fuel & Petrochemical Manufacturers

TRANSFORMING lives

MQ Foundation
c/o White Deer Energy
598 Madison Avenue,
3rd Floor
New York, NY 10022

MQmentalhealth.org

May 22, 2019

The Honorable Frank Pallone, Jr. Chairman
Committee on Energy and Commerce U.S. House of Representatives Washington, DC 20515

The Honorable Greg Walden
Ranking Member
Committee on Energy and Commerce U.S. House of Representatives Washington, DC 20515

Dear Chairman Pallone and Ranking Member Walden,

On behalf of the MQ Foundation and members of our community of mental health researchers, we applaud efforts to strengthen the public health core infrastructure through the Leading Infrastructure for Tomorrow's (LIFT) America Act.

We appreciate that the LIFT America Act recognizes the importance of enhancing and modernizing the public health infrastructure at the Centers for Disease Control and Prevention and at state, local, tribal, and territorial health departments and strongly urge you to approve the funding requested to update and strengthen the data science capabilities of these institutions. It is critical that the core public health infrastructure is interoperable and keeps pace with technological advancements. **This bold initiative will allow the public health community to detect public health threats including substance abuse and suicide sooner and will help us save lives.**

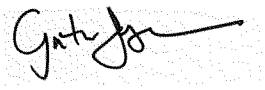
An interoperable public health surveillance system is critical to effective and timely public health response, prevention, and policy development. We strongly support the LIFT America Act's provisions to support the modernization of data exchange with interoperable IT systems and ensure public health professionals are equipped with the training and skills to implement, operate, and maintain these systems, interpret complex data through predictive analytics and informatics, and deploy actionable interventions. These improvements are sorely needed because the nation's public health surveillance ecosystem is falling behind. Currently, data sharing between health care providers, epidemiologists, public health laboratorians, and vital records registrars depends heavily on time-consuming manual and paper-based methods and processes. Phone calls, faxes, and emails create enormous administrative burdens and leave room for data entry errors and incomplete information that compromise data quality and impede timely data exchange. The consequences of inefficient and slow data sharing are significant: delayed detection and response, lost time, lost opportunities, and lost lives.

Modernizing public health data exchange and expanding a highly-skilled workforce will increase data quality and timeliness, decrease administrative burden, improve connectivity and coordination between health care and public health, and ensure sensitive health data is protected from cybersecurity threats. Investments today will update antiquated systems and allow public health to be at the nexus of data, technology, and innovation to maximize progress and resources. The LIFT America Act would support public health taking advantage of technological advances to expand and update vital records systems, enhance nationally notifiable disease surveillance, support electronic laboratory ordering and reporting, expand the number of hospitals conducting syndromic surveillance, automate disease reports directly from electronic health records to support electronic case reporting, develop highly skilled public health informaticians and data scientists, and improve data security. This commitment to transform today's public health surveillance system will make a lasting, positive impact on Americans' health.

Thank you for your leadership and vision to improve the public health infrastructure. The mental health community appreciates all you do to help us improve systems.

If you have any questions, please contact our representative, Emily Holubowich at eholubowich@dc-crd.com.

Sincerely,



Cynthia Joyce
Executive Director
MQ Foundation

CC: John Herrmann
Chairman and President
MQ Foundation

Committee on Energy and Commerce
U.S. House of Representatives
Hearing on
"LIFT America: Modernizing Our Infrastructure for the Future"
H.R. 2741, the "Leading Infrastructure for Tomorrow's America Act"
May 22, 2019

Ms. Mignon L. Clyburn
Principal, MLC Strategies, LLC

The Honorable G. K. Butterfield (D-NC):

1. The LIFT America Act specifies that funding recipients don't have to be an eligible telecommunications carrier (ETC) under the FCC's rules to get funding for broadband. Can you help us understand why it's important that these funds not be limited to just ETCs?

Gaining ETC status -- primarily a state by state commission process -- is time consuming, labor intensive and expensive. Even an innovative provider with a superior business model may take many months, if not years, to gain the necessary approvals if they lack the manpower or economic resources to get certified nationally. There are many accomplished non-ETCs that have expressed interest in bringing broadband to areas not adequately served. By expanding funding opportunities to any entity with the ability to provide service, there likely will be more participation in the reverse auction. Robust participation in the auction will likely drive down costs and expand the number of communities served.

The Honorable Tim Walberg (R-MI):

1. Title I of the LIFT America Act would authorize tens of billions of dollars new broadband funding through a national reverse auction. While such a mechanism has been efficient—assuming we get the underlying mapping situation done correctly—I'm concerned about how it might operate alongside the CAF-II auction, Chairman Pai's proposed Rural Digital Opportunity Fund, and the Remote Areas Fund created—but never funded—in the Commission's 2011 Intercarrier Compensation Transformation Order. Particularly, how the different provisions of this program interact with each other, like "unserved anchor institutions."

What is less tested, however, is the BIFIA financing provisions of the LIFT Act, which would create $5 billion in new funding of below-market loans to be administered by NTIA. This program is still relatively new in the water utility industry, on which this BIFIA mechanism is modeled, and the capital needs of the water industry—which are based on risk, compliance with the Clean Water Act, etc.—are not really comparable to what we're trying to achieve through a one-time investment in broadband networks.

These are apples and oranges. Before we move ahead with these different funding programs, we must better understand—both from you, the experts, but also from the agencies—how they would work.

a. Are you aware of NTIA ever managing a low-interest loan program like BIFIA?

No. I am not, but I do believe that while NTIA and RUS play important roles in coordinating federal broadband policy, the FCC does have the experience in conducting complicated reverse auctions. In addition to distributing funding, the FCC has the skill set to both monitor and enforce compliance.

b. How would you structure the eligibility requirements that this BIFIA provision would contemplate in a way that might complement the national reverse auction funding stream?

First, by erecting guardrails to discourage "double-dipping" for the same projects by preventing or limiting a provider from getting reverse auction monies, then turning around and getting additional funding from NTIA or any other duplicative effort so that those resources would go further. Second, by ensuring that all viable entities, including our nation's electrical cooperatives and competitive providers, can participate in the auction.

c. Do you have any insight into how NTIA might administer such a program, and how the coordination components relating to the reverse auction of $30 billion through the FCC would apply to this funding stream?

The need remains for better, more granular, updated broadband mapping as well as an open challenge process before funds are distributed and a coordination process between the agencies that promotes fast broadband deployment to areas that are in need.

d. Many rural providers receive support both through the Universal Service Program and the RUS program. USF support is distributed over a long-term period of years, largely to supplement the business case for investment in areas where consumers alone could not bear the cost of building a network. RUS funds, on the other hand, often help to finance the network build itself. Recognizing that existing federal support mechanisms for broadband investment already support complementary functions—in some instances—does the type of support envisioned through the BIFIA program overlap with one or more of these existing programs?

Maybe, but while both sets of funding mechanisms are designed to support capital expenditures, I respectfully ask for a resetting of the narrative:

The federal government needs to stop spending billions of dollars in rural America to build networks that only support 20th century speeds. The current practice of replacing and upgrading or re-plowing the broadband ground every couple of years with networks that are light years behind what is currently available in urban areas is inefficient, expensive and ensures that rural America will never be able to compete with urban America. Section 254 of the Communications Act requires that rural America's service be comparable to urban America. Moreover, the National Broadband Plan is more than a decade old but its Number 1 Goal by 2020: "At least 100 million U.S. homes should have affordable access to actual download speeds of at least 100 megabits per second and actual upload speeds of at least 50 megabits per second," has not been met in rural America. If the current mindset and planning mechanisms prevail, rural America will maintain its structural economic disadvantage to the rest of the country as we spend billions of dollars compounding the error. That would be a travesty. It is time for bipartisan agreement to fund broadband where there is no business case for the private sector to do so.

i. Would it make sense to have all of these functions supported through mechanisms under one agency? Or is there a benefit to having different visions for broadband support articulated and carried out through various grant or financing programs?

I will simply proffer this: Coordination should not be an afterthought. How that is achieved – by agency consolidation or better cooperation -- is a question that deserves an answer.

Committee on Energy and Commerce
U.S. House of Representatives
Hearing on
"LIFT America: Modernizing Our Infrastructure for the Future"
H.R. 2741, the "Leading Infrastructure for Tomorrow's America Act"
May 22, 2019

Ms. Jessica Eckdish
Legislative Director, BlueGreen Alliance

The Honorable Jan Schakowsky (D-IL):

Question: The revelations in 2015 that residents of Flint, Michigan, were being poisoned by lead-contaminated water stunned the entire country. I visited Flint in March of 2016 with a number of my colleagues here with on this panel. Yet long after this story receded from national headlines, the majority-Black community members of Flint still confront the shocking injustice of paying the full cost of their water bills even as their tap water has not yet been declared safe to drink without a filter. Flint is not an isolated incident: in the world's richest and most powerful country, more than 18 million people receive their drinking water from 5,300 water systems that violated the federal rules governing lead testing in 2015. Unfortunately, this rings true in Chicago, as well as the suburban communities I also represent.

Last year, toxic lead was found in tap water drawn from nearly 70% of 2,797 homes across Chicago within the previous two years, according to an analysis of results from the tested water. Tap water in three of every 10 homes included in the analysis had lead concentrations above 5 parts per billion, according to the study. That's why I am so glad this plan includes increased funding for Safe Water Revolving funds. This funding is so necessary for communities like those I represent.

> **Question 1.** Ms. Eckdish – can you please explain the impacts that increased water infrastructure can have on communities like mine? In what ways do we see this investment strengthen communities in terms of public health, workforce development, and quality of life?

Response 1: Our nation's drinking water, wastewater and storm water infrastructure is vital to the protection, treatment, and distribution of clean water. However, most of our current water infrastructure is aging and in serious need of replacement and upgrading. Chronic underfunding for these upgrades has resulted in the American Society of Civil Engineers delivering a D-minus or D grade to our water infrastructure for the past decade. [1]

Significant investment and upgrades are needed to allow communities to adapt to the effects of climate change, increase access to safe drinking water, and adequately treat storm and

[1] Pew Charitable Trusts, How Development of America's Water Infrastructure Has Lurched Through History, March 3, 2019. Available from: https://www.pewtrusts.org/en/trend/archive/spring-2019/how-development-of-americas-water-infrastructure-has-lurched-through-history

wastewater. Tripling funds for Clean Water and Drinking Water State Revolving Funds, creating grant programs to assist low-income households with water and sewer services, and creating a $35B clean water trust fund dedicated to upgrading water infrastructure that is targeted for communities most in need would strengthen community health and quality of life. Currently, our cities are relying on pipes for drinking water that are, on average, a century old. This aging and unsafe water infrastructure can pose significant health issues, as pipes erode and lead enters the drinking water supply. [2] Even low levels of lead exposure can have significant health consequences, affecting the developing brains and central nervous systems in children. Upgrading water infrastructure for communities in Flint, Michigan and across the U.S. is essential to keeping communities safe and healthy.

Requiring these infrastructure projects to meet labor standards, domestic content requirements, and project labor agreements (PLAs), community benefit agreements, local hire, and other provisions and practices would further ensure that we are creating good-paying jobs and maximizing the benefits of these investments for workers and communities.

Question 2: Ms. Eckdish – you mentioned about the high standards we need for construction and manufacturing for water projects. Can you expand on how Buy America procurement requirements are cost-effective in the long run?

Response 2: Buy America procurement requirements have a long-standing history of maximizing the return on investment to taxpayers and the American economy. Requiring domestic content in infrastructure projects has the potential to boost American workers and manufacturers, and create broad economic growth while spurring domestic manufacturing. According to a 2009 report by the Alliance for American Manufacturing, Buy America provisions lead to a 33% increase in manufacturing jobs per dollar of public spending. [3]Further, a GAO report found that water projects subject to Buy America provisions in the American Recovery and Reinvestment Act of 2009 were lower in cost than estimated, refuting the common argument that Buy America provisions lead to delays and higher project costs. [4]

Buy America provisions reinvest taxpayer money right back into local communities, instead of being sent overseas to the lowest bidder. In the long-run, offshoring to companies with lower labor and environmental standards perpetuates on our dependence on foreign products, instead of ensuring that we build it here and employ hard-working Americans.

For water infrastructure upgrades to truly benefit American workers, they must also include Davis-Bacon provisions to ensure prevailing wages, use project labor agreements and community benefit agreements to ensure projects are completed effectively and on time, and that communities and workers have a voice in project development. Additionally, ensuring that

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[2] Wahowiak, Lindsey. Infrastructure, public health linked, and crisis in Flint shows: Aging US systems pose risk to health. The Nation's Health. April 2016. Available at http://thenationshealth.aphapublications.org/content/46/3/1.3

[3] Alliance for American Manufacturing, How Infrastructure Investments Support the U.S. Economy: Employment, Productivity, and Growth. January 2009. Available at http://s3-us-west-2.amazonaws.com/aamweb/uploads/research-pdf/Infrastructure_2009.pdf

[4] GAO, Clean Water Projects Are Underway, but Procedures May Not Be in Place to Ensure Adequate Oversight. May 2010. Available at: https://www.gao.gov/assets/130/124764.pdf

people in low-income communities and communities of color have the opportunity to get these jobs would maximize return on investment in communities where the projects occur.

The success of the Buy America provisions in the state revolving loan fund (SRF) programs encouraged Congress to make the provision in the Clean Water SRF permanent and the Senate Environment and Public Works committee has now passed out of committee a permanent Buy America provision for the Drinking Water SRF.

The Honorable Earl L. "Buddy" Carter (R-GA):

Question 1: All natural gas utilities upgrade and modernize their infrastructure through enhanced risk- based integrity management programs. In fact, in the last decade, natural gas utilities have worked with their state regulators to implement any number of innovative programs that facilitate the accelerated replacement of cast iron and bare steel pipelines. Today, 43 states and the District of Columbia have a program on the books, and, as a result, the inventory of cast iron and bare steel pipe in the ground is down 33.6% over the last decade. States address this issue differently for any number of reasons, but the basis for decisions relating to infrastructure programs is always centered on ensuring safety and reliability while balancing just and reasonable rates for consumers.

a. How would the grant program proposed in the LIFT Act be facilitated relative to states' existing authority?

Response to 1 and 1a: LIFT Act Subtitle C, Section 33201 would establish a program to award grants to states "for the purpose of providing incentives for natural gas distribution companies to improve the public safety and environmental performance of the natural gas distribution system." Projects eligible for funding under this section are projects carried out by a natural gas distribution company to accelerate, expand, or enhance the implementation of a plan approved by the State for replacement of leak-prone components of the natural gas distribution system or inspection and maintenance programs for the natural gas distribution system.

While this work has already begun in many states, much more needs to be done to repair or replace the critical segments of the distribution network made of cast iron, unprotected steel and/or older plastic materials. Acceleration is necessary because current efforts to upgrade all leak-prone pipes could take over 30 years to complete. Large-scale investment through programs such as this would allow us to modernize the network and accelerate current and ongoing efforts of repair. According to a BlueGreen Alliance report, *Making the Grade 2.0*, tripling the current rate of repairs to natural gas distribution systems would create over 2 million job-years through the economy over the next 10 years.[5]

[5] BlueGreen Alliance. Making the Grade 2.0: Investing in America's Infrastructure to Create High-Quality Jobs and Protect the Environment. September 2017. Available at http://www.bluegreenalliance.org/wp-content/uploads/2017/09/MakingTheGrade-2.pdf

Because the project must already be approved by the State and the State will be responsible for applying for the grant to fund the project, this program should not impede existing State authority, only supplement funding for projects intending to benefit public safety, reduce methane emissions, spur innovation, and benefit low-income households.

b. How would the program impact existing accelerated infrastructure replacement programs?

Response to 1b: Although the inventory of cast iron and bare steel pipe in the ground may be down by 33.6% over the last decade, the age and quality of pipeline infrastructure varies across the United States, with some areas operating systems that are more than 100 years old.[6] Additionally, a recent study published in *Science* determined that the methane leak rate from the natural gas supply chain was around 2.3%, almost twice the EPA's estimate of 1.4%.[7]

The LIFT grant program for natural gas distribution is necessary for providing continued upgrades and protecting public health. Though state efforts are ongoing to replace natural gas distribution programs, acceleration of these efforts is needed to complete these repairs more quickly, which could be bolstered through the grant program.

The LIFT grant program for natural gas distribution is necessary for providing continued upgrades and protecting public health, and would work in tandem with existing efforts to replace leak-prone pipes.

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[6] DOE, "Natural Gas Infrastructure Modernization Programs at Local Distribution Companies: Key Issues and Considerations." January 2017. Available at: https://www.energy.gov/sites/prod/files/2017/01/f34/Natural%20Gas%20Infrastructure%20Modernization%20Programs%20at%20Local%20Distribution%20Companies--Key%20Issues%20and%20Considerations.pdf

[7] Alvarez, R et al., 2018. Assessment of methane emissions from US oil and gas supply chain. *Science* 361: 3698. Available from: https://science.sciencemag.org/content/361/6398/186https://science.sciencemag.org/content/361/6398/186

Additional Questions for the Record

Committee on Energy and Commerce
U.S. House of Representatives
Hearing on
"LIFT America: Modernizing Our Infrastructure for the Future"
H.R. 2741, the "Leading Infrastructure for Tomorrow's America Act"
May 22, 2019

Mr. Daniel Lyons
Visiting Fellow, American Enterprise Institute

The Honorable Michael C. Burgess (R-TX):

Question 1. Mr. Lyons, it is important that all Americans have broadband access should they choose to use it. Currently, about 85% of U.S. households have wired broadband service. This bill authorizes $40 billion to bring that to 98%. But, one of the issues with broadband access is the choice by some consumers not to adopt broadband services because monthly subscriptions are costly.

a. Does the rate of capital investment as authorized by this bill match demand?

Response to 1a: I'm sorry, Congressman, but this question lies outside the scope of my expertise.

b. If monthly broadband subscriptions are too costly, should some of this investment go towards making these services more affordable?

Response to 1b: You're right that monthly subscription fees are also a barrier to adoption, as are the one-time equipment costs of computers, and a general sense by some (particularly older Americans) that broadband Internet access is not a service they need. A comprehensive approach to closing the digital divide would address all of these factors: it would address broadband deployment, funding for low-income families to aid monthly broadband bills, and digital literacy initiatives.

But I question whether it is helpful to use this initiative to address all of these issues simultaneously. Doing so would risk repeating the mistake of the FCC's now-defunct High Cost Fund, which was designed to make rural telephone access more affordable by providing funds to rural telephone companies to offset some of their operating costs. This ended up operating as a form of corporate welfare that propped up inefficient business models. This bill is designed to provide one-time buildout assistance to make sure the funds actually lead to an extension of the nation's broadband network.

At a minimum, I recommend that any effort to address affordability come in the form of direct-to-consumer vouchers, like a telecom version of SNAP benefits. The problem that low-income families face is lack of purchasing power. By providing them directly with a voucher, Congress can close that purchasing power gap in a way that gives these families some agency in their purchasing decisions and enhances

rather than distorts competition in telecommunications markets.

The most likely vehicle to achieve this change would be to reform the FCC's Lifeline Program. Lifeline is designed to do exactly what you are suggesting: provide assistance to low-income consumers to make communications services more affordable. Unfortunately, it's not clear that the current Lifeline program actually achieves its purposes, a critique that the GAO has often leveled at the program. We give $9.25/month to carriers for each qualifying family they serve, but we have no evidence whether this is the right amount, or whether the recipients are at risk of canceling their service if they did not get this subsidy. Congress should direct the FCC to study the drivers of broadband non-adoption and repurpose Lifeline so that it is only funding those low-income families that cannot afford broadband without assistance, and provide sufficient funds to those families to close the gap.

Question 2: Mr. Lyons, while this bill authorizes $40 billion in investment to build out broadband internet infrastructure to 98% of the population, it is estimated that another $40 billion investment will be required to reach the last two percent.

a. What accounts for the increase in cost per percentage point to bring broadband infrastructure to the last two percent of U.S. households?

Response to 2a: The difficulties for these last two percent of U.S. households stem mostly from geography and low population density. Some terrain features, such as mountains or heavily wooded areas, are expensive places to lay wireline services, and wireless alternatives may not be effective. In other areas, even if Congress completely subsidized the construction of a network, the number of customers per mile of network would be insufficient to cover the company's monthly operating costs at affordable rates.

In the long run, technological advancement is the best solution for these households. Satellite-based broadband service has made significant advances in the last decade, and while it may not be quite ready to fill this gap yet, this technology likely holds the key to reaching that last two percent of households at speeds that this bill contemplates. Satellite providers already reach virtually 100% of American households, although my understanding is that their speeds and reliability are not always on par with more traditional broadband offerings. As these services improve, this gap will narrow.

The Honorable Tim Walberg (R-MI):

Question 1: Title I of the LIFT America Act would authorize tens of billions of dollars new broadband funding through a national reverse auction. While such a mechanism has been efficient—assuming we get the underlying mapping situation done correctly—I'm concerned about how it might operate alongside the CAF-II auction, Chairman Pai's proposed Rural Digital Opportunity Fund, and the Remote Areas Fund created—but never funded—in the Commission's 2011 Intercarrier Compensation Transformation Order. Particularly, how the different provisions of this program interact with each other, like "unserved anchor institutions."

What is less tested, however, is the BIFIA financing provisions of the LIFT Act, which would create $5 billion in new funding of below-market loans to be administered by NTIA. This program is still relatively new in the water utility industry, on which this BIFIA mechanism is modeled, and the capital needs of the water industry—which are based on risk, compliance with the Clean Water Act, etc.—are not really comparable to what we're trying to achieve through a one-time investment in broadband networks.
These are apples and oranges. Before we move ahead with these different funding programs, we must better understand—both from the experts, but also from the agencies—how they would work.

Question 1a: Are you aware of NTIA ever managing a low-interest loan program like BIFIA?

Response to 1a: I am not aware of NTIA overseeing a program like this.

Question 1b: How would you structure the eligibility requirements that this BIFIA provision contemplates in a way that might complement the national reverse auction funding stream proposed to be administered by the FCC?

Response 1b: The FCC has long struggled with the unintended consequences of subsidizing a carrier in an area where an unsubsidized provider is already operating—or worse, subsidizing multiple providers in an area. At a minimum, it is vital that NTIA strictly enforce the eligibility provision in Section 13002(12)(B)(i), that projects are only eligible in unserved areas. I am less supportive of the alternative project definitions in 12(B)(ii), as this would presumably fund projects in areas already served by a broadband provider, and there is no clear definition of what constitutes "access or improved access to broadband service" in this subsection.

Beyond this concern, it is also important that NTIA coordinate with FCC to assure that taxpayers do not subsidize two projects in the same area.

Question 1c: Do you have any insight into how NTIA might administer such a program, and how the coordination components relating to the reverse auction of $30 billion through the FCC would apply to this funding stream?

Response 1c: One potential solution would be to approve only BIFIA project proposals under 13002(12)(B)(i) in areas not currently subject to an FCC reverse auction for BIASP subsidies.

Response 1d: Many rural providers receive support both through the Universal Service Program and the RUS program. USF support is distributed over a long-term period of years, largely to supplement the business case for investment in areas where consumers alone could not bear the cost of building a network. RUS funds, on the other hand, often help to finance the network build itself. Recognizing that existing federal support mechanisms for broadband investment already support complementary functions—in some instances—does the type of support envisioned through the BIFIA program overlap with one or more of these existing programs?

i. Would it make sense to have all of these functions supported through mechanisms under one agency? Or is there a benefit to having different visions for broadband support articulated and carried out through various grant or financing programs?

Response to 1d and 1di: While there is some value to experimenting with a diverse set of approaches, my sense is that consolidation of federal programs in a single agency is the more beneficial approach. Consolidation helps avoid wasteful, duplicative efforts and also leverages the expertise that an agency has and will develop over time when addressing the multiple facets of the broadband gap problem. The RUS program, for example, had good intentions, but it largely duplicated efforts that the FCC would ultimately undertake when repurposing the High-Cost Fund into the Connect America Fund. Some academic scholarship has criticized the RUS program as less effective at achieving its goals, in part because the Agriculture Department does not have the same expertise in broadband network deployment and economics that the FCC does.

That said, the bill's federalism provisions do offer an opportunity to experiment with different visions for broadband support. Unlike the Agriculture Department, state commissioners often have expertise in broadband deployment and local knowledge about the unique challenges of deployment in their respective states. Giving them some leeway to craft state-specific modifications to deployment grants can achieve some of the benefits of experimentation and diversification of approaches when trying to close our broadband divide.

