MEMBER DAY

HEARING

BEFORE THE

SELECT COMMITTEE ON THE CLIMATE CRISIS HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

HEARING HELD
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SELECT COMMITTEE ON THE CLIMATE CRISIS

ONE HUNDRED SIXTEENTH CONGRESS

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CONTENTS

STATEMENTS OF MEMBERS OF CONGRESS

WITNESSES

SUBMISSIONS FOR THE RECORD

MEMBER DAY

THURSDAY, NOVEMBER 14, 2019

U.S. HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON THE CLIMATE CRISIS,
Washington, DC.

The committee met, pursuant to call, at 2:14 p.m., in Room 1300, Longworth House Office Building, Hon. Kathy Castor [chairwoman of the committee] presiding.

Present: Representatives Castor, Casten, Graves, Griffith, and Carter.

Ms. CASTOR. The Select Committee on the Climate Crisis will now come to order.

Today, we are holding a Member Day to hear from our colleagues on both sides of the aisle about their best ideas to solve the climate crisis, including specific pieces of legislation that they have introduced.

We have offered Members who are unable to appear today the opportunity to submit a written statement to the committee no later than November 21st. I ask unanimous consent that these statements be made part of the hearing record, without objection.

[The statements follow:]

Submissions for the Record
Representative Kathy Castor
Select Committee on the Climate Crisis
November 14, 2019

Written Testimony of the Hon. Gilbert "Gil" Cisneros
A Representative in Congress from the State of California

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor, Ranking Member Graves, and members of the House Select Committee on the Climate Crisis, thank you for allowing me this opportunity to provide testimony on behalf of the residents of California's 39th Congressional District on the critical need to reduce greenhouse gas pollution and ensure our communities are resilient to the impacts of climate change. In my district, as across the nation and around the world, we are seeing more and more examples of the immediacy of this crisis and its harmful effects on our communities.

Just last month, brush fires in Yorba Linda, Brea, Fullerton, and across my district sparked fear, widespread power outages, and poor air quality for my constituents. As the world continues to warm, wildfires are expected to get bigger and more frequent and the science is not in our favor. Earlier this year, a report by the Union of Concerned of Scientists projected that without climate action, the annual number

of heat-index days at 90 degrees or higher in Orange County will increase by 300% by mid-century and over 600% by 2099.

It is our responsibility in Congress to lead our country and the larger global community to move beyond partisanship and enact prudent solutions that improve lives and safeguard the future. To truly address the climate crisis, potential solutions need to be examined across every aspect of federal policymaking. I urge you to charge Congress with enacting legislation to (1) advance innovation in the energy sector to decrease our dependence on carbon; (2) support the deployment of green transportation infrastructure; (3) modernize Department of Defense policies to address the national security vulnerabilities of climate change; (4) help communities prevent climate disasters, rather than merely respond after the fact; and (5) preserve our natural resources and open spaces.

SUPPORT RENEWABLE ENERGY DEPLOYMENT

I am a strong supporter of the bipartisan Energy Innovation and Carbon Dividend Act and urge this committee to closely examine the proposal. This legislation would put a price on carbon pollution, speeding our transition to a clean-energy economy by incentivizing conservation and innovation. It takes a market-based approach that doesn't grow the size of government, instead returning the revenue raised directly to households as a dividend. The bill projects reductions in carbon pollution of 90 percent by 2050, compared with 2016 levels, while especially protecting the interests of those in the middle class and at the margins.

Our tax code should incentivize clean energy use. Earlier this month, I joined my fellow members of the New Democrat Coalition, Sustainable Energy and Environment Coalition, and the Congressional Progressive Caucus in calling for prioritization of legislation to advance clean energy tax policies by the end of the year to help us attain our emissions reductions goal and combat climate change. Tax incentives to promote energy storage, zero emission vehicles, offshore wind, and energy efficiency are critical to promoting cleaner energy use among individuals and businesses.

ADVANCE GREEN TRANSPORTATION INITIATIVES

I urge the Committee to support deployment of green transportation infrastructure, creating jobs while addressing climate change. In 2017, the transportation sector accounted for 29% of our nation's total emissions of 6.4 billion metric tons of carbon dioxide equivalent. Encouraging better emission vehicles and improved transit systems to reduce greenhouse gas emissions must be a component of your climate change plan.

In California, we are already taking major steps towards addressing climate change in our transportation systems by requiring all public transit buses to switch from dirty diesel fuel to zero-emission technology. Transit agencies in my district have admirably fully embraced this challenge, navigating new logistical challenges for how to best install charging stations throughout their existing systems with limited financial and technical support from the federal government. I support H.R. 2164, the Green Bus Act, to help replicate this success nationwide but urge you to ensure increased federal support is available. If other communities are to follow California's lead, the federal government must play a leadership role in providing technical and financial assistance to ensure seamless deployment.

While several car companies have made great strides to reduce greenhouse gas emissions through better fuel economy in their vehicles, more needs to be done. I was highly disappointed with the President's decision to abandon the Corporate Average Fuel Economy (CAFE) for model years 2021 to 2025. These regulations were carefully negotiated with manufacturers, labor, and environmental groups to reduce pollution and spur innovation within the industry. I support legislation, H.R. 978, the Clean and Efficient Cars Act of 2019, to preserve these fuel economy and vehicle emission standards that reduce greenhouse gas emissions and save drivers money at the pump.

DEFENSE

We must protect our nation's foreign policy interests and those of our military. As the Pentagon's own reports consistently confirm, the effects of a changing climate are a national security issue. Climate change makes our military bases more vulnerable and missions more complicated. That's why I worked to secure a provision in the House-approved Fiscal Year 2020 National Defense Authorization Act directing the Department of Defense to explore the possibility of maintaining plug-in hybrid and electric government vehicle fleets on military installations. It also directs the Pentagon to consider building microgrid infrastructure to support green vehicles and secure systems to support them.

I also support legislation H.R. 1201, Climate Change National Security Act, which would restore directives on national security and climate change requiring the federal government to consider the impacts of climate change in the development of relevant national security policies. Further, I support H.R. 2759, Department of Defense Climate Resiliency & Readiness Act, which would direct the Department of Defense to take a number of steps to make the Department more climate resilient, including establishing key benchmarks for energy goals, increasing transparency in contracting, and directing Departmental focus on climate and resiliency.

PREVENT CLIMATE DISASTERS

Like many states, California has been directly impacted by the devastating natural disasters exacerbated by climate change. Millions of dollars are spent fighting intensifying blazes during our now year-round fire season in California. We must invest in research nationwide on fire-related issues to advance seasonal wildfire forecasts, but also help forestry agencies prepare for wildfire events to mediate their devastating effects. I support legislation like H.R. 4924, the Smoke Planning and Research Act, to help state and local governments protect their communities from the public risks of wildfire smokes.

PRESERVE OUR NATURAL RESOURCES AND OPEN SPACES

We must prioritize the conservation of our public natural lands. Protection of our natural lands is a win for both the environment and for the reduction of greenhouse gases, as national parks, forests, and other public lands have been valued for their ability to absorb and store carbon and other air pollutants.

This is why I support H.R. 3195, the Land and Water Conservation Fund Permanent Funding Act, which would provide for permanent funding dedicated to the Land and Water Conservation Fund to protect conservation funds.

Thank you again for your time and consideration. I know you have a tough job ahead of you and I hope you will keep my testimony on behalf of my constituents in California's 39th Congressional District in mind as you recommend policies to advance as it relates to our nation's strategy in combating climate change.

Written Testimony of the Hon. Anna G. Eshoo
A Representative in Congress from the State of California

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chair Castor and Ranking Member Graves, for the opportunity to testify at the Member Day hearing of the Select Committee on the Climate Crisis. I appreciate your invitation to contribute to your important work as you work toward solutions to the existential threat of climate change.

While there is no denying the scientific consensus that human activity is driving climate change, it is worth reviewing the facts to emphasize the scale of our challenge. The Intergovernmental Panel on Climate Change (IPCC) found that global temperatures are likely to rise 1.5°C above pre-industrial levels between 2030 and 2052. This will have severe environmental impacts including a rise in sea levels, the loss of snow-pack, a thaw of the permafrost, higher ocean temperatures, increased ocean acidity, more intense hurricanes, stronger storms, longer droughts, and more severe flooding. If temperatures continue to rise to 2°C above pre-industrial levels, 50 million people will be displaced by rising sea levels; 350 million people will endure severe drought; and more than a billion people will experience extreme heat waves.

The time for debate on the causes of climate change is over, and we have limited time to implement solutions. Fortunately, the Speaker tasked this Committee with recommending "policies, strategies, and innovations to achieve substantial and permanent reductions in pollution and other activities that contribute to the climate crisis which will honor our responsibility to be good stewards of the planet for future generations." As you finalize your recommendations, I'd like to share a few principles to guide your work.

First, any recommendations must be informed by science and proportionate to the scope of our challenges. The IPCC report estimates that in order to keep average temperatures from increasing beyond 1.5°C, we need to reduce greenhouse gas emissions by 45 percent in the next decade and reach net zero emissions by 2050. This

should be the benchmark for the Committee's work because established science should guide informed policy decisions.

Second, while we should be ambitious in our goals, we must be pragmatic in how we achieve them which means embracing a broad range of policies to address the crisis. There are no silver bullets in climate policy. Tax credits and research backed by the federal government have led to the development of many forms of renewable energy, including some invented in my congressional district. As we continue to support renewable energy, we should also discourage the use of fossil fuels through a price on carbon, such as a carbon tax or cap and trade system. These complimentary policies are both necessary because relying on a narrow set of solutions will make it much harder to cut emissions before the science tells us it's too late.

Finally, I encourage you to look to the example of states that have taken the lead on climate policy, including California. My state has adopted cap and trade, a low carbon fuel standard, a renewable portfolio standard, and a zero-emission vehicles mandate, among other policies. Thanks to these efforts, California hit its initial carbon reduction goals four years ahead of schedule while our economy continues to grow. Federal policy can learn from and improve upon these successes. The Committee should also ensure that action from the federal government, while sorely needed, does not constrain states and local governments that have led the way in reducing emissions.

Thank you again for the opportunity to share these principles with you today. I look forward to your recommendations which I will take back to my committee, Energy and Commerce, as we write comprehensive legislation to address this existential threat. Our challenges are enormous, but we owe it to future generations to leave them a planet that is not greatly diminished from the one we have today.

Written Testimony of the Hon. Adriano Espaillat
A Representative in Congress from the State of New York

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you for accepting our testimony, today, Madam Chair.

Mitigating and adapting to climate change is the issue of our time. It is an existential problem, one that we have waited much too long to take seriously, and we are already paying the price for that. And it is frontline communities, communities of color, indigenous communities, women, children, migrants, people with disabilities, and other marginalized communities who bear the greatest burden, though they contribute the least to the causes of climate change. A recent study published in the Proceedings of the National Academy of Sciences of the United States of America makes this incredibly clear. It finds that Black and Hispanic individuals in the United States on average bear a "pollution burden" of 56 percent and 63 percent excess exposure, respectively, relative to the exposure caused by their consumption.[1] But I don't need statistics to know that air pollution in Washington Heights makes my grandson's asthma worse, and that it is not my neighbors in Washington Heights, Harlem, Inwood or the Bronx that are the greatest contributors to pollution that affects our health or contributes to climate change.

When the House passed the Climate Action Now Act earlier this year, it included an amendment of mine that simply stated that climate justice and environmental justice must be included in our efforts to meet the Paris Agreement and mitigate and adapt to climate change. This must be a core tenet of all our policies to address climate change. Every law we pass, every action to mitigate and adapt to climate change must include acknowledgement of and protections for marginalized and frontline communities who bear the burden climate change. My predecessor, the great Adam Clayton Powell Jr., one of the great Civil Rights leaders, led his Powell Amendments to ensure federal funding did not support segregation. Environmental justice is my Powell Amendment, and I want to work with you to ensure that in every bill this House considers, environmental justice is upheld.

We need serious investments to mitigate and adapt to climate change. But it will cost us more in the long-term if we do not act now, financially and existentially.

[1] Inequity in Consumption of Goods and Services Adds To Racial—Ethnic Disparities in Air Pollution Exposure. Christopher Tessum-Joshua Apte-Andrew Goodkind-Nicholas Muller-Kimberley Mullins-David Paolella-Stephen Polasky-Nathaniel Springer-Sumil Thakrar-Julian Marshall-Jason Hill—https://www.pnas.org/content/116/13/6001.

By the time a child born today retires, 2085, the U.S. will be spending $300 billion each year on climate resiliency. The time to invest is now. In fact, the time to invest was two decades ago, but here we are. We need serious investment in our infrastructure and our transportation systems. We need to invest in green roof technology and innovative urban agriculture to address not just the carbon emissions of the agricultural field, but to also address the intersectional issues of food security and climate change.

I want to also recognize that climate change does not just require domestic commitments. Climate change is an international problem that requires international solutions. That is why I have introduced H.R. 4986, the Green Climate Fund Authorization Act of 2019, which now has 10 cosponsors and counting, in response to the Trump Administration formally announcing U.S. withdrawal from the Paris Agreement last week. The Green Climate Fund is an independent, multilateral fund established by the United Nations Framework Convention on Climate Change to help developing countries limit or reduce their greenhouse gas emissions and adapt to climate change. Developing counties have limited capacity to reduce their greenhouse gas emissions, and through the Green Climate Fund the U.S. can contribute our fair share enable mitigation and adaptation activities that uphold environmental justice around the globe. Because it is these exact nations that are also on the frontline of climate change, though they too contribute the least to its causes.

Written Testimony of the Hon. Paul Gosar
A Representative in Congress from the State of Arizona

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Madam Chair and Ranking Member, thank you for the opportunity to come before you today to present recommendations to move America forward creating a stronger more secure future. I am Rep. Paul Gosar and I represent the Fourth District of Arizona as well as the current Chairman of the Congressional Western Caucus.

Regardless of your position on the issues before this Committee we all know that America will need to build more electricity generation and transmission and will face a greater demand for critical minerals and the land access that this development demands. In my testimony today I will highlight the challenges and opportunities that we face in bringing this energy future to fruition.

PLREDA

The first bill I would like to highlight is my bill H.R. 3794, the Public Land Renewable Energy Development Act. Joining me supporting this bill are such radical conservatives as Rep. Jared Huffman and Rep. Raúl Grijalva. Renewable energy sources like wind, solar and geothermal are an integral part of the United States' all-of-the-above energy strategy. Our nation's public lands can play a critical role in supporting that mission. While approximately 40% of total geothermal electric generating capacity comes from federal lands, only about 5% of total utility-scale wind energy capacity and utility-scale solar energy capacity comes from public lands. This bipartisan bill develops a streamlined process that will drive investment towards the highest quality renewable sources. This legislation uses upfront planning and careful siting to identify appropriate areas for wind, solar and geothermal energy. In addition, PLREDA incentivizes development in these lower-conflict priority areas, while ensuring impacts to wildlife, habitat and cultural resources are avoided and minimized. The bill also directs agencies to provide staffing resources to ensure project permitting moves forward as efficiently as possible.

I would encourage committee members to join in support of this legislation and help us see it enacted soon.

TRANSMISSION AND GENERATION

American demand for electricity is growing and everything from smart phones to electric cars will continue to increase our domestic demand for electricity. Recent efforts by cities and states to ban household use of natural gas will only exacerbate our demand for electricity. That demand growth will put increase pressure on our need for increased transmission capacity and the massive challenges of building significant new energy projects. As we have seen, poor environmental planning and maintenance can have devastating impacts on transmission particularly in rural areas susceptible to wildfires.

Beyond that, the simple process of building and installing any new significant construction is riddled with massive challenges and problems. It is important to consider what it takes to build new transmission. I present a case from my home state, the SunZia Southwest Transmission Project consists of 520 miles of two single-circuit 500 kV transmission lines to connect and deliver electricity generated in Arizona and New Mexico to population centers in the Desert Southwest.

This was a project built specifically to meet the demand for renewable energy from populations further West. In order to build these lines, the Bureau of Land Management (BLM), along with fourteen cooperating agencies, led the effort to comply with the National Environmental Policy Act (NEPA). That process started in 2008, was completed after a six and half year effort to comply with NEPA finalizing on January 23, 2015, when BLM issued a Record of Decision approving SunZia's application for a right-of-way across federally owned property. Again, a single transmission line, servicing only renewable energy needed nearly 7 years of environmental review under NEPA.

But it isn't just transmission, pipelines in America are facing massive obstacles as well and construction and operation of more pipelines will be critical to a cleaner future. The prompt approval of pipelines for methane capture and distribution can prevent flaring and methane emissions while providing clean natural gas for markets and industrial use. In addition, new pipelines for carbon capture and reuse will provide us new opportunities for both carbon sequestration and enhanced oil recovery.

And it isn't just power distribution but generation as well, right now offshore in the Atlantic the Vineyard Wind project has been in the NEPA process for 18 months. This summer the Administration was required to delay the NEPA approval to conduct additional cumulative impact assessments on offshore wind's impact on fisheries. This action was driven in part by a request from the Rhode Island Congressional delegation that asked, 17 months into the NEPA process, for a 2-year delay for a baseline fishing research study. It is nearly impossible for new massive investment of capital to come into the United States when the NEPA process is so fundamentally broken.

MINERALS

Finally, the last issue of my focus today is that of critical minerals. As the need more electricity in our future, we will need more critical minerals like cobalt, lithium and copper and access to rare earths and helium.

Today, we have allowed our domestic rare earth mines to be closed, shredding our domestic security by forcing our industrial and Defense apparatus to depend on Chinese rare earth materials. In May of 2019, President Xi Jinping (zhe—jingping) made a visit to the heart of China's critical minerals industrial complex. He stated during this visit, "We are here at the starting point of the Long March to remember the time when the Red Army began its journey. We are now embarking on a new Long March, and we must start all over again."

His words came a week after Chinese state media proposed the idea of completely banning critical mineral exports to the United States. Currently, the United States relies on China for 20 different critical minerals which include several rare earth materials defined by the Department of Defense. This irrational overreliance threatens our national security by imperiling our ability to make equipment and weapons integral to mission success. Rare earth materials are used in numerous modern technologies including missile guidance and control systems, lasers for enemy mine detection, satellite communications, radar, sonar on submarines, iPhones, electric vehicles, wind turbines, solar panels, computers and networks.

But it isn't just rare earths that threaten our security, it is our complete position on domestic mining. From the Rosemont Mine and Resolution Copper projects in Arizona, to Twin Metals in Minnesota and numerous projects across Alaska, Wyoming and Nevada. Our nation needs more copper, zinc and cobalt to achieve a cleaner energy future. Yet the permitting process for these projects is measured in hundreds of millions of dollars and decades of permitting. It faces reckless legislating from Congress working to pass moratoriums on mineral development, undo land exchanges passed by the will of the people. Effort after effort to undercut the domestic development of the resources to secure our nation. If we want a more reliable electric future, we will need these minerals. The choice is clear, support more mining and an electrified future or simply serve word salad to gullible activists while fundamentally failing to take the necessary steps to secure America.

CLOSING

Finally, in closing, the United States is the greatest CO_2 success story on the planet. The Paris agreement was nothing more than an effort to extort America to

pay the world for a sin created by an international bureaucratic cabal. We have lead the world in CO_2 reduction and we should work to export our success to the rest of the world with more LNG to Europe and allies in Asia.

Written Testimony of the Hon. Debra "Deb" Haaland
A Representative in Congress from the State of New Mexico

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor, Ranking Member Graves, members of the committee including my good friend from New Mexico, Assistant Speaker Luján, thank you for the opportunity to testify and for your leadership on this important issue.

This summer, the Intergovernmental Panel on Climate Change reported that the climate crisis is undermining the ability of our lands to sustain people, wildlife, and plants.

Deforestation, intensive farming practices, and fossil fuel production are contributing to worsening drought, increasing soil erosion, more intense wildfires, and diminishing crop yields.

We see this in New Mexico, where we have a methane cloud the size of Delaware hovering over the northwest portion of our state due to leakage from oil and gas extraction. Our state is the fifth driest state in the nation, and we've been experiencing a long-term drought for years.

All communities have a right to breathe clean air, live free from toxic pollution, have access to healthy food, and share the benefits of economic prosperity, but in New Mexico and elsewhere, low income communities and communities of color have borne the greatest burdens from pollution, climate change, and economic inequality.

Fortunately, New Mexico is blessed with over 300 days of sunshine each year and abundant wind resources, and our state passed legislation to support the swift transition to clean energy and away from dirty fossil fuels and support the state's energy workforce.

I urge you to develop legislative recommendations that will drive a vibrant renewable energy economy that will create millions of high-quality, safe, family sustaining jobs and reduce our impact on the climate.

I've been working on some legislation to address this existential challenge.

My Climate Stewardship Act aims to support natural climate solutions by boosting funding for programs that encourage sustainable farming practices, reforestation, and wetland restoration. It also promotes urban forestry and re-establishes the Civilian Conservation Corps, creating job opportunities for low income youth.

As Vice-Chair of the Natural Resources Committee and Chairwoman of the National Parks, Forests, and Public Lands subcommittee, I'm working with Chairman Grijalva on upcoming legislation to reduce the impact of our public lands on the climate.

I'm also part of an effort to build support for the goal of a 100% Clean Economy with net zero greenhouse gas emissions by 2050, which the science tells us is necessary to protect public health and our environment. Our bill, which we will introduce soon, tasks federal agencies with developing plans to achieve this goal that must protect vulnerable communities and ensure a just transition from fossil fuels that will create millions of jobs for *all* Americans.

And I support the Green New Deal, which would build on this goal and revamp the American economy to reduce emissions and create a more just and fair economic system.

I also urge you to recommend tax policies that drive investments in energy efficiency and renewable energy including: investment and production tax credits; incentives for energy efficiency retrofits, alternative fuel vehicles and infrastructure, and energy storage; and to ensure that these benefit *all* communities.

To increase integration of renewable energy, I also encourage you to support the deployment of a modernized, smart electric grid, including advanced transmission technologies to improve efficiency and making it easier to build transmission lines, a topic that I am working on legislation on.

We can also reduce our impact on the climate by supporting recycling and composting and promoting waste prevention, which reduces greenhouse gas emissions from landfills and incinerators, returns carbon to the ground, and reduces the need for chemical fertilizers.

Thank you again for your leadership on these issues and for the opportunity to testify. The future of our planet is in our hands.

Written Testimony of the Hon. Andrew "Andy" Levin
A Representative in Congress from the State of Michigan

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor and Ranking Member Graves: thank you for the opportunity to provide testimony on behalf of Michigan's Ninth Congressional District as you consider policy ideas for reducing greenhouse gas pollution and ensuring our communities are resilient to the impacts of climate change. On behalf of my constituents, I would like to highlight the need for action on electric vehicle (EV) charging infrastructure, on green transportation infrastructure more broadly, and on zero-net energy buildings.

EV charging infrastructure

As our nation's transportation sector has become increasingly responsible for overall greenhouse gas emissions, plug-in EVs—which have 54 percent lower lifetime carbon pollution than conventional vehicles—can help us reduce emissions and move us closer to climate sustainability.[1] [2] Demand for EV chargers is only expected to grow in the coming decade: EV charging needs will rise from 6 billion kWh in 2020 to 53 billion kWh in 2030, and the number of chargers needed is estimated to rise from 2 million in 2020 to 13 million in 2030.[3]

We need to lead the world in protecting our environment, and that must include improving EV consumer experiences so that we may end our dependence on conventional vehicles. Range anxiety, charge times, and charging costs currently preclude the paradigm shift necessary for a sustainable automotive future. To encourage our country's needed shift to EVs, I plan to introduce the EV Freedom Act, a bill establishing a network of EV charging stations at small businesses and other locations along the Interstate Highway System.

Green Transportation Infrastructure

Transportation represents the largest source of greenhouse emissions of any sector at about 29 percent of U.S. emissions.[4] I believe we need to simultaneously tackle the climate crisis and our crumbling infrastructure by taking a big, bold step towards total transportation electrification.

Any effort to electrify our transportation infrastructure must include funding for roads, bridges, and rail, while also dramatically electrifying our public transportation systems. We need to require renewable energy generation that offsets energy consumed by the electrified infrastructure system we will build. All of this must be done in a manner that ensures we take care of American workers now, while securing the automotive and infrastructure jobs of the future. I am working on relevant legislation that will be responsive to the urgent need to create a green national infrastructure, and I look forward to partnering with this Committee on that critically needed effort.

Zero-net energy buildings

In its 2015 Quadrennial Technology Review, the U.S. Department of Energy found that the buildings sector accounts for about 76 percent of electricity use and 40 percent of all U.S. primary energy use and associated greenhouse gas emissions.[5] The report also found that the implementation of the best available energy efficiency

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[1] U.S. Environmental Protection Agency (EPA). (2016). *Inventory of US Greenhouse Gas Emissions and Sinks.* https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf.

[2] NRDC. (2015). *Electric Vehicles Can Dramatically Reduce Carbon Pollution from Transportation and Improve Air Quality.* https://www.nrdc.org/experts/luke-tonachel/study-electric-vehicles-can-dramatically-reduce-carbon-pollution.

[3] Ibid.

[4] U.S. Environmental Protection Agency (EPA). (2019). *Sources of Greenhouse Gas Emissions.* https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.

[5] U.S. Department of Energy. (2015). An assessment of energy technologies and research opportunities. Quadrennial Technology Review. https://www.energy.gov/sites/prod/files/2017/03/f34/qtr-2015-chapter5.pdf.

technologies in the nation's current building stock would reduce commercial energy consumption by 46 percent.[6]

As a former clean energy entrepreneur, I have seen first-hand the potential to address our climate crisis through solutions that produce more efficient commercial buildings while also spurring cost savings and job growth. I believe we must move much faster with respect to the efficiency of both current and new building infrastructure, which is why I support requiring that all new buildings, including small businesses, be zero-net energy—i.e., new buildings should produce as much energy as they consume. To achieve this rapidly, we must increase our investments in grant programs that establish or expand financing for small business energy efficiency projects. Such investments will help us reduce our carbon footprint, create jobs, and move towards a cleaner, stronger economy.

I respectfully request that the Committee bear these priorities in mind when determining appropriate courses of action that promote sustainability for our communities and our environment. Climate change poses an existential threat to humanity, and we will not have to wait for sea levels or temperatures to rise even further to feel that impact—it is making us less safe right now. Even the Department of Defense just this year said, "the effects of a changing climate are a national security issue with potential impacts to DOD missions, operational plans and installations."[7] If we do not act urgently and boldly, we will have shirked our solemn responsibility to ensure the safety and wellbeing of the American people.

Again, I thank you for your consideration. I look forward to working with you.

Written Testimony of the Hon. Elaine G. Luria
A Representative in Congress from the State of Virginia

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

In Coastal Virginia, climate change is not a problem for tomorrow; it is one we face every day. As the Select Committee considers policy recommendations, I hope your work will prioritize national security, clean energy, and resilient communities.

National Security

The Department of Defense's 2019 *Report on the Effects of a Changing Climate* found that 60 of the 79 highest priority military installations in the U.S. are or will be at risk of recurrent flooding, 48 are or will be at risk of drought, and 43 are or will be at risk of wildfires as a result of climate change.[1]

Coastal Virginia is at particular risk. The report finds "Navy Region Mid-Atlantic and the greater Hampton Roads area is one of the most vulnerable to flooding military operational installation areas in the United States,"[2] and identifies Naval Station Norfolk, Joint Base Langley-Eustis, and Naval Air Station Oceana as at high risk for recurrent flooding. One study found that, by mid-century, the main road to Naval Station Norfolk will flood at high tide *every day*.[3] Further research shows that major military installations in the U.S. will face an average of more than a month of additional days with heat indexes above 100° F.[4] Military readiness will suffer if our service members cannot safely get to or from base or conduct training exercises.

In addition to its visible impacts on our military installations, climate change also fosters global political instability. Studies have indicated that weather events associ-

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[6] Ibid.

[7] Tony Capaccio, Jennifer A. Dlouhy and Ari Natter. Time. (2019). *Defense Department Warns About Climate Change Impacts to Armed Forces and Bases.* https://time.com/5507465/climate-change-impact-armed-forces-bases/.

[1] Department of Defense. *Report on Effects of a Changing Climate to the Department of Defense.* Media.defense.gov. https://media.defense.gov/2019/Jan/29/2002084200/-1/-1/1/CLIMATE-CHANGE-REPORT-2019.PDF.

[2] Ibid.

[3] Atinkson, Larry P., Tal Ezer, and Elizabeth Smith. "Sea Level Rise and Flooding Risk in Virginia." *Sea Grant Law and Policy Journal.* Odu.edu. https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1116&context=ccpo_pubs.

[4] Dahl, Kristy. "US Military on the Front Lines of Extreme Heat." Blog.ucusa.org. https://blog.ucsusa.org/kristy-dahl/military-extreme-heat?_ga=2.170567335.68016399.1573770532-1952043407.1567086713.

ated with climate change may have contributed to the start of the Arab Spring[5] and the Syrian Civil War.[6] A recent comprehensive study in the journal Nature found that climate change has already contributed to armed conflicts over the past half century, and that "intensifying climate change is estimated to increase future risk of conflict" through factors such as drought, flooding, and resource scarcity.[7] Mitigating these threats would reduce the need to send our service members into harm's way.

To address these risks, the Committee's recommendations should require DOD to consider climate change at all stages of planning and decision-making. I was troubled by recent reporting that the Navy dismantled its task force dedicated to climate planning.[8] Instead of ramping down such efforts, DOD should establish similar task forces within each service branch as well as a dedicated team of civilian climate experts to advise DOD senior leadership. Additionally, as the world's single largest institutional greenhouse gas producer,[9] the Committee should recommend that DOD be required to implement a plan to significantly reduce emissions by 2050.

Clean Energy

We must reduce all net greenhouse gas emissions within the U.S. to zero by 2050 at the latest. Clear and consistent market-based rules, coupled with robust investments in carbon-free energy technologies, will cut pollution and make the U.S. the world leader in the 21st century clean economy. Coastal Virginia is uniquely positioned to flourish as we transition to clean energy. By 2026, the waters off Virginia Beach could host the largest offshore wind project in the nation.[10] The Committee should build on this momentum by including recommendations for extending and expanding tax credits for clean energy generation, energy efficiency, and battery storage.

The Committee's recommendations for clean energy legislation should include nuclear power as part of the solution. As a former nuclear engineer in the Navy, I know that nuclear power, when deployed safely and responsibly, can play a key role in decarbonizing our economy. Modeling performed by the Massachusetts Institute of Technology has found that nuclear energy can dramatically reduce the cost of deep decarbonization by providing a constant flow of power that can complement the more intermittent power generated by wind and solar.[11] Nuclear power also has the potential to reduce emissions from the difficult-to-decarbonize industrial sector.[12]

Resilient Communities

Our transition to clean energy must be coupled with investments in communities facing the brunt of climate change impacts. State and local governments in coastal communities throughout the U.S., including in Coastal Virginia, cannot bear the costs of sea level rise alone.

Hampton Roads is experiencing the fastest rate of sea level rise of any region along the East Coast.[13] A study commissioned by the City of Virginia Beach found

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[5] Perez, Ines. "Climate Change and Rising Food Prices Heightened Arab Spring." *Scientific American.* Scientificamerican.com. https://www.scientificamerican.com/article/climate-change-and-rising-food-prices-heightened-arab-spring/.

[6] Kelly, Colin P., Shahrzad Mohtadi, Mark A. Cane, Richard Seager, and Yochanan Kushnir. "Climate Change in the Fertile Crescent and Implications of the Recent Syrian Drought." *Proceedings of the National Academies of Sciences.* https://www.pnas.org/content/112/11/3241.

[7] Mach, Katharine J., et al. "Climate as a Risk Factor for Armed Conflict." *Nature.* Nature.com. https://www.nature.com/articles/s41586-019-1300-6.

[8] Athey, Philip. "Navy Quietly Shut Down Climate Change Task Force." EEnews.net. https://www.eenews.net/greenwire/2019/08/07/stories/1060877355.

[9] Crawford, Neta C. "Pentagon Fuel Use, Climate Change, and the Costs of War." Watson.brown.edu. https://watson.brown.edu/costsofwar/files/cow/imce/papers/2019/Pentagon%20Fuel%20Use%2C%20Climate%20Change %20and%20the%20Costs%20of%20War%20Final.pdf.

[10] Ress, Dave. "Dominion Wants to Build The Nation's Largest Offshore Wind Farm Near Virginia Beach." *The Virginian Pilot.* Pilotonline.com. https://www.pilotonline.com/business/dp-nw-dominion-offshore-20190919-uuxqtkwkijagxj7sb323vbjgb4-story.html.

[11] Massachusetts Institute of Technology. *The Future of Nuclear Energy in a Carbon-Constrained World.* Energy.mit.edu. http://energy.mit.edu/wp-content/uploads/2018/09/The-Future-of-Nuclear-Energy-in-a-Carbon-Constrained-World.pdf.

[12] Cunliff, Colin. "An Innovation Agenda for Hard-to-Decarbonize Energy Sectors." *Issues in Science and Technology.* Issues.org. https://issues.org/an-innovation-agenda-for-hard-to-decarbonize-energy-sectors/.

[13] National Oceanic and Atmospheric Administration Office for Coastal Management. "Hampton Roads' Sea Level Rise Adaptation Advances on Multiple Fronts." Coast.noaa.gov. https://coast.noaa.gov/states/stories/sea-level-rise-adaptation-advances-on-multiple-fronts.html.

that the cost of infrastructure to combat sea level rise could be up to $3.8 billion.[14] A separate study has found that the cost just of building sea walls in the Hampton Roads area will be over $4.6 billion.[15]

Communities in Coastal Virginia are stepping up to meet this challenge. Norfolk has proposed over $1 billion to fight sea level rise and Virginia Beach plans to spend $450 million in stormwater projects over the next five years.[16] All cities within the region participate in the Hampton Roads Planning District Commission, which is coordinating long-term sea level rise planning through 2100.[17]

Although local communities are doing their part, only the federal government has the resources, expertise, and legal authority to address sea level rise and other climate effects in a comprehensive manner. This Committee should support policies to dramatically increase investment in the Federal Emergency Management Agency (FEMA)'s pre-disaster mitigation funding and consider additional financing solutions such as revolving loan funds for resiliency projects. While these initiatives will involve substantial up-front costs, building resiliency can deliver taxpayers a return of up to six-to-one in averted disaster losses.[18]

The Committee should also consider ways to improve information sharing about sea level rise and recurrent flooding. This could be accomplished by strengthening the mandates of the federal agencies conducting oceanic and sea level rise research, including the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), and FEMA, to ensure that they are effectively sharing data and analysis with local governments and communities threatened by flooding.

Conclusion

I thank the Committee for providing the opportunity for all Members to share solutions and stories of how climate change affects their communities. I look forward to working with the Committee to develop policies that support coastal communities, safeguard our national security, and position the United States to become the world leader of the clean energy economy.

Written Testimony of the Hon. Markwayne Mullin
A Representative in Congress from the State of Oklahoma

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor, Ranking Member Graves, thank you for allowing me to submit my testimony for the record.

The United States is in the middle of an energy renaissance. We are producing more energy in the United States than ever before. At the same time, we are leading the world in carbon emission reduction. This is in part due to the increase of natural gas in our energy mix.

Natural gas paired with renewables like wind and solar is a great way to reduce carbon emissions. In my home state of Oklahoma, which one might normally think of as an oil and gas state, is now the second largest producer of wind energy in the nation. We have plenty of wind and plenty of gas.

Congress is too hasty to pick winners and losers in our energy industry. I believe we need to take an all-of-the-above approach that uses all of resources. However, one type of energy is consistently forgotten about in conversations around Capitol Hill—Renewable Natural Gas.

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[14] Coutu, Peter. "Sea level Rise Could Cost Virginia Beach Billions of Dollars, Study Says." *The Virginian Pilot.* Pilotonline.com. https://www.pilotonline.com/news/environment/article_54a6f7be-19cc-11e9-a249-237d551545f7.html.

[15] Hafner, Katherine. "Seawalls to Fight to Rising Waters in Hampton Roads Would Cost More Than $4.6 Billion, Says Nationwide Study." *The Daily Press.* Dailypress.com. https://www.dailypress.com/news/vp-nw-seawall-cost-0621-20190620-story.html.

[16] Sea Level Rise.org. "Virginia's Sea Level is Rising." Sealevlerise.org. https://sealevelrise.org/states/virginia/.

[17] Hampton Roads Planning District Commission. "Region Adopts Sea Level Rise Planning Policy." Hrpdcva.gov. https://www.hrpdcva.gov/news/article/october/24/2018/region-adopts-sea-level-rise-planning-policy.

[18] National Institute of Building Sciences. "Natural Hazard Mitigation Saves Study." Nibs.com. https://www.nibs.org/page/mitigationsaves.

Renewable Natural Gas (RNG), or biomethane, is captured above ground from organic material in agriculture, wastewater, landfill, or food waste. In simpler terms, this technology takes methane, which is worse for the air than carbon dioxide, cleans and purifies it, and sticks it straight into a natural gas pipeline which can be used for natural gas vehicles, electricity generation, and home heating.

When using RNG it produces a net carbon-neutral and even carbon-negative results.[1] Over the last five years, RNG has increased 577 percent, displacing seven million tons of carbon dioxide equivalent. And unlike wind and solar, this renewable energy is not intermittent. RNG can be produced 24/7.

Some of my colleagues want to support the Green New Deal, whose creators say we need to get rid of cows because of their methane producing flatulence. However, using RNG we take that methane out of the atmosphere and turn it into clean renewable fuel. From cow farts to clean energy—that could be the future.

I urge my colleagues as we look at ways to reduce our emissions, we look at the benefits of all energy sources, including RNG. We need to lead the innovation here in the United States so that we can export our technologies to the world and be a leader in clean and efficient energy.

Written Testimony of the Hon. Robert "Bobby" Scott
A Representative in Congress from the State of Virginia

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chairwoman Castor, Ranking Member Graves and members of the Committee on the Climate Crisis for providing me this opportunity to discuss some of the priorities I believe should be reflected in this Committee's work.

I represent the 3rd congressional district of Virginia where the Chesapeake Bay meets the James, Nansemond, and Elizabeth Rivers, which presents both challenges and opportunities. Our waterways are essential to Virginia and the nation. Hampton Roads is home to the largest naval base in the world, Naval Station Norfolk, the one of the busiest ports on the eastern seaboards, the Port of Virginia and multiple shipyards. The recurrent flooding that we are already living with poses a severe national security risk. With 95 percent of our nation's trade moving by water, it is also essential that the port is able to maintain operations as the waters continue to rise. Our waterways keep our economy moving and the communities that support these operations are already living with the effects of climate change and rising waters.

I had the pleasure of showing Chairwoman Castor around Hampton Roads earlier this year. We heard from state and local elected officials in Virginia who already recognize the significant threat that sea level rise poses and have been working to combat these effects. Unfortunately, the cost to proactively and aggressively address this problem head-on is far too great for any city to bear by itself. While Norfolk and other cities in Hampton Roads have already spent considerable sums of money to study the recurrent flooding issues and implement resilient infrastructure, the shear scope of the project to address the problem will cost billions of dollars and require the federal government to step in and assist.

I encourage you to review the Building Up Infrastructure and Limiting Disasters through Resilience (BUILD Resilience) Act, legislation that I introduced last Congress with Senators Mark Warner and Tim Kaine and that I intend to introduce again soon. The BUILD Resilience Act would establish a competitive grant program for resilient infrastructure investment to bolster the ability of regions, such as Hampton Roads and New Orleans, to implement projects and strategies to reduce regional vulnerability to threats like sea level rise and recurrent flooding. Analyses by the Congressional Budget Office and the Multi-hazard Mitigation Council of the National Institute of Building Sciences estimate that every $1 invested in resilient infrastructure upfront saves $3 to $4 in future losses on the back-end after a major disaster strikes.

As this committee continues to hear and plan for the effects of climate change, I urge you to make federal investments in resilient infrastructure a priority. Investing upfront can help save taxpayers and impacted communities potentially billions

[1] https://www.ngvamerica.org/2019/04/16/renewable-natural-gas-on-road-fuel-reaches-historical-high/.

of dollars in avoided costs. Recognizing the disproportionate risk that climate chaos poses to low-income communities and communities of color, I urge the committee to center equity in such efforts.

Ms. Chairwoman, thank you again for allowing me the opportunity to share my priorities for addressing climate change as we deal with the effects in Hampton Roads. I look forward to working with you to ensure that we put forth policies that effectively deal with the changes we are already seeing.

Written Testimony of the Hon. Haley Stevens
A Representative in Congress from the State of Michigan

Submitted to the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

DEAR CHAIRWOMAN CASTOR, RANKING MEMBER GRAVES, AND MEMBERS OF THE HOUSE SELECT COMMITTEE ON THE CLIMATE CRISIS: Thank you for allowing me this opportunity to provide testimony on the urgent need to address the climate crisis, build out our clean energy infrastructure, and promote our transition to a sustainable 21st Century economy.

In August, I had the honor of hosting Chairwoman Castor for a town hall in Michigan's 11th District to discuss electric vehicles and clean transportation. During the discussion, we heard from a panel of experts who made it clear that encouraging greater production and consumer adoption of electric vehicles is key to hitting our sustainability goals while creating new economic opportunities right here in the United States. As electric vehicle technology proliferates, I urge the Select Committee to ensure that the next generation of automobiles are being built by American workers.

I would also like to urge Members of the Select Committee on the Climate Crisis to promote and encourage the practice of remanufacturing, which is the process by which used products are returned to good-as-new (or better) condition. The International Trade Commission estimates that remanufacturing has already added over 180,000 jobs in the U.S., with an enormous potential for growth. In addition to creating jobs, remanufacturing reduces the strain of industrial processes on the environment and lowers the cost of production for manufacturers. Remanufacturing and comprehensive refurbishment has the potential to reduce greenhouse gas emissions by between 79 percent and 99 percent in appropriate sectors.

Finally, I would like to affirm my strong support for tax incentives to encourage investment and innovation in clean electricity, clean transportation, and energy efficiency. Right now, the U.S. tax system provides permanent subsidies to polluting industries while leaving clean, renewable energy companies in the lurch. We must take advantage of the opportunity to make smart investments in clean energy to help the U.S. reduce carbon pollution and prepare our communities for the damaging effects of rising sea levels, severe weather and catastrophic wildfires.

We need to seize hold of the opportunity to tackle climate change by making major investments in our infrastructure and our workforce, while fostering innovation and job creation. Thank you again for your time and consideration. I hope you will keep these issues in mind as you craft policies to address the threat of global climate change.

Sincerely,

HALEY M. STEVENS,
Member of Congress.

Ms. CASTOR. I recognize myself for 5 minutes for a short opening statement.

I want to thank the Members who have come to speak before us today. Speaker Pelosi created the select committee with a broad but important task: to explore policy solutions to the climate crisis and make recommendations to committees of jurisdiction. We have embraced this charge with all of the seriousness it deserves. We have held 13 hearings and 4 roundtables, held hundreds of in-person stakeholder meetings, and issued a request for information that promises to generate hundreds of comments.

But we want to hear from fellow Members of Congress as well. Although Congress has not considered comprehensive climate legislation in a decade, Members, particularly on the Democratic side, have not been idle. They've been doing the work, meeting with stakeholders, and drafting legislation to cut carbon pollution and make our communities more resilient to the impacts of climate change.

Today will be a good reminder, when it comes to developing national climate policy, we are not starting from a blank sheet of paper.

Thank you all for being here today.

I now recognize the ranking member, if he has any comments. Otherwise, we can get going and hear from our Members.

Mr. CARTER. We can get started.

Ms. CASTOR. Terrific. Thank you, Mr. Carter.

Without objection, members who wish to enter opening statements into the record may have 5 business days to do so.

Now it is time hear from our witnesses. In order to fit in as many Members as we can, all statements should be no longer than 5 minutes, and I request that any questions be as brief as possible. Of course, we will follow up with your staff if we want additional information.

So, Ms. Underwood, you are recognized for 5 minutes. Welcome.

STATEMENT OF THE HON. LAUREN UNDERWOOD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Ms. UNDERWOOD. Thank you, Madam Chair, for providing this opportunity for Members to share their priorities with the Select Committee on the Climate Crisis.

The very existence of this committee is a testament to the urgency of this crisis and the House's commitment to tackling it head-on. I am grateful to come before the committee today to bring attention to the important need for congressional action to address climate change.

The science is clear: We are on an alarming path. Our climate is changing, presenting an existential threat to our environment, our national security, our health, and our economy.

As the country looks to its leaders to take Federal action to address climate change, I am proud to have supported H.R. 9, the Climate Action Now Act, which is the first major climate legislation passed by the House in nearly a decade.

I was honored to continue this effort when I introduced H.R. 3819, the Climate and Health Protection Act, with my colleague and former Secretary for Health and Human Services, Representative Donna Shalala.

As a public health nurse, I fully recognize the adverse impact climate change will have on public health, particularly for the most vulnerable people in our society—pregnant women, children, the elderly, and countless others.

My bill protects the Centers for Disease Control's Climate and Health Program. This program is the only office within the Department of Health and Human Services dedicated to helping State and local governments prepare for the public health consequences of climate change.

Secondly, my bill increases funding for the program to $15 million, which is consistent with the funding provided in the House's fiscal year 2020 appropriations package.

Without the resources and the services provided by the Climate and Health Program, many communities across the country will be left vulnerable and unaware of the devastating health consequences climate change poses. I appreciate the Committee on Energy and Commerce's oversight work on this administration's decision to limit the Climate and Health Program. In addition to continuing that work, we must pass my Climate and Health Protection Act to reinstate and protect this vital program.

It is an honor to represent the people of the 14th District of Illinois, who know that it is long past time to take serious steps to address climate change, or we risk living with life-altering consequences to our health, our economy, and national security.

I have spoken with farmers in my district who have experienced firsthand the impacts of climate change and who are concerned about what it means for our agricultural community. This past spring, Illinois saw historic flooding and other extreme weather events brought on by climate change. With Illinois rivers swelling beyond the flood stage and past record peaks, farmers were not able to plant their crops until well into the spring months.

After hearing the concerns of farmers in the 14th, I felt compelled to protect USDA research data by introducing an amendment to the fiscal 2020 Agriculture appropriations package that would prevent Federal agencies like USDA from removing existing public information about climate change.

Sadly, just weeks after my amendment was passed by the House, new reports exposed the extent of the anti-climate science sentiment at USDA. These reports indicated that USDA leadership took steps to hide scientific findings on the consequences of climate change and the impacts it will have on farmers.

Undermining public discourse of climate change research sets a dangerous precedent which can endanger our national security, food security, and the livelihoods of Illinois farmers and farmers throughout our country.

As you can see, climate change is a front-of-mind issue in my district. And like many others across the country, they are demanding real leadership on this issue from us, their elected representatives. I came to Congress with a mandate from my constituents, and I am committed to ensuring that Congress upholds its responsibilities to communities like mine who are demanding meaningful, long-term solutions to climate change.

We also need to talk about a broad-based approach to climate change. I am excited about forthcoming legislation that would put the United States on a path to have a 100 percent clean economy by 2050.

I look forward to working with you, Chairwoman Castor, and with other members on this committee to advance meaningful legislation during this Congress.

And I yield back.

[The statement of Ms. Underwood follows:]

Testimony of the Hon. Lauren Underwood
A Representative in Congress from the State of Illinois

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Madam Chair, for providing this opportunity for Members to share their priorities with the Select Committee on the Climate Crisis.

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After hearing the concerns of farmers in the 14th District, I felt compelled to protect USDA research data by introducing an amendment to the FY 2020 Agriculture appropriations package that would prevent federal agencies like USDA from removing existing public information about climate change.

Sadly, just weeks after my amendment was passed by the House, new reports exposed the extent of the anti-climate science sentiment at USDA. These reports indicated that USDA leadership took steps to hide scientific findings on the consequences of climate change and the impacts it will have on farmers.

Undermining public disclosure of climate change research sets a dangerous precedent, which can endanger our national security, food security, and the livelihoods of Illinois farmers and farmers throughout the country.

As you can see, climate change is a front of mind issue in my district. And like many others across the country, they are demanding real leadership on this issue from us—their elected representatives.

I came to Congress with a mandate from my constituents, and I am committed to ensuring Congress upholds its responsibility to communities like mine who are demanding meaningful, long-term solutions to climate change.

We also need to talk about a broad-based approach to climate change. I am excited about forthcoming legislation that would put the United States on the path to have a 100% clean economy by 2050.

I look forward to working with you, Chairwoman Castor, and with other members of this Committee to advance meaningful legislation during this Congress.

Ms. CASTOR. Well, thank you very much.

I know you are aware of what Harvard University and other researchers released today about the impact of extreme temperatures on children——

Ms. UNDERWOOD. That is right.

Ms. CASTOR [continuing]. Particularly on their public health. So I think your expertise in this area is going to be invaluable to the committee as we move forward. So thank you.

Are there any questions from the panel?

Thank you, Ms. Underwood.

Ms. UNDERWOOD. Thank you for your time.

Ms. CASTOR. So, Chairwoman McCollum, you have been a leader for many years on these issues. You are welcome to provide your testimony for 5 minutes.

STATEMENT OF THE HON. BETTY MCCOLLUM, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Ms. MCCOLLUM. Thank you. Thank you, Madam Chair and Ranking Member. Thank you for the opportunity to allow Members to testify today.

As the chair of the Interior and Environment Appropriations Subcommittee, I believe we have a shared responsibility to work together for the American people to combat climate change and reduce pollution, both through policy recommendations and funding.

I would also like to thank the committee for giving young climate leaders, policy specialists, business leaders, and State and local officials the opportunity to provide input on the climate crisis. I have heard firsthand in Minnesota how excited they are to be able to participate in this way.

Climate change is real and is affecting people all over the world, in every part of their lives. Recently, I was in Malawi with the U.S. Forest Service and witnessed firsthand the impacts of climate change in the southern part of Africa.

This is an issue that Congress cannot solve alone, nor can one committee do it alone. Changing the course of the climate crisis will require all of us to step up and take action. We all know that climate change will have devastating effects on economic inputs, from agriculture to healthcare to infrastructure, and we need to be making the Federal investments now to understand and address and adapt to climate change.

That is why I am here today to talk about prioritizing funding for climate change. Why? Because climate change is dynamic and is impacting our lives all over this planet. This is why the House invested in expanding climate research and protecting our public lands and our natural resources. By doing this, we will ensure that Americans will not only have clean air and clean water today but for generations to come.

It is critical that the Federal agencies funded throughout the Interior bill receive adequate support to carry out the policies recommended by this committee. Our path forward will also need to

include investments throughout the Federal Government. These investments will help to mitigate the worst effects of climate change but also help communities to adapt to the impacts we are already seeing, like rising sea levels and the wildland fires that are so devastating in California.

As vice chair of the Defense Appropriations Subcommittee, I know that climate change is one of the most forefront national security threats of our time. A report released in January from the Pentagon laid out the stark reality we face from our changing climate. Two-thirds of our military's operationally essential installations are threatened by climate change. And as the Department considers where to spend military construction dollars or bases for our most valuable assets, climate change must inform every decision that they are making. Simply put, the cost of inaction on climate change is already having a staggering impact on our national security.

In order to halt the acceleration as well as to adapt to climate change, we need to fund and protect sound scientific research within the Federal Government. It is no secret that scientific research is constantly under attack from the Trump administration. Under President Trump, for example, we have seen the rules change to favor industry domination over EPA scientific panels. We need to make smart decisions based on science, not politics. As this administration continues to push an anti-science agenda, Congress must do more to protect our scientific institutions.

What is most important is that we know that these policies that you are going to come up with come with a price tag. And I believe every appropriations bill should include a line on what agencies and departments need to do to combat climate change, mitigate the effects that we are already seeing, and establish resiliency.

And so that is my ask, Madam Chair. It is crucial that we ensure that the Federal Government has the resources necessary to carry out the work.

As chair of the Interior Appropriations Subcommittee, I will continue to prioritize to address climate change and building resiliency into our fragile ecosystems, and restore funding for our programs that have suffered deep cuts under previous Congresses, and to conduct the oversight necessary to hold the Trump administration and any other future administration accountable for their climate change actions or denials.

So, to the chair and the ranking member, I want to thank you so much for the time. I look forward to working with you together in the 116th Congress.

And, Madam Chair, with your permission, I would like to enter in for the record and for you the "Report on Effects of a Changing Climate" from the Department of Defense from January 2019.

[The information follows:]

Submission for the Record
Representative Kathy Castor
Select Committee on the Climate Crisis
November 14, 2019

ATTACHMENT: *Report on Effects of a Changing Climate to the Department of Defense.* Office of the Under Secretary of Defense for Acquisition and Sustainment, 2019.

This report is retained in the committee files and available at: https://media.defense.gov/2019/Jan/29/2002084200/-1/-1/1/CLIMATE-CHANGE-REPORT-2019.PDF.

Ms. MCCOLLUM. And I think you will find it invaluable reading. I know your State is impacted by many of these decisions.

Thank you.

[The statement of Ms. McCollum follows:]

Testimony of the Hon. Betty McCollum
A Representative in Congress from the State of Minnesota

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chair Castor, Ranking Member Graves thank you for providing the opportunity for Members to testify today.

As Chair of the Interior and Environment Appropriations Subcommittee, we have a shared responsibility to work together for the American people to combat climate change and reduce pollution through both policy recommendations and federal funding.

I would also like to thank the Committee for giving young climate leaders, policy specialists, business leaders, and state and local officials the opportunity to provide input on the climate crisis. I have contacted many stakeholders in my district, and throughout Minnesota, who are excited about the committee's invitation to submit public statements.

Climate change is real and affecting people all over the world, in every part of their lives. I recently was in Malawi with the U.S. Forest service and witnessed firsthand the varying impacts of climate change around the globe. This is an issue which Congress cannot solve with one Committee alone. Changing the course of the climate crisis will require all of us to step up and take action. We know that climate change will have devastating economic impacts from agriculture to healthcare to infrastructure. We need to be making federal investments now to understand, address, and adapt to climate change.

We must prioritize funding for climate change. Why? Because climate change is dynamic in all the ways it impacts our planet. That's why the House invested in expanding climate research and protecting our public lands and natural resources. By doing this, we will ensure that Americans will have clean water and air not only today but for generations to come. It is critical that the federal agencies funded through the Interior Bill receive adequate support to carry out the policies recommended by this committee.

Our path forward will also need to include investments throughout the federal government. These investments will help to mitigate the worst effects of climate change, but also help communities to adapt to impacts we are already seeing like rising sea levels and the devastating wildfires in California.

As Vice Chair of the Defense Appropriations Subcommittee, I know that Climate change is one of the foremost national security threats of our time. A report released in January from the Pentagon laid out the stark reality they face from our changing climate. Two-thirds of our military's operationally essential installations are threatened by climate change. As the Department considers where to spend military construction dollars or base our most valuable defense assets, climate change must inform every decision they make. Simply put, the cost of inaction on climate change has already had a staggering impact on our national security.

In order to effectively slow and adapt to climate change, we need to fund and protect sound scientific research within the federal government. It is no secret that scientific research is constantly under attack from the Trump Administration.

Under President Trump, for example, we have seen the rules change to favor industry domination on EPA's scientific panels. We need to make smart decisions that are based on science, not politics. As this Administration continues to push an anti-science agenda, congress must do more to protect our scientific institutions.

I look forward to working with this Committee and the authorizing committees on legislation that protects government scientists and invests in research. Scientific integrity is vital to address the serious challenges climate change poses to our natural and cultural resources, ecosystems, and human health.

Action on climate change is at a critical crossroads. The purpose of this Committee is to develop policies that will provide us the best chance at saving our planet for future generations. But it is important to note that these policies come with a price tag. I believe every Appropriations Bill should include a line item on what agencies and departments need to do to combat climate change, mitigate the effects we are already seeing, and establish resiliency. It is crucial we ensure the federal government has the resources necessary to carry out that work. As Chair of the Interior Appropriations Subcommittee, I will continue to prioritize funding to address climate change and build resiliency in our fragile ecosystems, restore funding for programs that have suffered deep cuts in previous Congresses, and conduct the oversight necessary to hold the Trump administration accountable for their climate denial.

Chair Castor, I thank you for the time, and I look forward to working as the 116th Congress moved forward.

Ms. CASTOR. Well, thank you, Chairwoman McCollum.

Your leadership on the Interior Subcommittee of Appropriations and the entire Appropriations Committee will be invaluable going forward. Already, the appropriations bill passed this term by the House is very impactful when it comes to climate policies, and I thank you. And I heard you loud and clear on your recommendation that every appropriations bill from this point forward should have some sort of analysis going forward for agencies.

And thank you, as well, for your attention to our military installations and to make sure that they are resilient and we are able to address these issues going forward.

Mr. Casten, do have you any questions or comments?

Mr. Griffith.

Mr. GRIFFITH. No.

Ms. CASTOR. Thank you, Chairwoman McCollum.

Speaking of defense experts and champions, Mrs. Davis, you are recognized for 5 minutes.

STATEMENT OF THE HON. SUSAN DAVIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mrs. DAVIS of California. Thank you very much, Chairwoman Castor, Ranking Member Griffith, and members of the select committee. It is a pleasure to join you today and discuss what we know is the biggest challenge of our time, climate change.

I am glad the select committee is meeting today to take testimony on this very important issue and pleased to be part of the conversation. After successful passage of H.R. 9, the Climate Action Now Act, I am looking forward to what the select committee will develop with multiple levels of input, and I appreciate the fact that you are doing that.

As we have seen, there is no simple solution. Not only do we have to consider how we mitigate the impacts of climate change, we also have to come up with a plan to adapt to future changes.

How do we create a sustainable commitment to reduce carbon emissions and plan for the future?

One place I have looked is my hometown of San Diego. San Diego enacted its own climate action plan to eliminate half of all greenhouse gas emissions in the city by 2035 and develop an adaptation and resiliency plan for future impacts. The plan includes a number of policies, but I am just going to focus on two areas, which are transportation and developing resiliency plans.

And I might mention, Madam Chair, you mentioned our military. On many levels, they have taken the lead in San Diego, working with their bases and with other communities. But I am going to put that aside right now and just talk about what the city of San Diego has done.

Transportation is the largest source of emissions in the United States, accounting for 29 percent of manmade greenhouse gas emissions in the United States. To address this, we will need more fuel-efficient vehicles, of course, more alternative fuels with less carbon content, and we will simply have to drive less.

As automakers develop more economical electric and alternative-fuel vehicles, we will need to ensure that we have the infrastructure available to accommodate them. Research shows that electric vehicles lack adequate infrastructure despite surging demand in recent years, and we must fix that.

Beyond infrastructure, the Federal Government must play a major role in promoting cleaner modes of transportation. In San Diego, for example, the city's climate action plan includes changing policy to have a majority of the city's fleet be electric vehicles. Similarly, we should move forward with the transition of vehicle fleets of Federal agencies to electric vehicles, hybrid-electric vehicles, or alternative-fuel vehicles.

According to the Government Services Administration, what we know as GSA, the Federal Government owns or leases over 640,000 vehicles across all agencies, at a cost of $814 million in fuel costs in a single year. With a proper transition plan and achievable benchmarks, this is one area where we could certainly help reduce our carbon footprint.

Last, we should make matching funds available for communities that want to build infrastructure for bicycling and public transport. This would certainly reduce how much time we spend in our vehicles.

As I mentioned earlier, we will also have to think critically about developing resiliency plans. Many parts of the country are already seeing the effects of climate change—record-breaking fires in California, historic floods in the Midwest, and hurricanes along the East Coast. These events, as we know, are becoming more frequent and more intense. And yet we continue to build and rebuild in areas that are prone to climate-change-related hazards. We see it every year in California and across the country.

But we don't have to wait for disasters to develop a resilience plan. We need to improve building codes and land-use practices and consider the future impact of climate change rather than relying solely on the historical record. We also need to include the development of resilience in building plans, build more resilient infra-

structure, and work towards restricting sprawl and increasing density.

San Diego is currently in the process of developing a climate resiliency plan to address climate-change-related vulnerabilities across our city and look at developing adaptation measures to improve the city's resilience to climate hazards.

It is time. It is time that we do that, too, as a Nation. We must look at how we build that resilience. Because more disasters are sure to come, and they will be costly. We are currently appropriating hundreds of millions of dollars to rebuild after each hundred-year storm or record-breaking wildfire. We should consider making funds for repairs and reconstruction after disasters contingent on the development of adaptation and resiliency plans. It is an important message to send to our communities.

Ultimately, Congress must play a role in making more resilient cities a reality by building on existing legislation.

I would like to thank you again for giving me the opportunity to be part of this important conversation. Thank you.

[The statement of Mrs. Davis of California follows:]

Testimony of the Hon. Susan Davis
A Representative in Congress from the State of California

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor, Ranking Member Graves, and Members of the Select Committee, it is a pleasure to join you today to discuss what we know is the biggest challenge of our time—climate change.

I am glad the Select Committee is meeting today to take testimony on this very important issue and I am pleased to be part of the conversation.

After successful passage of H.R. 9, the Climate Action Now Act, I am looking forward to what the Select Committee will come up with next.

NEED TO ACT ON CLIMATE CHANGE

As we have seen, there is no simple solution.

Not only do we have to consider how we mitigate the impacts of climate change, we also have to come up with a plan to adapt to future changes.

How do we create a sustainable commitment to reduce carbon emissions and plan for the future?

One place I have looked is my hometown—San Diego.

San Diego enacted its own Climate Action Plan to eliminate half of all greenhouse gas emissions in the city by 2035 and develop an adaptation and resiliency plan for future impacts.

The plan includes a number of policies. However, two areas I would like to focus on today are transportation and developing resiliency plans.

TRANSPORTATION

Transportation is the largest source of emissions in the United States, accounting for 29% of man-made greenhouse gas emissions in the United States.

To address this, we will need more fuel-efficient vehicles, more alternative fuels with less carbon content, and we will simply have to drive less.

As automakers develop more economical electric and alternative-fuel vehicles, we will need to ensure that we have the infrastructure available to accommodate them.

Research shows that electric vehicles lack adequate infrastructure, despite surging demand in recent years. We must fix that.

Beyond infrastructure, the federal government must play a major role in promoting cleaner modes of transportation.

In San Diego, for example, the city's Climate Action Plan includes changing policy to have a majority of the city's fleet be electric vehicles.

Similarly, we should move forward with a transition of vehicle fleets of federal agencies to electric vehicles, hybrid electric vehicles, or alternative fuel vehicles.

According to the Government Services Administration (GSA), the federal government owns or leases over 640,000 vehicles across all agencies at a cost of $814 million in fuel costs in a single year.

With the proper transition plan and achievable benchmarks, this is one area where we could certainly help reduce our carbon footprint.

Last, we should make matching funds available for communities that want to build infrastructure for bicycling and public transport.

This would help reduce how much time we spend in our vehicles.

BUILDING BETTER, MORE RESILIENT CITIES

As mentioned earlier, we will also have to think critically about developing resiliency plans.

Many parts of the country are already seeing the effects of climate change: record-breaking fires in California, historic floods in the Midwest, and hurricanes along the east coast.

These events are becoming more frequent and more intense and yet we continue to build and rebuild in areas that are prone to climate change-related hazards.

We see it every year in California and across the country. But we don't have to wait for disasters to develop a resilience plan.

We need to improve building codes and land use practices and consider the future impact of climate change rather than rely solely on the historical record.

We also need to include the development of resilience in building plans, build more resilient infrastructure, and work towards restricting sprawl and increasing density.

San Diego is currently in the process of developing a climate resiliency plan to address climate change-related vulnerabilities across the city and develop adaptation measures to improve the city's resilience to climate hazards.

It's time that we do that too—as a nation—because more disasters are sure to come and they will be costly.

We are currently appropriating hundreds of millions of dollars to rebuild after each hundred-year storm or record-breaking wildfire.

We should consider making funding for repairs and reconstruction after disasters contingent on the development of adaptation and resiliency plans.

Ultimately, Congress must play a role in making more resilient cities a reality by building on existing legislation.

I would like to thank you again for giving me the opportunity to be a part of this important conversation.

And I will look forward to your recommendations.

Ms. CASTOR. Thank you, Representative Davis, for your insightful testimony, particularly about the leadership efforts from San Diego.

Any questions from the members?

Thank you.

Ms. CASTOR. Welcome, Congresswoman Barragán. I know, as my colleague from the Energy and Commerce Committee, you have been a leader when it comes to clean energy. You are recognized for 5 minutes.

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

Ms. BARRAGÁN. Thank you, Madam Chairwoman and the ranking member and members of the committee, for the opportunity to testify here today in front of the select committee.

From sea-level rise to the location of power plants, to fossil-fuel extraction, to the urban heat-island effect, the inequities from our energy system and who bears its consequences are everywhere. People of color are on the front lines of this issue. We are hit first

and worst. We need a climate bill that rises to the scale of both the climate crisis and the damage from environmental racism that impacts my district and the districts like it across the country.

The best way for us to understand these challenges and how to overcome them is to meet environmental justice communities where they are. Not everyone can make it here to Washington, D.C., for a hearing or a meeting with their Representative. I appreciate that the select committee has conducted a field hearing in Boulder, Colorado, on local and State solutions, and, going forward, I want to encourage to you prioritize field hearings in EJ communities.

In particular, I have a couple of ideas for field hearings in my very district, in south Los Angeles, that could both illuminate our local challenges and provide useful information for Federal climate policy that can address these kinds of issues across the country.

One possibility is to hold a field hearing with the Port of Los Angeles and community environmental leaders in my district. We have one of the most ambitious ports in the country when it comes to reducing emissions. At the same time, the port is a significant source of air and climate pollution. And environmental groups in my district have strong views on the best paths forward for the port to achieve zero emissions as quickly as possible.

These are challenges that face ports throughout the country, so we could apply what is learned there to different parts of the country and incorporate it into any legislation.

An additional possibility is a hearing on a just transition away from fossil fuels and what it means for communities like mine. We deal with pollution from oil refineries and ongoing urban oil drilling right in people's backyards, which has a direct impact on the quality of the air we breathe. At the same time that the fossil-fuel industry has a disproportionate footprint in minority communities and those that are low-income, these industries often provide jobs, including union jobs, to my constituents. As we work to unwind the fossil-fuel economy, we need insights on how to provide for a just transition for workers in the fossil-fuel industry.

I would welcome the opportunity to work with the select committee on these and other ideas for a field hearing in my district as part of the process for crafting climate solutions that leave no community behind.

Thank you again for the opportunity to testify today.

[The statement of Ms. Barragán follows:]

Testimony of the Hon. Nanette Diaz Barragán
A Representative in Congress from the State of California

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Good afternoon, thank you for providing members of Congress with the opportunity to address the Select Committee on Climate Change.

From sea level rise, to the location of power plants, to fossil fuel extraction, to the urban heat island effect, the inequities from our energy system and who bears

its consequences are everywhere. People of color are on the front line of this issue. We are hit first and hit worst.

We need a climate bill that rises to the scale of both the climate crisis, and the damage from environmental racism that impacts my district, and the districts like it across the country. The best way for us to understand these challenges, and how to overcome them, is to meet environmental justice communities where they are. Not everyone can make it down to DC for a hearing or a meeting with their representative.

I appreciate that the select committee has conducted a field hearing in Boulder, Colorado on local and state solutions, and going forward I want to encourage you to prioritize field hearings in EJ communities. In particular, I have a couple of ideas for field hearings in my district that could both illuminate our local challenges and provide useful information for federal climate policy that can address these kinds of issues across the country.

One possibility is a hearing on a just transition away from fossil fuels, and what that means for communities like mine. We deal with pollution from oil refineries and ongoing urban oil drilling, which has a direct impact on the quality of the air we breathe. At the same time that the fossil fuel industry has a disproportionate footprint in minority communities, these industries often provide jobs, including union jobs, to my constituents. As we work to unwind the fossil fuel economy, we need insights on how to provide for a just transition for workers in the fossil fuel industry.

An additional possibility is to hold a field hearing with the Port of Los Angeles and community environmental leaders in my district. We have one of the most ambitious ports in the country when it comes to reducing emissions. At the same time, the port is a significant source of air and climate pollution and environmental groups in my district have strong views on the best path forward for the port to achieve zero emissions as quickly as possible. These are challenges that face ports throughout our country.

I would welcome the opportunity to work with the Select Committee on these or other ideas for a field hearing in my district, as part of the process for crafting climate solutions that leave no community behind.

Thank you.

Ms. CASTOR. Thank you very much.

You are absolutely right. We have to ensure, as we are developing policies to tackle the climate crisis going forward, that we do not leave folks on the front lines behind and that environmental justice policies are incorporated in everything that we recommend to the congressional committees. And I think the committee would look forward to a trip to your district and to examine these issues.

Mr. Griffith, do have you any questions?

Mr. GRIFFITH. I do have a comment. I also agree that we need to make sure we don't leave communities behind.

I represent a coal-producing district. And, you know, if we are going to reinvent the economy, as people often suggest to us, we are going to need road money and we are going to need other moneys to help us reinvent an economy that for over a hundred years has been reliant exclusively or predominantly on coal. And I appreciate your comments on that.

Ms. CASTOR. Mr. Casten.

Thank you. Next up is Congressman Lieu from California.

Welcome. You are recognized for 5 minutes.

STATEMENT OF THE HON. TED LIEU, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. LIEU. Thank you. Thank you, Chairwoman Castor, the ranking member, and members of the committee, for allowing me to testify before you today.

I am here to urge you to support two bills I have introduced: H. R. 330, the Climate Solutions Act; and H. R. 2360, the Renewable Energy for Puerto Rico and the U.S. Virgin Islands Act.

I believe that climate change is the greatest existential threat to humankind. In recent years, the dangers of climate change have become increasingly clear. According to the National Oceanic and Atmospheric Administration, the last 5 years have been the hottest on record, with July 2019 being the hottest month in recorded history.

These records have severe consequences. In 2018, the U.S. experienced several major weather disasters, resulting in 245 lives lost and $91 billion of damages. And we can see the climate crisis unfolding before our very eyes in districts we all represent. Last year, wildfires, including the Woolsey Fire in my congressional district, tore through California, making it the most destructive fire season on record. This year, we saw additional fires in my district, including the Palisades Fire and the Getty Fire. At the same time, communities throughout the country are dealing with hurricanes, flooding, and other extreme weather events.

That is why I introduced the Climate Solutions Act. When I was in the California State legislature, I was a co-author of AB 32, California's landmark Global Warming Solutions Act. The reason that I thought that law did well was we didn't set out and say, hey, here are 951 things we want you to do to mitigate climate change. Instead, we set a goal, and then we directed an agency to get us to that goal and gave that agency the power to take us there. So we set a goal of pre-1990 levels of greenhouse gases by 2020, and we gave the California Air Resources Board the power to take us there. My legislation is similar. It sets goals, and then it directs the EPA and the Department of Energy to take us there.

And so, first, the bill sets out a national renewable energy standard to drive us towards 100-percent renewable energy by 2035. Next, it creates a stringent national energy efficiency standard to reduce energy usage and to save consumers money. And, finally, the legislation sets ambitious greenhouse-gas emission targets to reduce emissions to 80 percent below 1990 levels by 2050.

The proposal has nearly two dozen Members of Congress who have co-sponsored it, and I respectfully request that you consider it as well.

And the second bill I would like to talk about is the Renewable Energy for Puerto Rico and the U.S. Virgin Islands Act.

We know that two hurricanes struck Puerto Rico, Maria and Irma, as well as the U.S. Virgin Islands, cutting off access to power for most communities on the island. Without electricity, critical sites such as hospitals and wastewater treatment plants became inoperable, local businesses closed, and performing regular tasks became nearly impossible.

It remains clear that we have a unique and necessary opportunity to empower local communities in Puerto Rico and the U.S. Virgin Islands to build up renewable energy systems that would remain operable after storms.

Under this act, the legislation would establish a program at the U.S. Department of Agriculture to award grants to not-for-profit organizations for the purposes of developing renewable energy sys-

tems in local communities. The funds may also be used to improve energy efficiency and battery storage and to train local residents.

And, finally, the bill will require the Government Accountability Office to conduct a study on renewable energy and energy efficiency in Puerto Rico and the U.S. Virgin Islands.

This proposal has the support of Representative González-Colón of Puerto Rico, Representative Stacey Plaskett of the U.S. Virgin Islands, and Representative Raúl Grijalva, the chairman of the Natural Resources Committee. And I respectfully request that you consider this legislation as well.

Again, thank you for having me here, and look forward to working with you as we tackle the issue of climate change.

[The statement of Mr. Lieu follows:]

Testimony of the Hon. Ted W. Lieu
A Representative in Congress from the State of California

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor and Ranking Member Graves, thank you for allowing me to testify. Today, I am here to urge you to support two bills I have introduced: H.R. 330, the Climate Solutions Act and H.R. 2360, the Renewable Energy for Puerto Rico and the U.S. Virgin Islands Act.

I believe that climate change is the greatest existential threat to humankind. In recent years, the dangers of climate change—and the need to address it—have become increasingly clear. According to the National Oceanic and Atmospheric Administration, the last five years have been the five hottest on record with July 2019 being the hottest month in recorded history. These records have severe consequences. In 2018, the U.S. experienced several major weather disasters resulting in 247 lives lost and $91 billion in damages.

Beyond these numbers, we can see the climate crisis unfolding before our eyes. Last year, wildfires, including the Woolsey Fire in my congressional district, tore through California making it the most destructive fire season on record. This year, we've seen similar apocalyptic images of fires in the West. At the same time, communities throughout the country are dealing with hurricanes, flooding, and other extreme weather events.

H.R. 330, The Climate Solutions Act

Last October, the International Panel on Climate Change found that limiting temperature increases to 1.5 °C above pre-industrial levels by the end of the century requires a decrease in carbon emissions to 45 percent below 2010 levels by 2030. The urgency of these numbers demands bold action from Congress. That is why I introduced a strengthened Climate Solutions Act to comprehensively address the climate crisis. First, the bill sets out a National Renewable Energy Standard to drive us towards 100 percent renewable energy by 2035. Next, it creates a stringent National Energy Efficiency Standard to reduce energy usage and save consumers money. Finally, my legislation sets ambitious greenhouse gas emissions targets to reduce emissions to 80 percent below 1990 levels by 2050. This proposal has the support of nearly two dozen of our colleagues in Congress and I'd ask you to support it.

H.R. 2360, Renewable Energy for Puerto Rico and the U.S. Virgin Islands Act

In 2017, Hurricanes Maria and Irma struck Puerto Rico and the U.S. Virgin Islands cutting off access to power for most communities on the island. Without electricity, critical sites such as hospitals and wastewater treatment plants became inoperable, local businesses closed, and performing regular tasks became nearly impossible. It remains clear that we have a unique and necessary opportunity to empower local communities in Puerto Rico and the U.S. Virgin Islands to build up renewable energy systems that will remain operable after storms.

That is why I introduced the Renewable Energy for Puerto Rico and the U.S. Virgin Islands Act. This legislation will establish a program at the U.S. Department of Agriculture to award grants to not-for-profit organizations for the purposes of developing renewable energy systems in local communities. The funds may also be used to improve energy efficiency and battery storage and to train local residents. Finally, the bill will require the General Accountability Office to conduct a study on renewable energy and energy efficiency in Puerto Rico and the U.S. Virgin Islands. This proposal has the support of Representative González-Colón of Puerto Rico, Representative Stacey Plaskett of the U.S. Virgin Islands, and Representative Raúl Grijalva, the Chairman of the Natural Resources Committee.

Conclusion

H.R. 330 and H.R. 2360 will prove critical to reducing greenhouse gas emissions to address the climate crisis and help communities devastated by extreme weather events build back in a more resilient manner. I urge you to include these bills in your final report to the standing committees.

Thank you again for the opportunity to testify before you.

Ms. CASTOR. Well, thank you very much, Mr. Lieu.

The committee does intend to delve into lessons learned from climate action in California, so your insight and your legislation will be very helpful as we move forward. So thank you very much.

Mr. LIEU. Thank you.

Ms. CASTOR. I have, just so you know, on my—oh, Mr. Casten, you are recognized.

Mr. CASTEN. So, number one, I want to absolutely echo your point that we need to be goal- rather than path-focused. I think all of our best environmental regulations followed that.

A question for you to consider and maybe submit comments afterwards, if you can, is: In thinking about places like California that have been well ahead of the Federal Government, how can we roll out Federal policy that is maximally synergistic with what has been done in the States? Maybe push them to do more, but we are going to be rolling out these policies in the context of AB 32 and RGGI and all these other programs, and I think we need to put some thought into how to make sure that those fit with those existing State programs.

I welcome your thoughts.

Mr. LIEU. Yes. So thank you for that question. We need to make sure we don't preempt States that have gone further and have innovated. At the same time, there are a lot of States that have done virtually nothing. And so we do need to bring up all of the States to an area where we are dealing with tackling climate change.

One of the reasons I ran for Congress, it was clear to me that California could go dark tomorrow, do no energy use whatsoever, and it wouldn't change many things. Because what we need is the rest of America to do what California has done and then the rest of the world to do what America will do, and then we have a shot at combating climate change.

So we need to make sure we don't preempt what States have already been doing but still set standards that will make a difference.

Thank you.

Ms. CASTOR. Thank you very much.

Mr. LIEU. Thank you.

Ms. CASTOR. All right. Congresswoman Bustos, you have been very outspoken particularly when it comes to solutions in agri-

culture. We look forward to hearing your testimony. You are recognized for 5 minutes.

STATEMENT OF THE HON. CHERI BUSTOS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mrs. BUSTOS. All right, very good. Thank you, Chairwoman Castor, for your leadership on this, and certainly appreciate the opportunity to be in front of the Select Committee on the Climate Crisis.

This is literally what I see as one of the most complicated challenges that our Nation and our world are facing today. As the national and global conversation continues, I want to be sure to bring the perspective of the region that I represent, the center of the country, and the solutions that we think we can bring forth to help address the climate debate.

So I want to give you a little bit of background on the district I serve first. Seven thousand square miles. Covers the entire northwest corner of the State of Illinois. Sixty percent of the towns in the congressional district I serve are 1,000 people or fewer. Eighty-five percent of the towns are 5,000 people or fewer. We have 9,600 farms. And the entire western border is the biggest inland navigable waterway in the world, the Mississippi River.

So, this past spring, we saw up close and personal what the climate crisis means, especially to our family farmers. We had historic flooding, where the Illinois River and the Mississippi River didn't just rise once but would go down and would rise again, and just historic flooding, where our growers and our producers literally had to apply in record numbers for what is called "prevent plant" because they couldn't even plant their soybean fields and their cornfields because of the massive flooding that we were experiencing.

So we wanted to make sure that we produced something to this committee that would show that we want to be part of the solution, in the middle part of our country. We want to have a seat at the table, and we want to make sure there is an understanding of what we are facing. So this is a matter of saying that rural America, we have some answers.

And what we have done is we put together a proposal that we call the—gosh, it is pretty bad that I don't have that right in front of me—the Rural Green Partnership. The Rural Green Partnership. So it is a set of policies that work with Federal, local, and State governments, producers, businesses, labor organizations, other stakeholders, to lower the greenhouse emissions and really look at every economic sector of rural America.

So, with each of these policies, it is designed to basically lift up our region and empower the enormous potential that we see in rural America. So just a few examples that I wanted to share with you this afternoon.

So we look at things like sequester carbon and soils, vegetation, forests; grow and produce biofuels in renewable products; capture carbon dioxide and store it deep underground, where it can be put for beneficial use; the building of wind farms and solar fields on a large scale, because we have so much open land; and employ the wealth of technical training schools, community colleges, Tribal colleges, land grant and other universities; work with organized labor,

apprenticeship programs, research facilities, and prepare our workforces to create thousands of good-paying jobs and boost our local economies.

So we see this as tackling the climate crisis as a moral and economic imperative. And I hope that your special committee will take a look at this and make sure that rural America has a seat at the table and sees us as part of the solution.

I want to thank you for the opportunity to be here with you today. And I know we have a little bit more time. I am happy to answer any questions about this, if have you any.

[The statement of Mrs. Bustos follows:]

Testimony of the Hon. Cheryl "Cheri" Bustos
A Representative in Congress from the State of Illinois

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chairwoman Castor and Ranking Member Graves for giving me the opportunity to share my policy recommendations for addressing the climate crisis.

Climate change may very well be the most complicated challenge our nation, and the world, has ever faced.

As the national and global conversation continues, I want to be sure to bring the perspective of the region I represent—the center of the country—and what we can offer to the climate change debate.

Illinois' 17th Congressional District spans 7,000 square miles.

85% of the towns in my district are 5,000 people or fewer, and 60% are 1,000 people or fewer. There are 9,600 family farms, and along the western border is the largest navigable inland waterway in the world—the Mississippi River.

And this past spring, my district experienced the effects of climate change firsthand. From historic flooding to unpredictable weather, the growers and producers in my district struggled to plant, grow and harvest their crops.

But it is more than just our farmers, these challenges impact every aspect of my region.

Witnessing this, I decided to submit the Rural Green Partnership to this Committee. The Rural Green Partnership is a framework of principles and policies to both combat climate change and spur economic growth.

It brings rural America to the table of the climate debate, a conversation that we've too often been left out of—or worse—simply blamed for.

Specifically, it details a set of policies that work with federal, local and state governments, producers, businesses, unions, non-governmental organizations and other stakeholders to lower greenhouse gas emissions in every economic sector of rural America.

And each of these policies is designed to bring to the table what our region of the country offers. It truly empowers and lifts up the enormous potential of rural America.

Because rural America can . . .

- Sequester carbon in soils, vegetation and forests
- Grow and produce biofuels and renewable products
- Capture carbon dioxide and store it deep underground or put it to beneficial use
- Build wind farms and solar fields on a large scale
- And employ its wealth of technical training schools, community colleges, tribal colleges, land grant and other universities, union registered apprenticeship programs and research facilities to prepare our workforce, create thousands of good-paying jobs and boost our local economies.

Tackling the climate crisis is both a moral and economic imperative. I urge my colleagues to make sure rural America is included in any conversation about our path forward.

Thank you for this opportunity, and I yield back the remainder of my time.

Ms. CASTOR. Well, thank you, Congresswoman Bustos.

You know, since you released your Rural Green Partnership policy proposals, it has been quite interesting, because I have seen a lot of folks in the ag industry and from rural America kind of rallying around these type of ecosystem solutions, solutions for the land—as you highlighted, sequestering carbon.

What we need now, we need to hear from a lot of those experts as we develop the policy proposals, put a little more meat on the bones. A lot of the land grant universities are ready to step up and help. So help us spread the word through our request for proposal that is out on the street to use your leadership position now to tap that expertise across rural America to help us develop those kind of solutions.

Mrs. BUSTOS. Well, we are happy to help you with that in any way possible, and really appreciate the opportunity to present this to you today. Thank you, Chairwoman.

Ms. CASTOR. Thank you very much. Terrific.

Next is the co-founder of the Climate Solutions Caucus, also the co-chair. I want to thank my colleague from Florida, Congressman Ted Deutch, for his leadership on climate change throughout his career.

Congressman, you are recognized for 5 minutes.

STATEMENT OF THE HON. TED DEUTCH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. DEUTCH. Thank you, Chairwoman Castor, Mr. Griffith. It is wonderful to be here. Thanks for holding this Member Day.

Imagine walking outside to a beautiful, sunny south Florida day, the sort of weather that attracts visitors to the Sunshine State. It is the backbone of our economy. Imagine strolling down Las Olas Boulevard in Fort Lauderdale under cloudless skies—and yet standing in water up to your ankles. Rising seas make sunny-day flooding a regular occurrence in south Florida. The South Florida Sun-Sentinel labeled October's annual king tides the time of year when fish swim in the streets.

For my constituents, climate change is already a part of their daily lives. Americans around the country are experiencing their own climate impacts today. Rushing flood waters, stronger storms, brutal droughts, sprawling wildfires won't discriminate between Republican or Democratic households.

These impacts inspired me and Congressman Francis Rooney to introduce the bipartisan Energy Innovation and Carbon Dividend Act. That is H.R. 763.

Our proposal would finally put a price on carbon. For too long, damaging carbon emissions have been left off the balance sheets of the world's largest polluters. Instead, we are all paying the price. That is why we need a market-driven solution that will get us to zero emissions.

Last month, the International Monetary Fund called carbon pricing the single most powerful and efficient tool to reduce emissions. The IMF called for a $75-per-ton fee by 2030. Our bill gets there by 2026. We start at a modest $15 per ton assessed on fossil fuels at the source—at refineries, at mines, and pipelines. But the price quickly ratchets up, $10 per year.

Putting a price on carbon will send a bright signal across the economy that it is time to switch to a clean-energy economy. It will drive clean-power innovations that make business sense as much as they make climate sense.

The big question is, where does the money go? One hundred percent goes back to the American people as a monthly dividend check. We have seen what happens when carbon fees hit consumers directly and the revenue is then used for purposes other than directly helping consumers: It doesn't work, and it penalizes the most vulnerable. Monthly dividends will allow families to afford renewable energy as an alternative to carbon-based fuels.

Last month, Columbia University's Center on Global Energy Policy released an in-depth report on our bill. And I would ask unanimous consent to submit for the record an assessment of the Energy Innovation and Carbon Dividend Act.

Ms. CASTOR. Without objection.

[The information follows:]

Submission for the Record
Representative Kathy Castor
Select Committee on the Climate Crisis
November 14, 2019

ATTACHMENT: Kaufman, Larsen, et al. *An Assessment of the Energy Innovation and Carbon Dividend Act*. Columbia University Center on Global Energy Policy, 2019.

This report is retained in the committee files and available at: https://energypolicy.columbia.edu/sites/default/files/file-uploads/EICDA_CGEP-Report.pdf.

Mr. DEUTCH. The report found that our bill will produce economy-wide net greenhouse gas emission reductions of 38 percent by 2030, exceeding our Paris Agreement commitments; by 2050, 90 percent reductions. It would also create over 2 million net jobs over 10 years and will return monthly checks of as much as $367 per month to a family of four.

Returning the cost of pollution back to American families is essential. We need a drastic turn away from hundreds of years of unchecked carbon pollution toward a carbon-free economy. But we must root this dramatic change in justice. Justice means those who have profited off the destruction of our environment pay the price. Justice means protecting people who have been locked into a carbon-heavy lifestyle through no fault of their own.

And the balance of market-driven solutions and protection for the most vulnerable is why this bill has the support of advocates from across the ideological spectrum, from Citizens' Climate Lobby, to the Alliance for Market Solutions, to the Catholic Bishops of America and other faith-based organizations. I ask that this committee respond to their call by recommending that the Ways and Means Committee fully consider this bill.

It is important to set goals and targets, but we need to do something to get us there. This bill can do exactly that. It is time to stop passing the cost for carbon pollution on to the next generation. It is time to pull the levers in our economy to deliver real and lasting change. It is time to put a price on carbon. The Energy Innovation and Carbon Dividend Act will do that. The stakes could not be any higher, and we must act now.

Again, Madam Chairman, I am so grateful for the opportunity today. Thank you for giving us the chance to present.

[The statement of Mr. Deutch follows:]

Testimony of the Hon. Theodore "Ted" Deutch
A Representative in Congress from the State of Florida

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chairwoman Castor and Ranking Member Graves.

Imagine walking outside to a beautiful, sunny South Florida day.

The sort of weather that attracts tourists to the Sunshine State and is the backbone of our economy.

Imagine strolling down Las Olas Boulevard in Fort Lauderdale under cloudless skies, and yet, you are in standing water up to your ankles.

Sunny-day flooding events are now a regular occurrence in South Florida because of rising seas.

October's "king tides" are the time of the year when, according to the South Florida Sun Sentinel, "fish swim in the streets.".

For my constituents, climate change is already a part of their daily reality.

Americans around the country are already experiencing their own climate impacts—TODAY.

Rushing flood waters, stronger storms, brutal droughts, and sprawling wildfires won't discriminate between Republican or Democratic households.

The climate impacts we are already feeling today inspired us to introduce the bipartisan "Energy Innovation and Carbon Dividend Act".

Our proposal would finally put a price on carbon.

For too long, the damage by carbon emissions to our planet have been left off the balance sheets of the world's largest polluters.

Instead, we are ALL paying the price.

That's why we need a market-driven solution that will get us to zero emissions.

Last month, the International Monetary Fund released a report calling carbon pricing the "single, most powerful and efficient tool" to reduce emissions.

The IMF report calls for a global fee on carbon of $75 per ton by the year 2030. Our bill gets there by 2026.

We start at a modest $15 per ton of carbon assessed at the source—on the fossil fuel companies.

But the price quickly ratchets up $10 per year.

By putting a price on carbon, we will set a bright signal across the economy that it is time to switch to cleaner energy sources.

It will drive new clean power innovations that make business-sense as much as they make climate-sense.

The big question: where does the money go?

100 percent of the net revenue will be returned to the American people as a monthly dividend check.

We've seen in cases around the world what happens when carbon fees try to hit consumers directly, or the revenue is used for purposes other than to directly help consumers.

It doesn't work, and it penalizes the most vulnerable.

By returning a carbon dividend check directly to the people, working families will be in a financial position to afford renewable energy as they become an attractive alternative to carbon-based fuels.

Last month, Columbia University Center on Global Energy Policy released an in-depth report on the bill.

The report found that our bill would:

Lead to economy-wide net greenhouse gas emission reductions of 33% by 2025 and 38% by 2030——

These reductions exceed our commitments to the Paris Agreement.

By 2050, our plan would cut greenhouse gas emissions by 90 percent.

Other studies have found that our fee and dividend proposal would create over 2 million net jobs over ten years.

I want to thank the broad base of support we have received on this proposal from stakeholders across the ideological spectrum.

But I especially want to thank the bipartisan advocates from Citizens Climate Lobby.

CCL advocates take time out of their lives to come to Congress to meet with their representatives and urge bold action on climate.

They have been instrumental in the progress we have made on this bill.

I urge the committee to closely examine this proposal.

It is time to stop passing the costs for carbon pollution on to the next generation.

It is time to pull the levers within our economy that will deliver real and lasting change.

It is time to put a price on carbon.

This committee is charged with investigating, studying, and developing recommendations to substantially and permanently alleviate the causes of climate change.

I urge you in the strongest terms to press this Congress to make a carbon fee and dividend program part of your important work——

Work that is of existential importance to our planet.

Ms. CASTOR. Well, thank you to my good friend from Florida, Congressman Deutch.

You know, you mentioned the flooding there in downtown Fort Lauderdale.

And if you haven't been to Fort Lauderdale, it is a beautiful place. It is known as the Venice of the United States.

Well, you don't want to be the Venice of the United States, because Venice, Italy, right now is completely flooded over. But my brother-in-law, the one day of the terrible flooding there, sent me some video where the flooding now was coming over onto sidewalks, into the street. They had a lot of those little scooters there practically washed away into the canal.

If we don't get busy, this is going to get worse. So I really appreciate your leadership on this. The committee will be grappling with how we price carbon and what our recommendations are, so thank you for your advice to the committee.

Mr. DEUTCH. Thanks so much.

Ms. CASTOR. Mr. Reed, you are the co-chair the Problem Solvers Caucus, and we have a problem, and it is called the climate crisis. So I hope you have some good recommendations for the committee.

Mr. REED. Well, I hope I do, Madam Chair.

Ms. CASTOR. You are recognized for 5 minutes.

STATEMENT OF THE HON. TOM REED, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. REED. It is good to be with you. And to the ranking member, I thank you for the opportunity to appear before you on this Select Committee on the Climate Crisis.

And as the chair of the Problem Solvers Caucus, I would agree with you; this is a problem that needs a solution. And I think working together is how we are going to get this done, Democrats, Republicans, and fundamentally as American citizens, as citizens of the world.

I am here to discuss the Energy Sector Innovation Credit Act as an idea as part of the solution to this issue as we work in a bipartisan way to ensure future generations have clean air to breathe, clean water to drink, and an overall healthy home we call Earth.

Energy innovation is not a subject that I am new to or that I take lightly. In my career, I have worked to demonstrate a commit-

ment to provide tax credits in the alternative and renewable energy sector. This is best reflected by my receiving the Solar Energy Industries Association's Solar Champion Award in 2016 for my work in the Ways and Means Committee to ensure relevant tax credits to that industry did not expire.

However, I have come to realize that not only should these specific tax policies be championed in their own right but we must also unleash the strongest asset we have to deal with this worldwide problem of climate: the power of American ingenuity and innovation. It is this unique American capability that has proven time and time again that it can avert world crises. And this situation is and will be, in my humble opinion, no different.

It is in this vein that I will introduce legislation to offer a tax incentive for new energy technologies which would increase overall energy on the grid and ensure unneeded energy is not financially rewarded so it will not be unnecessarily produced. This will help cutting-edge technologies break into the market to push new and old energy portfolios to provide next-generation clean and potentially unlimited energy sources.

How would it work? By spurring innovation in the market through these tax incentives, we can ensure a clean environment for future generations, rather than producing policies that line the pockets of established technologies and prop up otherwise uneconomical and ultimately unaffordable technologies.

This plan would lead to cleaner power without the false security created by government mandates that cannot be technologically achieved or a noncompetitive over-reliance on Federal tax credits that ultimately will stifle energy technologies becoming accessible in the world market. If these technologies are not affordable and accessible, any improvement or benefit to our environment here in America and across the globe will be impossible.

Instead of picking winners and losers in the energy sector, this new tax credit would bolster market-driven innovation across all existing and new electricity-generating technologies. This means everything from new power plants that can capture, store, or use carbon emissions from fossil-fuel generation to facilities using next-generation batteries to store excess power from wind, solar, and other renewable sources will be encouraged. Offshore wind would become commercially viable.

And these technologies are just the beginning. There are technologies and innovation that this would spur that we can't even envision because of the ingenuity and the innovation spirit of America that always comes through in these times of our greatest needs.

So I stand before you, or I sit before you, Madam Chair, as a bipartisan Member of the House supporting this proposal, because I think Members on both sides of the aisle know and recognize that innovation is a critical key in the long-term viable solution to combating climate change and ensuring that we have a home here on this great globe in a safe and secure fashion for generations to come.

And so, Madam Chair, I submit that to the committee for consideration. And I encourage any folks on both sides of the aisle to come together to embrace American innovation, American ingenuity, and provide the solutions that are going to truly move the

needle to solve this problem for our kids and for our grand-kids that don't even exist on the face of the Earth as of today.

With that, I yield back.

[The statement of Mr. Reed follows:]

Testimony of the Hon. Thomas "Tom" Reed
A Representative in Congress from the State of New York

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Madam Chair, I am appearing before the Select Committee on the Climate Crisis to discuss the Energy Sector Innovation Credit Act, as we work in a bipartisan way to ensure future generations have clean air to breath in and clean water to drink.

For decades, Congress has routinely acted on a bipartisan basis to extend a number of expired or expiring green energy tax provisions. Typically, these extensions would be bundled into a part of a larger spending package or budget deal at the end of the year—oftentimes hurriedly or haphazardly with little thought of whether the industry receiving the tax break was deserving.

I have even pushed for these tax credits in the green energy sector, and I received the Solar Energy Industries Association Solar Champion Award in 2016 for my work in the Ways and Means Committee to ensure solar tax credits did not expire.

However, what I have come to realize is that we hand out these tax extenders with little regard if the industry is using this incentive to boost profits or to actually advance green technology.

This is why I will introduce legislation to offer a tax incentive for new clean energy technologies which would increase energy on the grid, ensure unneeded energy is not financially rewarded, help cutting-edge technologies break into the market and upend the status quo of federal incentives for existing technologies.

How would it work?

The plan ends unlimited, market-distorting extenders for tax incentives and has a built-in ramp down for each technology as it grows. By spurring innovation in the market, we can ensure a clean environment for future generations rather than lining the pockets of established technologies and propping up otherwise uneconomical technologies.

Instead of picking winners and losers in the energy sector, this new tax credit would bolster market-driven innovation across electricity-generating technologies. This means everything from a new power plant which can capture, store or use carbon emissions from fossil fuel generation to facilities using next-generation batteries to store excess power from wind, solar and other renewable sources.

This plan would lead to cleaner power without government mandates or an uncompetitive over-reliance on federal tax credits.

The current market rewards energy whether it is used or not. My bill ensures incentives apply to the value of energy when sold so we do not reward unwanted power.

Both the Republicans on the Ways and Means Committee and bipartisan members of the House are supporting this proposal—not only to help bring an end to the tax extender carousel—but because they know innovation is the only viable long term solution to combat climate change and ensure clean air and water for future generations.

Ms. CASTOR. Well, thank you, Mr. Reed, for your remarks and your encouragement. I do believe that this committee will find bipartisan solutions and help unleash American ingenuity that can help with climate solutions.

So thank you very much.

Mr. Griffith.

Mr. GRIFFITH. Madam Chair, if I might.

I appreciate your comments. Innovation is extremely important. It has been interesting, as we have done some of the hearings, some of the Democrat witnesses and some of the Republican wit-

nesses have both agreed that this is something that we need to focus on, in innovation and parity with both renewables and fossil fuels, because big chunks of the world are going to use fossil fuels. If we can find a way to make it cleaner, we are not just helping the United States of America, we are helping to clean up the world.

Ms. CASTOR. Thank you.

Mr. REED. Thank you.

Ms. CASTOR. All right. Congresswoman Lee, you have been an outspoken advocate for climate solutions. I am pleased to recognize you for 5 minutes.

STATEMENT OF THE HON. BARBARA LEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. LEE of California. Thank you very much. Thank you, Madam Chair and to our ranking member and committee members, for giving me a chance today to discuss H.R. 1880 and H. Res. 574. My bill and the resolution will help bring attention to two populations who are often overlooked, women and students, as it relates to climate change.

First, H.R. 1880 will address the disproportionate effects that climate change has on women.

Oftentimes, women are the leader of their households and are responsible for providing necessities to their families. This puts them in a situation where they feel the brunt of climate change. Global warming creates additional responsibilities. Women may be forced to move their families out of a flood zone that was created because of the rising oceans. They may need to travel further to obtain water for children due to a drought created by rising temperatures.

Mothers around the world need to drastically adjust their lives and make sacrifices to ensure their safety and well-being of their families. This is why my bill is so important, because it would help bring attention to this very important issue.

My bill would also establish a working group within the United States Department of State to help brainstorm potential solutions to address the disproportionate effects that climate change has on women and their families. We need America to be a leader in addressing the climate crisis that is affecting women around the world.

I would also like now to discuss my resolution on teaching climate change in schools as part of the school curriculum.

My resolution was inspired by students from the Sonoma Academy in California. They came to my office with a passion for more education on sustainability and global warming. They shared with me some of the resolutions that they have tried to pass at the State and local levels.

And I also was inspired by Greta Thunberg, a climate activist from Sweden who boldly skipped school to protest the need for climate action. Her act of defiance has evolved into a movement and set precedent for a generation of climate activism. More than 25 percent of American students took action at the climate protests to urge us to address climate change.

In order to meaningfully act upon our changing climate, young people need education on its causes, consequences, and possible solutions. American students also do not learn enough about climate

change. We need to teach every young person the human impacts of climate change and how to address our warming plant—quite frankly, before it is too late.

So I would respectfully ask members of this committee and my colleagues in Congress to cosponsor H.R. 1880, the Women and Climate Change Act of 2019, and H. Res. 574, which is the resolution on teaching climate change in schools.

Finally, let me just say, as a person of faith, Madam Chair, I believe that we must protect God's creation. We must secure the future for future generations to come. And so this committee and what you are doing here and what our colleagues are doing is such important work. So thank you again for giving me the chance to be before you.

[The statement of Ms. Lee of California follows:]

Testimony of the Hon. Barbara Lee
A Representative in Congress from the State of California

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Madam Chair and thank you to the committee members for allowing me to testify today.

I am here to testify on H.R. 1880 and H. Res 574 and the urgent need to take up these bills in Congress. My bill and resolution will help to bring attention to two groups of people that I feel are often overlooked: women and students.

These bills also greatly reflect the mission of this select committee to put forward bold legislative ideas to help reduce greenhouse gas pollution, mitigate the human impact on climate change, and ensure our communities are resilient.

Specifically, H.R. 1880, the Women and Climate Change Act, will address the disproportionate effects that climate change has on women. As many of us know, women are the leader of their households and are responsible for providing necessities to their families. This puts them in a situation where they will feel the brunt of climate change.

Global warming creates additional responsibilities. Women may be forced to move their families out of a flood zone that was created because of the rising oceans. They may need to travel further to obtain water for children due to a drought created by rising temperatures.

Mothers around the world need to drastically adjust their lives and make sacrifices to ensure the safety and well-being of their families. This is why my bill is so important, because it would help bring attention to this very important issue.

My bill would also establish a working group within the U.S. Department of State to help brainstorm potential solutions to address the disproportionate effects that climate change has on women and their families. We need America to be a leader in addressing the climate crisis that is disproportionately affecting women around the world.

I would also like to discuss my resolution on teaching climate change in schools, H. Res. 574. My resolution was inspired by students from the Sonoma Academy in California, who came to my office with a passion for more education on sustainability and global warming. They shared with me some of the resolutions that they have tried to pass at the state and local levels.

I was also inspired by Greta Thunberg, a climate activist from Sweden, who boldly skipped school to protest the need for more climate action. Her act of defiance has evolved into a movement and set precedent for a generation of climate activism—more than 25% of America students took action at the climate protests to urge us to address climate change.

In order to meaningfully act upon our changing climate, young people need education on its causes, consequences, and possible solutions.

American students also do not learn enough about climate change. We need to teach every young person the human impacts of climate change and how to address our warming planet before it is too late.

I would respectfully ask members of this committee and my colleagues in Congress to become cosponsors of H.R. 1880—Women and Climate Change Act of 2019 and H. Res 574—resolution on teaching climate change in schools.

And finally, I hope that this Select Committee will take these important bills up. Thank you again for allowing me to speak and for your leadership of this select committee.

Thank you, and I yield back.

Ms. CASTOR. Well, thank you very much, Representative Lee.

You are right; we have a moral obligation to our children and future generations to tackle the climate crisis. And I am so intrigued by your ideas and your legislation here.

You know, one of the most popular climate solutions books is Project Drawdown, the organization from your neck of the woods. And most people wouldn't think of this, but they cite as one of their top climate solutions educating women and girls across the world. So we need more help and more detail on how to craft those kind of policies.

So thank you very much——

Ms. LEE of California. Thank you.

Ms. CASTOR [continuing]. For your leadership.

Ms. LEE of California. Good to see you.

Ms. CASTOR. Next, Chairwoman Kaptur, I want to thank you, because early on you met with me and the professional staff from the Climate Committee. You have crafted an appropriations bill that provides significant new research dollars for the Energy Department and others. You have been a longtime advocate for clean energy solutions.

So thank you for being here, and you are recognized for 5 minutes.

STATEMENT OF THE HON. MARCY KAPTUR, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Ms. KAPTUR. Thank you, Chairwoman Castor, for coming to our office and advocating and including us. We truly appreciate that and for the invitation to appear today. With the tremendous turnout of Members, this tells you that our country is headed in the right direction.

As we know, our world is at a tipping point from the Earth's thermal heat. And our job in Congress is to manage the magnitude of the environmental challenge before us and to lead our people and, in fact, all of humanity to address climate change and to provide an understandable pathway forward.

Headlines in our local newspapers bring home the gravity of the crisis. My own hometown paper, The Toledo Blade, just had a story about, "Scientists: Earth Under a Climate Emergency." Thousands of scientists attest to this. Also, for our own Great Lakes, "Overflowing Lakes Pose New Threat for Birds," the threat to sea life in our part of the United States. And then in The Washington Post, a recent headline, "Wildfires: A Can't-Win Challenge for California."

These challenges are indeed daunting, but the combined commitment of all of us, of enlightened people, can result in positive change.

I believe, regionally, we must use these types of stories to inform the American people and include in what we do together a multimedia approach to the crisis, for example, by region, inviting people to view films like "Planet Ocean" and "Blue Planet" to help deliver an important message of cause and effect to the American people and, in fact, to many of the staff members here on Capitol Hill and perhaps even some of the Members.

The American people are demanding action, and there is little patience. So it is my hope that, by working together across the committees of jurisdiction, Congress can quickly advance a climate package that is regionally sensitive and demarked by related watersheds.

We know the enduring impacts of climate change are resulting in increasing rainfall, rising seas, severe hurricanes and tornados, increasing wildfires and tornados, and countless other impacts.

I am going to move regionally now so I can better develop the point about how important it is by watersheds to bring people together regionally. In the interest of time, let me focus on the Great Lakes region.

Our Ninth Congressional District runs along the south edge, the entire perimeter almost, of Lake Erie, the shallowest and southernmost of the Great Lakes, which contain, together, 84 percent of North America's fresh surface water and 21 percent of the world's surface fresh water.

In 2014, a massive harmful algal bloom forced the city of Toledo, a town of over 300,000 people and a coastal city, to shut off its fresh water supply, the first in the country to do so other than Flint, Michigan, for a different reason there. For days, citizens could not drink, bathe, or cook from the tap.

This particular algal bloom was only the start. Since then, Lake Erie has faced an annual algal bloom that threatens our region's economic future. Year after year, a massive green bloom engulfs the region, as rainfall and lake levels rise to 124-year highs. And adjacent farmland tiling is totally inadequate to hold back the water and nutrients to the lake.

This algal bloom is not an anomaly. In the last year, we have seen massive rainfall events that continue to feed the ever-increasing annual algal bloom. I know about the issue in the Everglades and Lake Okeechobee as well.

The Fourth National Climate Assessment documents a clear impact of climate change for our region. Between 1973 and 2010, ice cover on our Great Lakes declined an average of 71 percent, by three-quarters, and this means greater evaporation and real changes in sea life.

Change and action are needed. Warm autumns mean larger algal blooms, larger ones every year. And more rainfall means more farm runoff and a greater need for a farm nutrient control system, including advanced tilling and irrigation systems. And with one-half of the land owned by absentee owners, the daunting challenge of how do you do this remains before us.

An effective approach requires, in our region, both the U.S. and Canada to cooperate on a broader scale and a commitment to engaging the world through such agreements as the Paris Climate Agreement.

Further, agricultural America needs a regenerative soils approach to help farmers utilize their fields to soak up excess carbon. I associate myself with what Congresswoman Bustos mentioned in her testimony a little earlier.

Our approach globally must wean our economy off our over-reliance on carbon-based fuels to reduce the destructive impact of greenhouse gases on the upper atmosphere. And as Congress writes this comprehensive approach, our Nation needs an enhanced research and development bridge to the future.

So, in closing, let me say that the Department of Energy must play and is playing an enormous role to address these necessary energy changes. The Department of Energy is the Federal Government's leading agency on the research and development of new clean-energy technologies.

In the bill our subcommittee has written for 2020, we propose critical funding for energy innovation in all sectors. And our country has been at the forefront in energy innovation across all sectors through research grants, loan programs, tax incentives, laboratory facilities, pilot programs, and public-private partnerships.

But in terms of a regional transition, let me associate myself with the remarks of the Congresswoman from California, who talked about transitioning people as well——

Ms. CASTOR. Thank you very much.

Mr. KAPTUR [continuing]. In the coal well-worn regions of the country, as well as the nuclear plants, where we are having real trouble with transition.

So thank you so very much for allowing me to appear today.

And let me just say as a mark of hope, I think one of the impressive pictures that I present to the public has to do with our ability to ban fluorocarbons from the air and the healing of the ozone layer as a result. We are about a different task right now, but I believe, working together, we can achieve a similarly very positive solution.

And thank you so much.

[The statement of Ms. Kaptur follows:]

Testimony of the Hon. Marcia "Marcy" Kaptur
A Representative in Congress from the State of Ohio

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chair Castor, for the invitation to speak before your committee.

As we know, our world is at a tipping point. The American people are demanding action, and there is little patience. It is my hope, that by working together, across committees of jurisdiction, we can quickly advance a climate package.

Localizing Climate Impacts

Every time I am home, I see the impacts of climate change.

My district includes a broad swath of Lake Erie. The Great Lakes contain 84% of North America's surface freshwater and 21% of the world's surface freshwater. The health of our lakes determines the social opportunities for 30 million people living on the lakes. And as a region, we have begun speaking with a more unified voice to protect the Great Lakes. However, climate change poses an existential threat to my region.

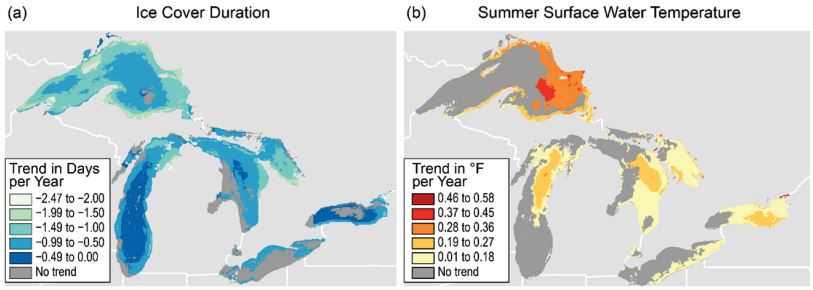
In 2014, a massive harmful algal bloom forced Toledo to shut off its water. For days, citizens could not drink, bathe, or cook from the tap. In a modern economy with sophisticated infrastructure, we take ready access to freshwater for granted. But for three days, my region rationed water during this ecological emergency.

Source, NASA 2011 Photo of Lake Erie during Harmful Algal Bloom

This algal bloom was only the start. Since then, Lake Erie has faced an annual algal bloom that threatens our region's economic future. Year after year, a massive green bloom engulfs my region.

And this algal bloom is not an anomaly. In the last year, we have seen massive rainfall events that continue to feed the ever-increasing annual algal bloom. Ironically, the enormous early spring rains flooding Lake Erie in 2019 delayed the spring plantings and meant that there was less nutrient run off than expected. The spring rains that threatened farm production meant the Lake Erie Algal Bloom was only 700 square miles this year!

The Fourth National Climate Assessment documents a clear impact of climate change for my region. Between 1973 and 2010, ice cover on the Great Lakes declined an average of 71%. And the lakes are becoming warmer with summer water temperatures increasing. The islands in my district used to be regularly connected to the mainland by ice cover in the winter. But today, the ice is thinner, and the journey to the islands becomes more treacherous.



Source, Fourth Annual Climate Assessment, Chapter 21, Midwest

This is the problem, but as you know, there is a solution.

It involves a broader solution and a commitment to engaging the world through the Paris Climate Agreement. A larger package must wean our economy off our over reliance on carbon-based fuels.

As Congress writes this larger package, we need a research and development bridge to the future.

DOE's Role in Energy Changes

In the bill I have written, the FY 2020 Energy and Water Development Act, I have proposed critical funding for energy innovation at the Department of Energy. The United States has been at the forefront of energy innovation to address climate challenges by providing research grants, loan programs, tax incentives, laboratory facilities, pilot programs, and public-private partnerships. DOE is the federal government's leading agency on the research and development of new clean energy technologies.

Decades of investment by DOE has driven down costs for clean energy technologies, enabling increased deployment as they become cost-competitive with con-

ventional energy sources. These advances in clean energy technology have led to job creation in every region and every state in America.

Although the U.S. has been a leader in energy innovation and DOE has made significant gains in real solutions to climate change, there are still opportunities to advance new and improved clean energy technologies. Additional investment in energy innovation is critical to meeting goals for addressing climate change.

Thank you for the invitation to speak today and for your commitment to holding these public hearings. Members of Congress are tremendous advocates and spokespersons for the local and very real impacts of climate change.

Ms. CASTOR. Thank you very much, Ms. Kaptur, for your detailed presentation.

Mr. Beyer, you are welcome to provide your testimony here for 5 minutes. You are recognized.

STATEMENT OF THE HON. DON BEYER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF VIRGINIA

Mr. BEYER. Thank you, Madam Chair and Ranking Member. I am very grateful for the opportunity to testify before you and to share our best policy ideas on the climate change.

When I ran 5 years ago, the central theme of this campaign and every one was that I would try to be the strongest, clearest voice I could be, in my humble way, on climate change. So I was really proud when Dr. Lowenthal asked me to co-lead the Safe Climate Caucus, which is mostly about educating Members about how we can better address climate change. And I now co-chair the New Democrat Climate Change Task Force. We have put together a set of 13 bills, most of which are now bipartisan, to address climate change.

Three overarching priorities. The first: U.S. global leadership on climate change and responding to the threat it poses to our national security. Many years ago, 10 years ago, I was in Copenhagen for COP 15, when it was abundantly clear with every person I talked to from other nations that they were looking to the U.S. first for climate change leadership.

Second is to take an economy-wide and a market-oriented approach—Federal investments and carbon pricing.

And, third, that we invest in our communities and our workers, people like the coal miners in Morgan Griffith's district, and by resolving the environmental injustices and by fostering adaptation, resilience, and relief.

I have my own climate playbook of bills. I would like to detail seven of them.

The first is something that Chris Van Hollen introduced many years ago and we have done every year since, the Healthy Climate and Family Security Act, which places a cap on carbon pollution in alignment with the IPCC report, and then it has a polluter-pays principle to emit carbon within those caps.

It is an economic dividend approach, where all of the money is given back to the American people. So 80 percent get more back than they put in, making sure that it is progressive rather than regressive. And it recognizes that polluters should pay, gives businesses the ability to plan long-term, and it reduces the burden of impact on disproportionately impacted communities.

I think everyone agrees, across the economic spectrum, that carbon pricing will accelerate innovation and incentivize greater energy efficiency better than anything else.

The second bill is the New Democrat Coalition's National Oceans and Coastal Security Improvements Act to support coastal communities' ability to prepare for and respond to a variety of coastal threats—extreme weather events, climate hazards, changing ocean conditions. These coastal communities are literally and figuratively under water. So this will help these well-known, unmet, imminent needs.

The third bill is the Community Health and Clean Transit Act, about to be introduced, which will provide zero-interest loans to qualified transit districts for the marginal costs of electricity and fuel-cell stuff and the needed charging infrastructure. You know, fuel-cell or electric busing costs $150,000 to $300,000 more. This will help local transit districts be able to afford them.

The fourth is tax credit legislation modeled off the original EV tax to help move vans, pickup light-duty trucks, and other commercial vehicles toward a zero-emission future. It is really fascinating, how much is already happening. I think DHL has announced everything in Europe will be electric, in terms of the commercial side. But it will be an enormous move forward.

The fifth addresses flight: the Cleaner, Quieter Airplanes Act. My bill would build upon NASA's existing mission, specifically its aeronautics mission, and bolster its capacity to create electrified and non-greenhouse-gas-emitting flight.

I read a fascinating story last night that showed that, among the people that are emitting the most greenhouse gases per year per person, something like 69 percent of it is the flights they take. So, to the extent that we move to electric airplanes, it will be an important correction.

Number six is the Wildlife Corridors Conservation Act, which your excellent staffer, Kenzie Landa, had a big hand in. E.O. Wilson, the professor at Harvard who created the idea of biodiversity, says it is the most important biodiversity bill in an generation. And this is bipartisan. Vern Buchanan, among others, is leading it on the Republican side. To connect—connectivity from native species, everything from the pronghorn antelope to the Florida panther to wolves and grizzly bears and butterflies and often plants also. If we believe biodiversity is essential, this will move us there.

And, lastly, the bipartisan SEA FUEL Act. Morgan and I have talked for years about carbon recapture. This will throw in the aircraft, ships, vehicles, and other things that the Department of Defense needs. There is mature technology which we can help do to pull carbon capture out of the ocean to run our fleet. By the way, if you care about ocean acidification and the super-saturation of CO_2 in the ocean, this is a really helpful bill.

So these seven bills will all move us in the right direction. And, of course, please look deeply at the package coming out of the New Democrat Coalition which is also very thoughtful.

And thank you for the opportunity to do this.

[The statement of Mr. Beyer follows:]

Testimony of the Hon. Donald "Don" Beyer
A Representative in Congress from the State of Virginia

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you so much for having this hearing!

I am honored by the opportunity to testify before you and be one of many members sharing our best policy ideas to address the climate crisis.

I ran on addressing climate change as a central tenet of my candidacy for office and I have tried to be the strongest, clearest voice I can on addressing climate change in Congress.

I was proud to be asked by Mr. Lowenthal to help co-lead the Safe Climate Caucus, which works to educate all Members on how we can all better address climate change and elevate Member efforts.

I am also a Co-Chair of the New Democrat Coalition Climate Change Task Force, where I have been working with my colleagues to move an evidence-based, comprehensive framework to address the threat of climate change with the rapid urgency this crisis demands.

We have three overarching policy priorities:

- Promote U.S. global leadership on climate and respond to the threat climate change poses to our national security
- Take an economy-wide and market-oriented approach through policies such as federal investments in tech-inclusive research, development, and deployment, and carbon pricing; and
- Investing in and supporting our communities and workers by resolving inequities and fostering adaptation, resilience, and relief.

The New Democrat Coalition endorsed a slate of bills that correspond with those aims, many of which are bipartisan, and I highly encourage your committee to take a look.

I have my own climate playbook of bills that I am advancing to help in the effort to tackle this crisis.

First and foremost, the Healthy Climate and Family Security Act, which places a cap on carbon pollution to align with the recommendations of the IPCC report.

It then applies a 'polluter pays' principle by requiring polluters to pay to emit carbon within those caps.

Finally, the revenue raised from the sale of those permits is returned straight to the American people.

This is the fasted, clearest way to move us in the right direction.

It recognizes that polluters should pay, helps businesses plan long term and more quickly reduces the burden on disproportionately impacted communities.

On an economy-wide level, the price signal will accelerate innovation and incentivize both greater energy efficiency as well as greater use of lower-carbon energy alternatives.

The second bill I want to mention is my bill which is included in the slate of the bills endorsed by the New Democrat Coalition, the National Ocean and Coastal Security Improvements Act.

This bipartisan bill would support coastal communities' ability to prepare for and respond to a variety of coastal threats, including extreme weather events, climate hazards and changing ocean conditions by improving coastal infrastructure and supporting coastal research, resiliency, conservation and restoration work.

Our states and localities are literally and figuratively underwater in their ability to become climate resilient.

This bill would help address these well-known unmet, imminent needs and ensure we have viable coastal economies for future generations.

This shouldn't be the case where only the rich can become resilient. It is imperative that we help coastal communities adapt.

The third bill I want to mention my soon to be introduced Community Health and Clean Transit Act, which provides zero interest loans to qualified transit districts for the marginal costs of electric and fuel and needed charging infrastructure.

The upfront capital costs of fuel cell or electric buses are prohibitive for many transit and school districts.

They can cost $150,000 to $300,000 more than a conventional diesel bus.

This bill would help local transit districts who want to lead on climate or reduce their long-term operating costs by helping them in their goal to invest in electric or fuel cell buses.

Keeping in the transportation theme since it the primary source of carbon emissions—we've had some important advances in emissions on the personal vehicle side but continue to lag behind other countries in terms of electrification for commercial vehicles.

I'll shortly be introducing tax credit legislation modelled off the original EV tax credit to help move vans, pickup, light duty trucks and other commercial vehicles towards a zero emissions future.

And the third bill in my soon to be introduced transportation package, addresses flight—the Cleaner, Quieter Airplanes Act.

My bill would build upon NASA's existing mission and bolster its capacity to create electrified and non-greenhouse gas emitting flight.

I've mentioned economy wide emissions, coastal resilience and adaption, as well as transportation, I also want to mention my bill to help with biodiversity.

The Wildlife Corridors Conservation Act would give species a fighting chance at survival in the face of climate change.

The Wildlife Corridors Conservation Act provides a framework to address the long-term habitat connectivity of native species.

This bill identifies wildlife corridors that aim to mitigate harm to wildlife and threats to public safety by implementing strategies to reduce human and wildlife conflict.

And lastly, I'll mention a 7th bill in my climate armada—the bipartisan SEA FUEL Act.

To run the aircraft, ships, vehicles, and other equipment necessary to defend our nation and conduct operations abroad, the Department of Defense relies heavily on an extensive logistics chain to transport fuel around the globe.

This transportation infrastructure comes with significant costs and could be targeted by our adversaries to diminish our ability to project power in a foreign conflict.

My bill help address these issues by authorizing the Department of Defense and the Department of Homeland Security to mature new technologies to generate fuel directly from ocean water and the atmosphere, reducing the logistics tail of our military and increasing the resiliency of our overseas operations.

The program builds on existing efforts and patented technology invested in by the U.S. Navy and our national laboratories.

The IPCC report emphasizes the importance of negative emissions technologies in reaching net zero emissions by 2050.

This bill would both address that goal and our national security.

These are 7 of many of the ideas that I am trying to advance to address our climate crisis.

I hope you consider them.

We need everyone invested in this fight and all the good ideas on the table in order to meet net-zero greenhouse gas emissions by 2050 at the latest—and that, as you all know, is only to mitigate the worst impacts of climate change.

I appreciate the opportunity to be here today. This hearing provides hope that we're on the right track.

Ms. CASTOR. Well, thank you, Mr. Beyer. You have provided a strong and clear voice on climate solutions. So thank you very much for being here.

Mr. Phillips, you are recognized for 5 minutes.

STATEMENT OF THE HON. DEAN PHILLIPS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. PHILLIPS. Thank you, Chairwoman Castor and Mr. Griffith and members of the committee.

Climate change is an existential threat to the health and national security, economic prosperity, and future of the American people and our planet. Indeed, our habitat is at stake. Humankind's ability to survive, let alone thrive, on a dramatically changing planet is very much in question.

The Fourth National Climate Assessment and the 2018 Intergovernmental Panel on Climate Change, the IPCC, have illustrated an urgent and very inconvenient truth, and that is that we are running out of time. The IPCC 2018 report found that even a 1.5-degree Celsius increase would have a disastrous effect on our habitat.

To do our part in preventing the most drastic impacts of climate change and to stay below that 1.5-degree threshold, the United States must achieve the goals committed to in the Paris climate accords and attain net-zero emissions by 2050 at the latest.

Mr. PHILLIPS. Limiting warming to 1.5 degrees Celsius is still possible, and it is a call to action that we must heed with seriousness. We have already seen the impacts of climate change in my home State of Minnesota. The Great Lakes region is warming faster than most regions in the United States. A lack of action will result in growing numbers of people exposed to water scarcity, extreme heat, and displacement from sea level rise, and severe weather events. The costs are rising and the science is clear. We cannot let the enormity of the issue overwhelm us. We must start addressing the problem immediately.

That is why I am a member of the New Dems Climate Task Force, as referenced by my colleague from Virginia, Mr. Beyer. Our goal is to put forth an ambitious pro-climate and pro-market agenda that leverages every decarbonization solution available to advance a swift and just transition to a clean economy.

We need to be focused on solutions to the climate crisis. One of those I find most promising is carbon pricing. I am in support of H.R. 763, the Energy Innovation and Carbon Dividend Act, a bipartisan bill with Republican roots, which puts a fee on fossil fuels like coal, oil, and gas. Climate change has a price, and this legislation ensures that big polluters are the ones paying for it. By starting low and growing over time, it will drive down carbon pollution by incentivizing energy companies, industries, and consumers to move towards cleaner, renewable options. The rate begins at $15 per ton in the first year and increases by $10 per ton each year, and is subject to further adjustments based on the progress in meeting specified emissions reduction targets. Best of all, it is completely revenue neutral. The money collected from the carbon fee is allocated in equal shares every month to American taxpayers to spend as they see fit. Program costs are paid for from the fees collected.

In this legislation, the government does not keep any of the money from the carbon fee. Returning revenue from carbon fees directly to people as carbon dividends, which is payments to every person, would transform carbon pricing from a regressive policy into a progressive one. This policy is all about incentivizing the change which many, including myself, find to be the most effective way to realize our climate goals. The price signals motivate consumers, businesses, and governments alike to invest in renewables and energy efficiency, and carbon dividends would yield a net increase in income for everyone whose carbon footprint is smaller than average.

People with larger carbon footprints pull up that average and would pay more in higher fuel expenditures than they would get back in dividends, while the majority of households, including the most low-income and middle-class families in America, would come

out ahead. In addition, a clean energy transition will need smart regulations and public investments as well as aggressive emission limits. Carbon pricing is not the only answer to the climate crisis, but it is one of the most effective tools to meeting the goals of the IPCC.

There are many commonsense environmental policies that we can and should pursue; however, it is true with climate issues as it is with every other important policy issue that we consider in this body that in order to begin making meaningful change, we must reform our government. Too many wealthy special interests have far too much influence and control over climate policy. It is time to end the corrupting influence of special interest money in the halls of Congress and do what is right for our planet, for our children, and for our future.

When it comes to our climate, environment, and habitat, we are living in an era of great opportunity and great consequence. The time to act, the time to lead is now.

Thank you, Madam Chair.

Ms. CASTOR. Thank you very much, Mr. Phillips. Thank you for your recommendations for action to the committee.

[The statement of Mr. Phillips follows:]

Testimony of the Hon. Dean Phillips
A Representative in Congress from the State of Minnesota

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chairwoman Castor, Ranking Member Graves and members of the Committee.

Thank you for the invitation to offer testimony this afternoon on this urgent problem.

Climate change is an existential threat to the health, national security, economic prosperity, and future of the American people and our planet.

Our habitat is at stake——

Human kind's ability to thrive on a dramatically changing planet is in question——

The Fourth National Climate Assessment and the 2018 Intergovernmental Panel on Climate Change (IPCC) have illustrated an urgent and inconvenient truth—we're out of time.

The IPCC 2018 report found that even a 1.5 degree increase would have disastrous effects to our habitat.

To do our part in preventing the most drastic impacts of climate change, and to stay below a 1.5 degrees Celsius temperature increase, the United States must achieve the goals committed to at the Paris Climate Accords and attain net-zero emissions by 2050 at the latest.

Limiting warming to 1.5 degrees Celsius is still possible. It is a call to action we *must* heed with seriousness.

We've already seen the impacts of climate change in our state of Minnesota. The Great Lakes Region is warming faster than most other regions in the United States.

Lack of action will result in higher populations exposed to water scarcity, extreme heat, and displacement from sea-level rise and severe weather events.

The costs are rising and the science is clear. We cannot let the enormity of the issue overwhelm us, we must start addressing this problem immediately.

That's why I'm a member of the New Dems Climate Task Force. Our goal is to put forth an ambitious pro-climate AND pro-market agenda that leverages every decarbonization solution available to advance a swift and just transition to a clean economy.

We need to be focused on solutions for the climate crisis. One of the solutions I find promising is carbon pricing. I'm in support of H.R. 763, the Energy Innovation and Carbon Dividend Act—a bipartisan bill with Republican roots—which puts a fee on fossil fuels like coal, oil, and gas.

Climate change has a price, and this legislation makes sure that big polluters are the ones paying it.

By starting low and growing over time, it will drive down carbon pollution by incentivizing energy companies, industries, and consumers to move toward cleaner, cheaper options.

The rate begins at $15 in the first year, increases by $10 each year, and is subject to further adjustments based on the progress in meeting specified emissions reduction targets.

And it's completely revenue-neutral. The money collected from the carbon fee is allocated in equal shares every month to the American people to spend as they see fit.

Program costs are paid from the fees collected. In this legislation, the government does not keep any of the money from the carbon fee.

Returning revenue from carbon fees directly to the people as carbon dividends—payments to every person—would transform carbon pricing from a regressive policy into a progressive one.

This policy is all about incentivizing the change, which many including myself find to be the most effective way to actualize our climate goals.

The price signal motivates consumers, businesses, and governments alike to invest in renewables and energy efficiency.

Carbon dividends would yield a net increase in income for everyone whose carbon footprint is smaller than average.

People with larger carbon footprints pull up the average, they would pay more in higher fuel expenditures than they get back in dividends, while the majority of households, including most low-income and middle-class families, would come out ahead.

In addition, a clean-energy transition will need smart regulations and public investments as well as aggressive emissions limits.

Carbon pricing isn't the only answer to the Climate Crisis but one of the most effective tools to meeting the goals of the IPCC.

There are many common-sense environmental policies that we can and should pursue.

However, it is true with climate issues as it is every other important policy we consider, that in order to begin making meaningful change, we must reform our government.

Too many wealthy special interests have far too much control when it comes to climate policy.

It is time to end the corrupting influence of special interest money in the halls of Congress and do what is right for our planet and our future.

When it comes to our climate, environment, and habitat, we're living in an era of great opportunity—and great consequence. The time to act—the time to lead—is now.

Thank you.

Ms. CASTOR. Mr. Kilmer, you are recognized for 5 minutes.

STATEMENT OF THE HON. DEREK KILMER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. KILMER. Thank you, Chair Castor, for holding this important hearing today and for taking on this important challenge.

I was born and raised on the Olympic peninsula in northwest Washington State, and I am now honored to represent the district that I grew up in. In the Pacific Northwest, we have a sense of urgency about addressing climate change, and that urgency is driven in part by the fact that we are already seeing its impacts.

Where I am from, we have four coastal tribes that, as we sit here, are in the process of trying to move to higher ground because of rising sea levels, more severe storms, not to mention the threat of tsunami. Catastrophic wildfires threaten the health and safety of communities throughout the Pacific Northwest, and our region's

largest employer, the United States Navy, identifies climate change as a threat multiplier that makes our world less safe. That shouldn't be surprising. We have seen decades of scientific evidence that climate change will lead to devastating environmental, economic, public health, and national security consequences. Climate change is real and it requires bold action. And sadly, that commitment to science and that sense of urgency have been largely absent from the current administration.

While President Obama took significant steps to address this challenge, President Trump, immediately upon taking office, began rolling back those policies. He has begun the process to remove America from the Paris climate agreement. He has repealed efforts to reduce carbon emissions from power plants and automobile tailpipes, and those actions are wrongheaded. And to protect our communities, our national security, and our economic interest, we have a moral obligation to act.

The scientific consensus is that we need to achieve the critical goal of economywide, net-zero greenhouse gas emissions by 2050. That means we need to catch up to our global peers and our competitors, and it means we need to build a politically resilient roadmap that outlasts election cycles.

I am honored to serve as the chair of the New Democrat Coalition, a group of over 100 forward-looking House Democrats, who all share a commitment to develop endurable policy solutions to our most pressing issues. And I am proud that our coalition created a new climate change task force to develop an ambitious and actionable policy strategy to address the threat of climate change.

Our agenda is grounded in three main principles. First, that combating climate change requires global action. America should be leading the way in combating climate change, not sitting on the sidelines, and that is why, among other strategies, our coalition endorsed the Climate Action Now Act to recommit to the Paris climate accord.

Second, transitioning to a climate-forward economy represents an opportunity to mobilize our economy and create high-quality jobs.

Other nations have recognized that combating climate change can lead to new innovations, new industries, and new jobs. The United States should too. What is more, we should ensure Federal energy and technology policies enable our country to leverage every decarbonization tool available to reach our goals.

Among other strategies, our agenda focuses on clean energy innovation. We have endorsed bills to increase Federal research and to encourage the development and adoption of green innovation. We can also set predictable pricing those through market-based solutions like carbon pricing and greenhouse gas emission standards.

And finally, enacting a climate-forward agenda requires investing in communities, resilience, and relief. We cannot leave frontline communities behind. The House has already passed three pieces of legislation to expand research and innovation to understand and address ocean acidification and coastal community vulnerabilities. Additionally, we need to empower workers in communities to navigate economic change, not to be victims of it.

Earlier this fall, we saw marches taking place all across our Nation urging leaders to do something. These young activists made a

powerful statement, and now leaders in Washington, D.C. need to make real progress. While D.C. currently has divided government, which has been our reality for nearly a decade, we can't wait. With each passing day as more greenhouse gases are emitted into our atmosphere, the crisis becomes more difficult to combat. We cannot afford for solutions to get caught up in partisan battles or for persistent inaction. We need to make progress today, and that is why the New Democrat Coalition endorsed several bills that have bipartisan support in the House and in the Senate and that can make a difference today. And I have brought you a list of the bills that we have endorsed, and I hope I can submit those for the record.

Ms. CASTOR. Without objection.

[The information follows:]

Submission for the Record
Representative Kathy Castor
Select Committee on the Climate Crisis
November 14, 2019

ATTACHMENT: "New Democrat Coalition Endorsed Legislation." New Democrat Coalition, 2019.

This document is retained in the committee files and available at: https://newdemocratcoalition.house.gov/download/ndc-cc-legislation.

Mr. KILMER. Our coalition's bill, endorsements, and policy roadmap are just the beginning. We urge both Chambers, the House and the Senate, to move this suite of bills so we can break the logjam and begin to address climate change with the urgency that it demands. Communities in my region and around the planet cannot wait.

Thank you, Madam Chair.

[The statement of Mr. Kilmer follows:]

Testimony of the Hon. Derek Kilmer
A Representative in Congress from the State of Washington

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you Chair Castor and Ranking Member Graves for holding this important hearing today.

I was born and raised on the Olympic Peninsula in Northwest Washington, in the District that I am now honored to represent, Washington's Sixth.

And there, in the Pacific Northwest, we have a sense of urgency about addressing climate change. That urgency is driven in part, by the fact that we are already seeing its impacts.

Where I'm from, we have four coastal tribes that are trying to move to higher ground due to rising sea levels and more severe storms. Catastrophic wildfires threaten the health and safety of communities throughout the Pacific Northwest. And our region's largest employer—the Department of Defense—identifies climate change as a "threat multiplier" [1] that makes our world less safe.

This shouldn't be surprising. We've seen decades of scientific evidence that climate change will lead to devastating environmental, economic, public health, and national security consequences.

Climate change is real, and it requires bold action.

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[1] https://archive.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf.

Sadly, that commitment to science and that sense of urgency have been absent from the Trump Administration. While President Obama took significant steps to step up to this challenge, President Trump—immediately upon taking office—began rolling back [2] those policies. He has begun the process to remove America from the Paris Climate Agreement. He's repealed efforts to reduce carbon emissions from power plants and automobile tailpipes.

These actions are wrongheaded. To protect our communities, our national security, and our economic interests, we have a moral obligation to act.

The scientific consensus is that we need to achieve the critical goal of economy-wide, net-zero greenhouse gas emissions by 2050. That means we need to catch up to our global peers and competitors. And it means we need to build a politically resilient roadmap that outlasts election cycles.

I serve as the Chair of the New Democrat Coalition,[3] a group of over 100 forward-looking House Democrats who all share a commitment to developing durable policy solutions to our most pressing issues. I'm proud that our coalition created a new Climate Change Task Force to develop an ambitious and actionable policy strategy [4] to address the threat of climate change.

Our agenda is grounded in three main principles.

1. Combating climate change requires global action

America should be leading the way in combating climate change—not sitting on the sidelines. That's why, among other strategies, our coalition endorsed the Climate Action Now Act [5] to recommit to the Paris Climate Accord.

2. Transitioning to a climate-forward economy represents an opportunity to mobilize our economy and create high quality jobs.

Other nations have recognized that combating climate change can lead to new innovations, industries, and jobs. The United States should too. What's more, we should ensure federal energy and technology policies enable our country to leverage every decarbonization tool available to reach our goals.

Among other strategies, our agenda focuses on clean energy innovation. We've endorsed bills to increase federal research and encourage the development and adoption of green innovation.

3. Enacting a climate-forward agenda requires investing in communities, resilience, and relief

We cannot leave frontline communities behind. The House has already passed three pieces of legislation [6] to expand research and innovation to understand and address ocean acidification and coastal community vulnerabilities. Additionally, we must empower workers and communities to navigate economic change—not to be victims of it.

Earlier this fall, we saw marches taking place all across our nation urging leaders to 'do something.' These young activists made a powerful statement.[7] Now, leaders in D.C. need to make real progress.

While D.C. currently has divided government (which has been our reality for nearly a decade), we cannot wait. With each passing day, as more greenhouse gases are emitted into our atmosphere, this crisis becomes more difficult to combat. We cannot afford for solutions to get caught up in partisan battles or for persistent inaction until Democrats hold all levers of power. We need to make progress today.

That's why the New Democrat Coalition endorsed several bills that have *bipartisan* support in the House and Senate and that can make a difference today.

Our Coalition's bill endorsements and policy roadmap are just the beginning. We urge both chambers of Congress to move this suite of bills so we can break the log-jam and begin to address climate change with the urgency it demands. Communities in my region and around our plant can't wait.

Ms. CASTOR. Well, thank you, Mr. Kilmer. The New Dems have been out in force today, and I appreciate it. Thank you for your leadership.

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[2] https://www.nytimes.com/interactive/2019/climate/trump-environment-rollbacks.html.

[3] https://newdemocratcoalition.house.gov/media-center/press-releases/new-democrat-coalition-releases-priorities-for-us-climate-policy.

[4] https://newdemocratcoalition.house.gov/imo/media/doc/Climate%20Change%20Task%20Force-%20US%20Climate%20Policy%20Priorities%20Document_FINAL%20SEARCHABLE.pdf.

[5] https://newdemocratcoalition.house.gov/media-center/press-releases/new-democrat-coalition-chair-derek-kilmer-statement-on-the-house-passage-of-broad-legislation-to-fight-climate-change-.

[6] https://newdemocratcoalition.house.gov/media-center/press-releases/new-democrat-coalition-climate-change-task-force-statement-on-passage-of-legislation-to-address-ocean-acidification.

[7] https://www.usatoday.com/story/news/world/2019/09/26/meet-greta-thunberg-young-climate-activists-filed-complaint-united-nations/2440431001/.

Next, we are going to go to Chairman DeFazio and I want to thank him for his years of focus on the climate crisis. He is going to be a linchpin in everything that America does, especially when it comes to transportation and infrastructure and all of the policies that we need to enact moving forward, so thank you very much for being here, Mr. Chairman. You are recognized for 5 minutes.

STATEMENT OF THE HON. PETER A. DEFAZIO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. DEFAZIO. Thank you, Madam Chair, and thanks for convening this hearing today.

As you did point out, transportation is the single largest contributor to climate change and carbon pollution in the United States, so we have to defossilize transportation. There are a number of steps in the bill we are drafting for the reauthorization of a 21st century transportation bill that will move us in that direction. Electrification of the national highway network is a key factor. My committee even witnessed in Sweden an experiment with trucks that charge as they are driving, full-size heavy trucks. And, of course, I have seen Tesla electric truck, which is fabulous. We need advances in battery technology. I hope you will recommend that the Federal Government make investments in battery and storage technologies of all sorts.

Secondly, of course, the most carbon efficient way of transit transportation is walking and the pedestrian. We are having record fatalities, and we have got to make our cities safer so more and more people can choose those options. And there will be very substantial investment in that. Transit has fallen into a state of disrepair. Much more energy efficient, much of it is already electrified, and we need to bring that up to a state of good repair. That is a hundred billion dollars, let alone building out new transit options for people.

The most efficient way to move freight—well, we have all seen the ads from CSX, rail is way more efficient than trucks, but the most efficient way is maritime. So we are going to do additional investments in the inland waterway system in our harbors and ports and encourage something that is hard to say, if I won't stumble over it, short sea shipping. And so we need—on the coast, we could be moving a heck of a lot more goods on the oceans, and it is incredibly energy efficient. The IMO, the International Maritime Organization, has set goals for—at least is moving away from dirty bunker fuel moving to cleaner fuels. But Maersk, the largest shipping company, has said that they are going to be totally carbon free by 2050.

So, you know, we need—there is some incredibly interesting things going on in maritime with sail assist and solar and hybrids and those sorts of things. So, again, an area that could benefit from a boost from the Federal Government.

In my committee also, we passed out the first wastewater bill reauthorization, SRS, since 1987. And having heard testimony from a sewer authority in New Jersey, I put in a mandate that any future Federal investment in wastewater that if it is technologically feasible, and that would only be—it wouldn't be if it was a retrofit of an old plant, perhaps, they have to capture their methane and

generate electricity. And this sewer district in New Jersey is actually providing all their own electricity and making money by selling on to the grid.

Also, the Federal Government is the largest single lessor or owner of commercial office space in the United States of America. We are doing platinum LEED now, but there is a standard beyond platinum LEED, which is carbon neutral buildings. And I am going to be moving the GSA in that direction to carbon neutral buildings. And then as we rebuild our infrastructure, we have to rebuild it in a way, obviously, that is resilient for severe climate events. We also will have to rebuild it in a way that can potentially accommodate autonomous vehicles. But beyond that, there are new materials out there. There is even a form of concrete that absorbs carbon, and you can also mix carbon into standard concrete, lower the footprint of producing the concrete and, you know, permanently encapsulate that carbon and it actually strengthens the concrete. It is a winner all the way around.

So we are going to be looking at new materials that are less carbon polluting, more resilient, as we look to the future.

Finally, two other quick points. I have a bill, the Act for the Amazon Act, which would go after Brazil for the deliberate deforestation, and would prohibit the import of goods that are produced on deforested tropical lands and put some other incentives or, some might say, penalties on Brazil.

And then finally, I heard earlier mention from one of my colleagues, the idea of cap and dividend. I am working on a little different version, which would have a progressive dividend. I don't see why a billionaire who flies around in a private jet and owns 12 houses should get the same rebate that a family of three living in Springfield, Oregon, gets. So, you know, I am looking at modifying that proposal.

With that, Madam Chair, thank you for your leadership on this issue. It is only about the future of the planet.

[The statement of Mr. DeFazio follows:]

Testimony of the Hon. Peter DeFazio
A Representative in Congress from the State of Oregon

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

CHAIR CASTOR AND RANKING MEMBER GRAVES: Thank you for holding today's hearing. To be successful in combatting the climate crisis, all ideas must be on the table. As a leader in this fight, I appreciate the opportunity to share my ideas and priorities.

Climate change is an existential threat to the planet as we know it, and we have a moral obligation to act aggressively and immediately. Congress has a duty to ensure the youth of today and future generations inherit an environment that is healthy and sustainable.

We are already experiencing the consequences of inaction. Our summers are getting hotter, droughts more frequent, and ocean acidification continues to escalate. In my district, our forests have become tinderboxes. Last year, and the year before, Southwest Oregon experienced devastating wildfires that burned hundreds of thousands of acres and generated hundreds of thousands of tons of carbon emissions. The fires not only destroyed our forests and private lands, they also affected our

recreation and tourism industry and produced dangerous levels of smoke that threatened public health. Earlier this year, my district experienced flooding and snow levels we haven't seen in decades.

We ignore at our peril that climate change has occurred because of human activities. Recent studies by prominent climate scientists provide a critical wake-up call and reveal the damage that has already taken place. One, published in November 2017 by my constituent, Oregon State University professor Dr. Bill Ripple, is entitled "World Scientists' Warning to Humanity: A Second Notice," and endorsed by more than 15,000 scientists. In the first "Warning to Humanity" report, released 25 years before, scientists called on humanity to make changes or, "so alter the living world that it will be unable to sustain in the manner that we know." Sadly, Dr. Ripple found that we had only made progress in one major area: our effort to reduce the amount of ozone-depleting substances.

This past Earth Day I participated in a conference with Dr. Ripple to discuss his findings. While his study laid out the urgency of reversing the current path to environmental destruction, it also provided ways we can address climate change today. Dr. Ripple's study found that one of the most effective ways we can reduce carbon emissions is to support policies that have a strong federal mandate to reduce greenhouse gas (GHG) emissions in the U.S. and abroad.

Again working with a team of international climate experts, Dr. Ripple released his second warning which reinforced his initial study, using data that tracks the vital signs of climatic impact. His report declared that not only has the climate crisis arrived, it is accelerating faster than most scientists expected, and is more severe than anticipated.

In September, the International Panel on Climate Change issued the "Ocean and Cryosphere in a Changing Climate" report. Like Dr. Ripple's 2017 study, the report held dire warnings about the damage climate change is having on ocean ecosystems and the danger it poses to the billions of people that live along coastlines. It provided more evidence that melting ice sheets and glaciers, sea level rise, and ocean acidification are getting worse. The research also found that the ocean also experiences "heat waves," just like those that occur on land. Ocean heat waves impact nearly all marine life by disrupting the ocean's food chain. In 2014 and 2015, an ocean heat wave called "the Blob" occurred in the Pacific Northwest. It wreaked havoc off the Oregon coast, causing the largest algal bloom ever recorded in our region, shutting down crabbing and other fisheries for months. If oceans continue to warm and acidification intensifies, Oregon's coastal economies could collapse.

Thankfully, there are ways to not only reverse the damage to the ocean but also to use the ocean as a way reduce climate change. Another of my constituents, Oregon State University Distinguished professor and former Administrator of the National Oceanic and Atmospheric Administration Dr. Jane Lubchenco, recently led the High Level Panel for A Sustainable Ocean Economy's report "the Ocean as a Solution to Climate Change" which found the ocean can be a powerful tool to sequester carbon as well as development of renewable energy sources. The report found that developing off-shore energy sources while not negatively affecting marine life, restoring blue carbon ecosystems such as seagrasses and salt marshes, and using alternative fuels in the shipping industry can significantly contribute to combatting climate change.

As I noted at the beginning of my testimony, there is no one policy that will achieve the significant reduction of greenhouse gas emissions we need for humanity to survive. A decade ago, I was one of the first Members of Congress to be the lead cosponsor of a bill to cap, regulate, and reduce emissions, and I believe that is a policy we must consider. Other incentives I support to expedite the transition to a one hundred percent renewable energy portfolio, such as progressive carbon fee and dividend or similar proposals are a vital part of how to accomplish this.

Yet it's critical to ensure that our policies do not unintentionally hurt struggling low income, rural communities, or benefit some regions while penalizing others. That is one reason I am an original cosponsor of H. Res. 109, also known as the Green New Deal. Beyond laying out a bold action plan to quickly achieve net-zero greenhouse gas emissions, it makes clear that we can create millions of good, high-wage jobs in every region of the country.

At twenty-nine percent, the transportation sector is now the biggest source of greenhouse gas emissions in the U.S. Within the transportation sector, passenger and freight vehicles contribute 83 percent of global warming emissions. Congress must act to combat this, and as Chair of the Transportation and Infrastructure Committee, I intend to comprehensively tackle the transportation system's effect on climate change as part of the upcoming surface transportation bill.

We must address emissions from passenger vehicles, and that means eliminating emissions from single occupancy vehicles through electrification and investing in

modes of transportation that don't involve taking a car at all. Far greater investment in public transit and bicycle and pedestrian infrastructure will provide safe, reliable, competitive alternatives to single occupancy vehicles that choke our interstate highway system, burn fossil fuels sitting in traffic, and slow the efficient movement of freight. Transit needs a shot in the arm to bring rolling stock and rail systems to a state of good repair. Further resources must be brought to bear to increase levels of service to provide transit riders reliable and frequent service that gets them where they need to go when they need to be there.

The lowest carbon mode of transportation is walking and biking. Today, record numbers of Americans are walking and biking as a primary mode of transport, but also record numbers of American cyclists and pedestrians are dying on our roadways. In fact, the National Highway Transportation Safety Administration reported that, nearly 20 bicyclists and pedestrians were killed *every single day* last year.[1] My transportation bill will include new funding to improve safety and help cities create the network of walking and biking infrastructure that will allow people to safely walk and bike in their communities.

I also realize, however, that many Americans, especially those in rural areas, will continue to drive. We must invest in the infrastructure to support a shift from carbon-based fuel sources to electric and zero emission vehicle technology and fueling systems. My bill will lay the groundwork for an electrified highway system to reduce range anxiety and further the broad adoption of zero emission vehicles.

While reducing carbon emissions from the transportation sector will have the largest impact, there are other areas within the Transportation and Infrastructure Committee's jurisdiction in which I'm pushing changes that will help reduce human impacts on climate change.

For example, last month my committee passed a landmark reauthorization of the Clean Water State Revolving Fund which includes a requirement for utilities to maximize their energy efficiency potential, including the recapture and reuse of methane emissions. Innovative approaches like this should be part of our nation's comprehensive strategy to combat climate change.

I intend to provide continued federal leadership in the administration of public building contracts, moving the GSA beyond the current LEED standards and towards carbon neutral facilities. In addition, other modes within the transportation sector will need to become more sustainable. We need to expand access to renewable jet fuel, increase freight transport by water, and reduce the carbon emissions of overseas shipping. As a matter of fact, A.P. Møller Maersk—the world's largest ocean carrier—and other maritime stakeholders in the Global Maritime Forum have committed to decarbonize ocean shipping by 2050. We should follow their lead across other transportation modes.

Finally, as we actively work to reduce emissions, we also need to steel ourselves with more resilient infrastructure. Revisiting design standards in flood-prone areas, utilizing less carbon intensive materials, and incorporating natural infrastructure are all techniques that must be part of our future infrastructure plans. Building infrastructure that will have a smaller carbon footprint and be more resilient to storms of greater intensity will help prepare us for the changing climate and reduce the long-term costs for recovery after damaging storms.

Threats to our climate are happening around the world. Although outside our borders these climate crises have impacts at home. In response to the devasting fires and continued illegal deforestation in the Amazon, I introduced H.R. 4263, the Act for the Amazon Act. The bill would ban the import of items produced by illegal deforestation, halt military aid, and prohibit a free trade agreement with Brazil until their government ends the devastation caused by the fires and illegal deforestation. The Amazon serves as the lungs of the earth. Without significant intervention to curtail destruction of the rainforest, it will impact rainfall in the United States, dramatically reduce our crop yields and food supply, and increase the extreme conditions for catastrophic wildfires in the Pacific Northwest. We must act to end the destruction of the rainforest, and my bill takes a significant step to do so.

There are numerous technologies that can reduce emissions or sequester carbon. Some are mature and in use today, and some are in a nascent stage of development. For example, we must promote the use and development of 100 percent renewable hydrogen. In early August I held a roundtable to raise awareness of the potential for renewable hydrogen to power parts of our transportation system, maximize the efficiency of renewable energy production, and make our communities more resilient

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[1] National Center for Statistics and Analysis. (2019, October). 2018 fatal motor vehicle crashes: Overview. (Traffic Safety Facts Research Note. Report No. DOT HS 812 826). Washington, DC: National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812826.

during natural disasters, all while significantly lowering carbon emissions. I brought together utilities, a major car manufacturer, energy entrepreneurs, and nonprofits dedicated to fighting climate change through substantive policy.

Renewable hydrogen is a clean fuel that can power cars, buses, trains, ships, and even electric utilities while only emitting water vapor as a byproduct. To produce this hydrogen, electricity is used to split or "crack" water into hydrogen and oxygen. When that electricity comes from renewable energy sources like wind and solar, then we have a revolutionary fuel that could potentially meet significant amounts of energy needs without any carbon emissions.

The ability to store surplus renewably-generated electricity is one of the most challenging aspects to achieve a 100 percent renewable energy future. By using renewable electricity to convert water into hydrogen, we can store hydrogen fuel in fuel cells that can generate power when we need it.

An increasing number of utilities and companies are incorporating hydrogen fuel into their portfolios and long-term business plans. At the roundtable, Toyota brought its hydrogen-fuel-cell-powered Mirai passenger car. Tech start-up Hydrostar brought a demonstration of a low cost electrolyzer that can use renewable energy to create 100 percent renewable hydrogen. The Eugene (Oregon) Water and Electric Board is looking at innovative plans to use hydrogen to store surplus renewable energy as emergency backup power during natural disasters.

California is nurturing the use of hydrogen fuel-powered vehicles by co-funding hydrogen refueling stations. There are now more than 30 hydrogen fueling stations powering the more than 4,200 hydrogen fuel cars in the state. The federal government must follow California's lead and propel the growth of hydrogen fuel technologies. Like wind and solar, the federal government can provide various tools to help this technology reach economies of scale, reduce its price, and make it more available to the public.

As I noted, it is immoral and unethical for policy makers to abandon our duty to leave a sustainable planet. Our nation's youth rightly demand that the government has a constitutional duty to protect them from the existential threat of climate change. Which is why in February, I was one of seven members of Congress to send a "friend of the court" brief to support the plaintiffs in the *Juliana* vs. *United States* to the court in support of their argument. Three of the plaintiffs are from my district; once again Oregon leads the way.

Let me be clear: I will not stand by as our earth lurches toward a state that cannot support life. I am open to any and all ideas to overcome our climate crisis. One thing is certain: we cannot give up. We don't have to. We already have solutions that will put us on the road to lower carbon emissions, we just need the political will to act. You can count on me to continue working to end the most critical issue facing our world.

Thank you again for holding today's hearing.

Ms. CASTOR. Well, fortunately, we have you as the chairman of the Transportation and Infrastructure Committee to help us.

You know, so much of the dialogue around the climate crisis involves the challenges ahead, but I think what you have been able to do through your work and your testimony today is highlight the opportunities, the opportunities for families, hardworking families across the country to save money, to build these new innovative technologies. So we will look forward to working with you and your professional staff, all of your committee members on charting that course forward.

Mr. DEFAZIO. Thank you, Madam Chair.

Ms. CASTOR. Thank you very much.

And, Mr. Schneider, you are recognized for 5 minutes.

STATEMENT OF THE HON. BRADLEY SCOTT SCHNEIDER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. SCHNEIDER. Thank you, Madam Chair. And I want to thank you for your leadership on this committee and the work you are doing, and then today, for the opportunity to testify before you.

Congress must urgently address climate change because climate change is not a future threat. As others have said, it is a very real and present danger. On nearly weekly basis we see news of catastrophic climate events, including Category 5 hurricanes and typhoons, more widespread floods, record-setting tornadoes, and longer and more devastating fire seasons. This is true in the United States, but also around the world. The need for bold action is now. The decisions we make today will determine the future we pass on to our children and will determine the future of our way of life on this planet.

In that vein, I want to highlight four general topics. First, the idea that comprehensive congressional response to climate change is necessary. Addressing impacts and crafting solutions extends beyond the single jurisdiction of any one congressional committee. It affects our national domestic security, it impacts communities both urban and rural, it threatens our national energy grid, our emergency response capacity, transportation infrastructure. Rising seas pose new risks to coastal communities and naval bases. Changing weather patterns threaten farms and, therefore, food security, not just here at home, but around the world. It is placing new demands on our foreign policy and our international aid.

Because the challenges are so multifaceted, the tools we will need, from tax incentives to spur development to assistance for vulnerable communities, will necessarily come from every corner of government. This is why I believe that every committee in Congress should charge and empower one of its standing subcommittees to address climate-related policy within its jurisdiction. This assignment should be reflected in the subcommittee's name. To properly address climate change, we will need a whole-of-government approach and all hands on deck. Congress must approach the issue with the same level of thoroughness.

The second topic deals with resiliency that others have talked about as well. In this, as in previous Congresses, we are pushing for Federal investment in our Nation's infrastructure. We have the opportunity to spur investment in infrastructure through regularly authorized legislation like that governing surface transportation that we will address in this Congress, as well as through more comprehensive infrastructure packages that I hope we will address and, hopefully, pass in this Congress.

As we look at these opportunities to make significant Federal investments in infrastructure around the country, we must ensure that these investments are made with the long-term impacts of climate change in mind. In my own district, for instance, we have seen the effect of climate change firsthand through increased rainfall and flooding in recent years, challenging our storm water infrastructure. We must make sure that our future investments in infrastructure are prepared to handle the capacity and ongoing demands climate change will bring from increased natural disasters to adapting to the needs of an electrical grid run by renewables.

Third, with respect to natural disaster funding. Climate change has already significantly increased dangerous and damaging natural disasters around the world, including six Category 5 hurricanes in the last 4 years, the first ever extreme red flag warning

for wildfires in California, and the increasingly common occurrence of so-called 100- and even 500-year floods.

There are vital Federal programs that help communities prepare for and respond to these disasters, but we know that these programs will be stretched thin as climate change exacerbates the cost and frequency of these events. I believe this committee must make sure funding for natural disasters is examined through the lens of climate change so that we can be sure future events have adequate funding prepared to respond.

Finally, the Great Lakes Restoration Initiative. As my colleague Marcy Kaptur spoke earlier about the effects of climate change and algal blooms in Lake Erie, we are seeing impacts across every great lake, and we must look to existing, successful Federal programs to address local and regional climate-related issues. The Great Lakes Restoration Initiative has been a successful Federal program that promotes conservation, stewardship, and environmental programming in the Great Lakes region.

As this committee looks for ways to address regionally specific concerns stemming from climate change, I encourage you to look at the Great Lakes Restoration Initiative as a means of addressing Great Lakes issues specifically and to follow the successful partnership model of the GLRI more generally when considering new programs.

Again, I want to emphasize that addressing climate change will require an all-of-government response. I look forward to working with my colleagues on this committee to chart a more sustainable and prosperous future for our planet and to tackle with the fierce urgency this issue requires.

Thank you very much. I yield back.

[The statement of Mr. Schneider follows:]

Testimony of the Hon. Bradley "Brad" Schneider
A Representative in Congress from the State of Illinois

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Madam Chair, for the opportunity to testify. And thank you for the leadership of this committee. Congress must address climate change with the dire urgency the situation requires, because climate change is not a future threat, it is a present danger. On a near weekly basis we see news of catastrophic floods, record setting tornadoes, and longer and more devastating fire seasons.

The need for urgent action is now. The decisions we make today will determine the future we pass on to our children.

Subcommittee

Climate change is a global problem that evades the single jurisdiction of just one congressional committee. It affects our natural resources, our national energy grid, our emergency response, transportation infrastructure, foreign policy, and more. And the tools we'll need—from tax incentives to spur development to assistance for vulnerable communities—come from every corner of government.

I propose that every committee in Congress empower one of its subcommittees to address climate-related policy within its jurisdiction. To properly address climate change, we will need a whole-of-government approach and for all hands on deck. Congress must approach the issue with the same level of thoroughness.

Resiliency

In this as in previous Congresses, we are pushing for federal investment in our nation's infrastructure. We have the opportunity to spur investment in infrastructure through regularly authorized legislation like that governing surface transportation that we will address this Congress, and through more comprehensive infrastructure packages like that which we all hope we can pass this Congress.

As we look at these opportunities to make significant federal investments in infrastructure around the country, we must ensure that these investments are made with climate change in mind. In my own district, for instance, we have seen climate change first-hand through increased rainfall and flooding in recent decades, challenging our stormwater infrastructure. We must make sure that our future investments in infrastructure are prepared to handle the capacity and demands climate change will bring—from increased natural disasters to adapting to the needs of an electrical grid run by renewables.

Natural Disaster Funding

Climate change has already significantly increased dangerous and damaging natural disasters around the world, including six Category 5 hurricanes in the past four years, the first-ever Extreme Red Flag Warning for wildfires, and the increasingly common occurrence of the so-called "100-year" floods.

There are vital federal programs that help communities prepare for and respond to these disasters, but we know that these programs will be stretched thin as climate change exacerbates the cost and frequency of these events. I believe this Committee must make sure funding for natural disasters is examined through the lens of climate change so that we can be sure future events have adequate funding prepared to respond.

GLRI

Finally, we must look to existing, successful federal programs to address local and regional climate-related issues. The Great Lakes Restoration Initiative has been a successful federal program that promotes conservation, stewardship, and environmental programming in the Great Lakes Region. As this Committee looks for ways to address regionally-specific concerns stemming from climate change, I encourage you to look at GLRI as a means of addressing Great Lakes issues specifically, and to follow the successful partnership model of GLRI more generally when considering new programs.

Addressing climate change will require an all of government response. I look forward to working with my colleagues on this committee to chart a more sustainable and prosperous future for our planet, and to address this with the fierce urgency the issue requires.

Ms. CASTOR. Well, thank you very much, Mr. Schneider.

Mr. Peters, you are my colleague from the Energy and Commerce Committee. I know that these issues have been of interest to you from the time before you entered the Congress, so I am pleased that you have recommendations for the select committee. You are recognized for 5 minutes.

STATEMENT OF THE HON. SCOTT H. PETERS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. PETERS. Thank you so much, Madam Chair. And thank you for your pivotal leadership on this crisis today.

You know, we now well understand climate change. We have many of the tools at our disposal that we need to deal with climate change. We know the target net-zero by mid-century, but we cannot get to where we need to be without dramatic and substantive policy change. We need to tackle that now.

Some argue that what we need is the Green New Deal. While I agree with just about every policy in the Green New Deal that has to do with climate, it also calls for major expensive societal overhauls, like a Federal jobs' guarantee and free college for every American, and we could debate those policies separately without burdening the already daunting task of climate action with these

extra requirements. And that was the point that Greta Thunberg made recently when she came to Capitol Hill. She said we need to keep our eyes on the ball, quote.

Yes, of course, a sustainable transformed world will include lots of new benefits, but you have to understand, this is not primarily an opportunity to create new green jobs, new businesses, or green economic growth. This is above all an emergency, and not just any emergency. This is the biggest crisis humanity has ever faced.

So it is not responsible for us in Congress to pretend that a one-party, nonbinding resolution that itself enacts not a single legislative change or any one-party bill that cannot become law is the answer to this question. Great challenges like sending a man to the Moon or winning a world war against tyranny or fighting climate change to save the planet are one with national unity and consensus. Great challenges don't wait for or depend on the results of the next election. We need to work together now across party lines if we want our children and grandchildren to have a habitable planet, and we have some great opportunities that I want to point out. Some of the context has changed.

At the Energy and Commerce Committee this April, even EPA Administrator Wheeler testified that climate change is real and that it is driven by human activity, including the burning of fossil fuels. That is not exactly climate change denial. Florida Republicans Francis Rooney, Brian Mast, and Matt Gaetz are all sponsors of legitimate climate legislation, because Floridians have noticed the streets of Miami are flooded on sunny days and they know why that is. And perhaps most noteworthy for bringing about a change of opinion toward climate among our Republican colleagues is the moral advocacy of religious leaders like Pope Francis and the Evangelical Environmental Network, which is prioritizing climate change action because they believe we are called upon to take care of God's creation.

So these trends present some new opportunities, and I have been looking for bipartisan bills that actually pass. I assembled a climate playbook from work we have already done, over 90 bills, many of them are bipartisan, that we could take action on soon. Many have already cleared their committees, some have reached the floor. You have heard the New Democrat Coalition has endorsed 12 bills, seven of them are bipartisan.

One of those bills is the USE IT Act, which I coauthored with Dave McKinley from West Virginia. Bipartisan and bicameral, it supports the development of and construction of vital carbon capture and removal technologies as called for by the U.N. Intergovernmental Panel on Climate Change. It also invests in technologies to transform captured carbon dioxide into commercial products, like Chairman DeFazio was talking about.

Florida Republican Matt Gaetz and I introduced the bipartisan Super Pollutants Act, which aims to regulate black carbon, hydrofluorocarbons, and methane, some of the most potent greenhouse gases, together worth a half a degree of warming. Among other things, the bill would codify the new source methane regulation that the Trump administration is trying to kill and would incentivize and then mandate control of methane from existing sources.

Elise Stefanik and I introduced the Renewable Electricity Tax Credit Equalization Act, which would extend tax credits for investments and qualify renewable biomass, geothermal, solid waste, and hydropower so that we can develop new renewable baseload power that can replace fossil fuels.

We have introduced the DISASTER Act with Mark Meadows to mandate the OMB to give us an accurate picture of Federal cost for disaster response so we can understand the cost and emphasize the need to act on climate. And you have already heard about bipartisan efforts to advance a carbon fee, because we generally accept that a price on carbon is an indispensable component of an effective climate action strategy, incentivizing every business consumer and family to reduce their own carbon footprint.

With all these challenges, what is the right policy approach? I am for the ones that might actually become law, and I hope the committee agrees because there is no time to waste, there is no election to wait for. We need to work now to save this planet.

Again, thank you very much for your work.

[The statement of Mr. Peters follows:]

Testimony of the Hon. Scott Peters
A Representative in Congress from the State of California

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

We now well understand climate change, we know we have many of the tools at our disposal to deal with climate change, and we know the target is net zero by mid century. We cannot get to where we need to be without dramatic and substantive *policy* change. We need to tackle that now. Some argue that what we need is the Green New Deal.

While I agree with just about every policy in the Green New Deal that relates to climate change, it also calls for major, expensive, societal overhauls such as a federal jobs guarantee and free college for every American. We can debate those policies separately without burdening the already daunting task of climate action with these extra requirements.

Greta Thunberg emphasized when she came to Capitol Hill that we climate warriors need to keep our eyes on the ball. She said:

Yes, of course a sustainable transformed world will include lots of new benefits. But you have to understand. This is not primarily an opportunity to create new green jobs, new businesses or green economic growth. This is above all an emergency, and not just any emergency. This is the biggest crisis humanity has ever faced.

It's not responsible to pretend that a one-party, nonbinding resolution that itself enacts not a single legislative change or a one party bill that can't be enacted is the answer.

Great challenges like sending a man to the moon, or winning a world war against tyranny, or fighting climate change to save the planet are won with national unity and consensus. We need to work together if we want our children and our grandchildren to have a habitable planet. There is no time to waste.

We have some openings in the Congress to get real, bipartisan, science-based legislation passed. Let's seize them.

At the Energy and Commerce Committee this April, EPA Administrator Wheeler testified that climate change is real and that it is driven by human activity, including use of fossil fuels. Florida Republicans Francis Rooney, Brian Mast and Matt Gaetz are all cosponsors of legitimate climate legislation. Floridians have noticed the streets of Miami flooded on sunny days, and they know why that is.

Perhaps most noteworthy for bringing about a change of opinion toward climate among Republicans is the moral advocacy of religious leaders. Pope Francis issued

an encyclical declaring climate change is "both the cry of the earth and the cry of the poor."

The Evangelical Environmental Network is prioritizing climate change action, because they believe we are called upon to take care of God's creation. These trends present new opportunities for not just the usual suspects, but for actual change.

I assembled a Climate Playbook, which lays out over 90 bills authored by Democrats and Republicans in recent years, most of which already have bipartisan support. Many have already passed through their committees of jurisdiction and some have passed the full House. It's a resource we update as ideas are written into legislation, and as bills advance. It's hosted on my web site and available to everyone.

One of these bills is the (USE IT) Act, which I coauthored with Dave McKinley. It's bipartisan and bicameral and supports the development and construction of vital carbon capture and removal technologies as called for by the UN Intergovernmental Panel on Climate Change. It also invests in technologies to transform captured carbon dioxide into commercial products.

Florida Republican Matt Gaetz and I introduced the bipartisan Super Pollutants Act, which aims to regulate black carbon, hydrofluorocarbons, and methane—some of the most potent greenhouse gases—which are significantly more harmful than carbon dioxide. Among other things, the bill would codify the new source methane regulations the Trump Administration is trying to kill, and would incentivize, then mandate, control of methane from existing sources.

New York Republican Elise Stefanik and I introduced the Renewable Electricity Tax Credit Equalization Act, which extends tax credits for investments in qualified renewable biomass, geothermal, solid waste and hydropower, so that we can develop new renewable baseload power that could replace fossil fuels. The DISASTER Act, which I introduced with Rep. Mark Meadows, mandates the OMB to give us an accurate picture of federal costs for disaster response, so we can understand the costs and we can emphasize the need to act on climate.

Related to our clean energy future, Rep. Elaine Luria and Rob Wittman have introduced the Nuclear Energy Leadership Act, which has the DOE demonstrate advanced nuclear plants, develop the fuel needed for this technology, and write a 10-year strategic plan for advanced nuclear reactor development.

Finally, there are two bipartisan efforts to advance a carbon fee: the MARKET CHOICE Act and Energy Innovation and Carbon Dividend Act. We generally accept that a price on carbon is an indispensable component of an effective climate action plan, incentivizing every business, consumer and family to reduce their own carbon footprint.

Great challenges like sending a man to the moon, or winning a world war against tyranny, or fighting climate change to save the planet are won with national unity and consensus. Great challenges don't wait for or depend on the next election results. We need to work together now, across party lines, if we want our children and our grandchildren to have a habitable planet.

So, what's the right policy approach? I'm for the ones that might actually become law, and I hope the Committee agrees, there is no time to waste.

Ms. CASTOR. Well, thank you, Mr. Peters. You know, I guess it was a little over a year ago you said you were going to keep track of every climate bill that was filed in this Congress, and your climate playbook has become an invaluable resource. So thank you very much. Thank you for your testimony today.

Ms. Axne, we want to hear about the Iowa story. Since you arrived in the Congress, you have been an outspoken advocate for your State and what is happening there in the transformation to clean energy. So you are recognized for 5 minutes.

STATEMENT OF THE HON. CYNTHIA AXNE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF IOWA

Mrs. AXNE. Well, thank you so much Chairwoman Castor, Ranking Member Graves, and members of the Select Committee. Thank you for the opportunity to testify here today, and thanks for all the work that you have done to push this agenda forward.

As we all know, climate change is a real existential threat, and the impacts of climate change, as you are implying, don't just affect

our coast, but they also affect the heartland with changing weather patterns and devastating floods, and it is only going to get worse and impact our economy if we don't act.

My district experienced this pain firsthand just this year. Earlier this year, the Midwest suffered historic flooding on the Missouri River and put entire towns like Hamburg and Pacific Junction in my district completely under water. We still have 4 feet of water in many places with white caps flowing on it this many months later.

Not only did it cause pain and destruction, but it caused billions of dollars of damage in agricultural losses throughout Iowa, and now we are experiencing these historic so-called 100- or 500-year floods on a fairly regular basis. It is also been the wettest year on record for Iowans, which has made flood recovery even more difficult and has greatly affected our harvest. So the effects of climate change can't be ignored in places like Iowa.

So the situation in my district underscores the urgency of what we are hear to talk about today and, of course, why Congress must address the climate crisis with substantial legislation that will move us toward a cleaner environmental future. We simply can't afford to get this wrong, and we must work collaboratively with all stakeholders in both rural and urban communities to achieve meaningful results.

I come from the great Third District of Iowa. It is a row crop State in the heartland where agriculture and our rural communities are literally essential to who we are. Farmers quite often get a bad rap on environmental issues, but that is simply misguided. While we all can and must do more to address this crisis, farmers in my State and district have been on the forefront of this issue because the environment is their livelihood.

We have seen farmers adopt scientific solutions, technological advances, and groundbreaking innovations to improve the health of their land and become more efficient, while reducing their footprint, like precision agriculture practices that address every single inch of land and what is specifically needed for an input on that piece of land. In fact, over the last 70 years, farms have nearly tripled in production while inputs have stayed the same, so Iowans are feeding more with less, and this increased efficiency has also allowed farmers to grow crops to be converted into renewable biofuels.

These biofuels have helped reduce greenhouse gas emissions in the transportation sector, which we have indicated here is the leading industry for carbon emissions. Compared to petroleum, biodiesel reduces GHG emissions by upwards of 72 percent. And in 2018 alone, biofuels reduced GHG emissions equivalent to taking 17 million cars off the road. So the renewable fuel standard is an essential program to help us reduce our emissions, and Congress must support the biofuels industry to continue this.

Farmers have also implemented several conservation programs with success, like the Conservation Reserve Program, the Environmental Quality Incentives Program, and the Conservation Stewards Program. Between those programs, we have 132 million acres enrolled, which is 15 percent of all agricultural land in the country.

And additionally, I am very proud of this, Iowa leads the Nation in conservation tillage acres and is fifth in no-tillage practices.

So it all goes to show that farmers are already working hard to implement conservation practices that help our environment. But farmers are also facing really hard times right now between low years of commodity prices, a trade war that continues to threaten our market access, and unpredictable weather that harms production. So any additional conservation program should be modeled after the current ones and provide financial support and incentives.

There is also significant advances to be made with carbon sequestration. We should look at opportunities to promote practices that result in the greatest amount of carbon being sequestered and incentivize the implementation of those practices. I am proud of the work that the Iowa Soybean Association is doing in developing a soil and water outcomes fund that would provide financial incentives for farmers and monetize the carbon capture. And I encourage the select committee to look into the important work they are doing and look for opportunities that Congress can support.

We must also recognize the importance of rural broadband in this conversation, because as farmers continue to innovate and adapt groundbreaking precision agriculture technologies, they can have a significant impact on addressing the issues with climate change. So investing in rural communities allows for further deployment of wind and solar technologies as well. I have been there. I was in charge of implementing the governor's agenda for clean energy in the environment in Iowa. We now have over 9,000 jobs in that industry and almost 40 percent of our energy is there, so we ask you to continue to look at the Midwest to support these ideas.

Chairwoman Castor, you couldn't have said it any better during the opening remarks of the select committee's hearing on agriculture last month when you said farmers are already doing a lot to combat climate crisis and we must invest in them to do more.

So to finish this up, I am asking Congress to enact meaningful legislation to address climate crisis, but we have got to get our answers right, and that means working with partners in every sector, in every community to build upon a success they have and invest in new opportunities for carbon reduction.

Thanks again for letting me testify here today, and I really look forward to hearing your recommendations.

[The statement of Mrs. Axne follows:]

Testimony of the Hon. Cynthia "Cindy" Axne
A Representative in Congress from the State of Iowa

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor, Ranking Member Graves, and Members of the Select Committee—thank you for the opportunity to testify here today, and thank you all for the work you have done on this important committee.

Climate change is a real and existential threat. The impacts of climate change aren't just felt on the coasts with rising sea levels, but are also felt in the Heartland

with changing weather patterns and devastating floods. Climate change is already impacting America's economy, and it will only get worse if we don't act.

My district has experienced this pain first hand. Earlier this year, the Midwest suffered historic flooding of the Missouri River that put entire towns such as Hamburg and Pacific Junction in my district completely underwater.

The flooding caused pain and destruction for many of my constituents and caused billions of dollars in damage and agricultural losses throughout Iowa.

We are experiencing these historic, so-called 100 or 500 year floods far too often. This year was also the wettest year on record for Iowans, which has made flood recovery even more difficult and has greatly affected harvest. The effects of climate change cannot be ignored.

This situation in my district underscores the urgency of what we're here to talk about today. This Congress must address the climate crisis with substantial legislation that will move us towards a cleaner environmental future. We simply cannot afford to get this wrong, and we must work collaboratively with all stakeholders in both rural and urban communities to achieve meaningful results.

I come from the Third District of Iowa, a row crop state in the heartland, where agriculture and our rural communities are essential to who we are. Farmers often get a bad rap on environmental issues, but that is simply misguided.

While we all can and must do more to address this crisis, farmers in my state and district have been on the forefront of this issue—the environment is their livelihood.

We have seen farmers adopt scientific solutions, technological advances, and groundbreaking innovations to improve the health of their land and become more efficient while reducing their footprint. Like precision agriculture practices that address what's needed on every inch of land to use inputs in the most efficient way.

In fact, over the last seventy years farms have nearly tripled in production while inputs have stayed the same. Iowans are feeding more with less. This increased efficiency has also allowed farmers to grow crops to be converted into renewable biofuels.

These biofuels have helped reduce greenhouse gas emissions in the transportation sector, which as we all know is the leading industry for carbon emissions. In 2018 alone, biofuels reduced green house gas emissions equivalent to taking 17 million cars off the road.

Farmers have also successfully implemented conservation programs such as Conservation Reserve Program, the Environmental Quality Incentives Program, and the Conservation Stewards Program. Between these three programs, more than 132 million acres—15% of all agricultural land in the country—is enrolled in conservation practices.

Additionally—and I'm very proud of this—Iowa leads the nation in conservation tillage acres and is fifth in no-till acres.

This all goes to show that farmers are already working hard to implement conservation practices that help our environment. However, farmers are also facing hard times between years of low commodity prices, a trade war that has threatened market access, and unpredictable weather that has harmed production.

Any additional conservation programs should be modeled after the current ones and provide financial support and incentives.

There are also significant advances to be made within carbon sequestration. We should look at opportunities to promote practices that result in the greatest amount of carbon being sequestered and incentivize the implementation of such practices.

I am proud of the work that the Iowa Soybean Association is doing in developing a Soil and Water Outcomes Fund that would provide financial incentive for farmers and monetize the carbon capture. I encourage the Select Committee to look into the important work that they are doing and look for opportunities for Congress to support.

We must also recognize the importance of rural broadband in this conversation. As farmers continue to innovate and adapt groundbreaking precision agriculture technologies—which has had significant effects on tracking water quality issues and reducing inputs and energy needs through efficiency—it is critical that our rural communities have the infrastructure necessary to support new and emerging technology.

Investing in our rural communities also allows for further deployment of wind and solar technologies. In my time working with the State of Iowa, I helped implement the Governor's Agenda on Clean Energy and the Environment. The initiative helped bring the wind industry to scale in Iowa while also creating thousands of jobs.

Today, the wind industry supports over 9,000 jobs for Iowans and generates nearly 40% of the state's electricity—among the highest in the nation. We must continue to make investments in these clean technologies.

Chairwoman Castor, you could not have said it any better during your opening remarks of the Select Committee's hearing on agriculture last month when you said that farmers are already doing a lot to combat the climate crisis and we must invest in them to do more.

That is what this comes down to—there is significant opportunity to build upon the practices our farmers are already undertaking and incentivize new research, technology, and practices to reduce our carbon footprint—we need to invest in and encourage these developments.

This Congress must act and pass meaningful legislation to address the climate crisis and we must get our answer right. The stakes are simply too high if we don't.

That means working with partners in every sector and in every community, to build upon the success they already have, and invest in new opportunities for carbon reduction.

Thank you again for the opportunity to testify here today and I look forward to the Select Committee's recommendations.

Ms. CASTOR. Well, thank you very much, Representative Axne, for your leadership, your know-how based upon your experience in Iowa. We are going to need your help as we craft these policy recommendations. So thank you.

Mrs. AXNE. Thank you.

Ms. CASTOR. And speaking of a leader on climate is my colleague from the Energy and Commerce Committee, who has for many years been working on principles and climate solutions. So to the chairman of the Environment and Climate Change Subcommittee, welcome, thank you, Mr. Tonko, for being here. You are recognized for 5 minutes.

STATEMENT OF THE HON. PAUL TONKO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. TONKO. Thank you.

Well, good afternoon, Chair Castor. And as chair and certainly as the members of the select committee gather, we thank you for this opportunity to testify and for all your work to advance meaningful and necessary climate action. So thank you, Chair Castor.

The scale and scope of this crisis demand an all-hands-on-deck approach. Much like the select committee, the House Energy and Commerce Committee has been holding hearings and stakeholder roundtables to better understand what opportunities, what challenges, and what potential solutions should be considered as part of comprehensive legislation. As a precursor to these hearings, I undertook a year's long process meeting with hundreds of stakeholders and seeking their perspectives and their policy priorities. This input proved critically important to developing a set of nine principles for climate action, which were released earlier this year. I will not go through that entire framework today, but I do hope the committee will consider it as a helpful rubric for building and evaluating comprehensive climate proposals. And you have received copies of this, and, you know, I think it proves helpful.

This process has also revealed several insights that may be useful to you now. Our next step must be to draw from areas of agreement and build specific policies and legislative language. Most importantly, we need a broad portfolio of solutions. No one policy will decarbonize the entire economy on its own. The transition to a clean economy will create opportunities that can benefit American workers, can benefit families and communities if we act quickly and thoughtfully. But our approach must also acknowledge challenges.

First, it must provide fairness and opportunities for workers and a transition plan for communities and individuals that face disruptions. Second, we must ensure that the transition works for all Americans and that it addresses historic inequities and environmental injustices. Third, we must maintain energy affordability to avoid harming America's most vulnerable populations. Fourth, we need to restore and strengthen the United States' competitiveness, particularly in domestic manufacturing.

Regarding specific solutions, I am certain we have heard many of the same suggestions; therefore, it might be useful to mention a few aspects that might be overlooked or underappreciated. In power, no credible modeler believes we can achieve 80 percent or more clean electricity with our existing infrastructure alone. We need to build more transmission, we need to reduce regulatory barriers that cause new lines to take a decade to build, and increase the capacity and efficiency of our existing lines. This will not be politically popular, but it is indeed necessary.

In transportation, we should electrify as much as possible, but there are limitations that require us to develop other clean alternatives. Hydrogen fuel cells have great potential, especially for long-haul trucking that benefits from fast refueling without the heavyweight of batteries. Similarly, cleaner liquid fuels will likely be needed for aviation. We must continue investing in R&D and encouraging market demand for these alternatives.

For industry, regardless of your feelings on CCS and the power sector, carbon capture for certain types of industrial facilities will likely be necessary. Again, raising demand for low emissions industrial products can be a major driver for innovation. Amongst economywide mechanisms, carbon pricing is a potentially powerful part of our toolkit. A strong price signal will spur investment and innovation and low emissions alternatives, but not all carbon pricing programs are created equally. Good design matters and successful programs can take different approaches.

Whether we are considering a tax, a fee, or emissions trading system, first and foremost, it must provide emissions reductions certainty. Second, the best result will come from covering as much of the economy as technically and politically feasible, while being technologically inclusive. Third, the program must be credible and provide certainty in order to impact long-term investment decisions. Fourth, it should provide flexibility for regulated entities to the extent that it does not undermine the integrity of the program or result in harmful inequitable outcomes. Fifth, it must protect low-income households as well as the global competitiveness of U.S. energy intensive trade exposed manufacturers. And finally, at least some revenues must go toward complementary policies that promote R&D, infrastructure deployment, workforce development, community and worker programs, environmental justice and restoration resilience, and energy efficiency. These types of investments will help make emissions reductions both quicker and cheaper.

Ten years have passed since Congress last attempted comprehensive climate legislation. If our intention is to avoid the most dangerous and irreversible aspects of climate change, our next opportunity to confront this crisis will likely be our last.

I am eager to work with your committee, this committee, and any member interested in ensuring this attempt succeeds. And again, thank you for the opportunity to testify, and thank you, again, for your leadership on this issue.

[The statement of Mr. Tonko follows:]

Testimony of the Hon. Paul D. Tonko
A Representative in Congress from the State of New York

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chair Castor, Ranking Member Graves, and members of the Select Committee, thank you for this opportunity to testify and for all your work to advance meaningful and necessary climate action.

The scale and scope of this crisis demand an all-hands-on-deck approach. Much like the Select Committee, the House Energy and Commerce Committee has been holding hearings and stakeholder roundtables to better understand what opportunities, challenges, and potential solutions should be considered as part of comprehensive legislation.

As a precursor to these hearings, I undertook a years-long process meeting with hundreds of stakeholders and seeking their perspectives and policy priorities.

This input proved critically important to developing a set of 9 principles for climate action, which were released earlier this year.

I will not go through that entire framework today, but I hope the Committee will consider it as a helpful rubric for building and evaluating comprehensive climate proposals.

This process has also revealed several insights that may be useful to you now.

Our next step must be to draw from areas of agreement and build specific policies and legislative language.

Most importantly, we need a broad portfolio of solutions. No one policy will decarbonize the entire economy on its own.

The transition to a clean economy will create opportunities that can benefit American workers, families, and communities if we act quickly and thoughtfully. But our approach must also acknowledge challenges.

First, it must provide fairness and opportunities for workers and a transition plan for communities and individuals that face disruptions.

Second, we must ensure that the transition works for all Americans and addresses historic inequities and environmental injustices.

Third, we must maintain energy affordability to avoid harming America's most vulnerable people.

Fourth, we need to restore and strengthen U.S. competitiveness, particularly in domestic manufacturing.

Regarding specific solutions, I am certain we have heard many of the same suggestions. Therefore, it might be useful to mention a few aspects that might be overlooked or underappreciated.

In power, no credible modeler believes we can achieve 80 percent or more clean electricity with our existing infrastructure alone.

We need to build more transmission, reduce regulatory barriers that cause new lines to take a decade to build, and increase the capacity and efficiency of existing lines. This will not be politically popular, but it is necessary.

In transportation, we should "electrify-as-much-as-possible," but there are limitations that require us to develop other clean alternatives.

Hydrogen fuel cells have great potential, especially for long-haul trucking that benefits from fast refueling without the heavy weight of batteries. Similarly, cleaner liquid fuels will likely be needed for aviation. We must continue investing in R&D and encouraging market demand for these alternatives.

For industry, regardless of your feelings on CCS in the power sector, carbon capture for certain types of industrial facilities will likely be necessary. Again, raising demand for low-emissions industrial products can be a major driver for innovation.

Among economy-wide mechanisms, carbon pricing is a potentially powerful part of our toolkit. A strong price signal will spur investment and innovation in low-emissions alternatives.

But not all carbon pricing programs are created equally. Good design matters, and successful programs can take different approaches.

Whether we are considering a tax, fee, or emissions trading system, first and foremost, it must provide emissions reductions certainty.

Second, the best results will come from covering as much of the economy as technically and politically feasible while being technology-inclusive.

Third, the program must be credible and provide certainty in order to impact long-term investment decisions.

Fourth, it should provide flexibility for regulated entities to the extent that it does not undermine the integrity of the program or result in harmful, inequitable outcomes.

Fifth, it must protect low-income households as well as the global competitiveness of U.S. energy-intensive, trade-exposed manufacturers.

And finally, at least some revenues must go toward complementary policies that promote R&D, infrastructure deployment, workforce development, community and worker programs, environmental justice and restoration, resilience, and energy efficiency. These types of investments will help make emissions reductions both quicker and cheaper.

10 years have passed since Congress last attempted comprehensive climate legislation.

If our intention is to avoid the most dangerous and irreversible aspects of climate change, our next opportunity to confront this crisis will likely be our last.

I am eager to work with this Committee and any member interested in ensuring this attempt succeeds.

Thank you again for the opportunity to testify.

Ms. CASTOR. Thank you, Mr. Tonko.

Congresswoman Shalala, thank you very much for the opportunity to be with you and local leaders in Miami, Miami Beach last week. I was so impressed with what you are leading when it comes to resiliency.

You are recognized for 5 minutes. I am anxious to hear your testimony.

STATEMENT OF THE HON. DONNA E. SHALALA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Ms. SHALALA. Thank you very much, Madam Chair, and thank you for coming to South Florida.

Since 1950, the sea level in South Florida has risen eight inches and it is only speeding up. By 2030, the sea level in South Florida is projected to rise up to 12 inches, and by 2100, perhaps 80 inches. According to U.N. projections, the average temperature on the planet will rise by 5 to 9 degrees Fahrenheit by the end of the century. This will cause a sea level rise that will virtually submerge all of South Florida.

If we continue to do nothing on climate change, my community, Chairwoman Castor's Florida community as we know it, will disappear. We have a moral obligation to mitigate and adapt immediately as we are already seeing the effects of climate change and sea level rise.

It no longer takes a strong hurricane to flood our streets. They now flood just from a particular high tide such as the king tides. In fact, tidal flooding has become three times as common in South Florida in just the past 19 years, causing so-called sunny-day flooding, affecting our streets, our schools, our tourism economy.

Ninety percent of South Florida's drinking water comes from the underground Biscayne aquifer. Because of Florida's porous lime-

stone bedrock and the diversion of fresh water ways, as sea levels rise, saltwater reaches further inland and our drinking water is seriously threatened. If we do not address sea level rise through infrastructure, this saltwater intrusion will destroy our only source of drinking water long before Miami is under water.

With more powerful storms causing more destruction than ever before, Category 4 and 5 hurricanes are projected to be at least 45 percent more common because of rising ocean temperatures. Combined with higher sea levels, when these storms make landfall, they don't just flood roads and stop traffic; they destroy homes and lives. But with thorough legislation from this committee, we can combat rising sea levels and a warming planet by crafting and pushing forward with legislation to mitigate the effects of the climate crisis. We can reduce emissions and transition away from fossil fuels so that we can leave a healthy planet to future generations.

For those on this committee who also sit on the Transportation and Infrastructure Committee, my testimony likely sounds very similar to the one I gave to the committee on Member day in the spring. That is because, particularly for my constituents, addressing the climate crisis means addressing our crumbling climate change exacerbating infrastructure. We have a real opportunity to use climate-smart infrastructure to prepare for higher sea levels, mitigate the effects of climate change, and protect our communities.

So I ask my colleagues on the select committee to make sea level rise and climate-resilient infrastructure a fundamental component of their climate legislation. We have already had success designing effective infrastructure projects in Miami. In my district, as you well know, Madam Chair, as you visited us last week, the city of Miami Beach has spent a half a billion dollars on raising streets, building seawalls, and installing massive water pumps that can move 30,000 gallons of water a minute from streets into the ocean, draining over 7 inches of water a day. The city bond rating was maintained because of these resilience efforts.

Combining these projects with natural green infrastructure can result even better and more environmentally friendly results. Miami Waterkeeper, a nonprofit organization that advocates for South Florida's watershed and wildlife, is working to address climate change and sea level rise locally by promoting green infrastructure. And North Bay Village, also in my district, is testing modular seawalls and encouraging the private market to take the first step in raising the elevation of this island community.

I have always believed that the Federal Government should pay close attention to what is happening at the local level, but it is really on to us in Washington to be partners for local and State governments. We can't wait. My district and many others are already seeing the disastrous effects of sea level rise. This is not the time for incrementalism. We need a big, bold strategy, so let's do it.

Thank you very much.

[The statement of Ms. Shalala follows:]

Testimony of the Hon. Donna Shalala
A Representative in Congress from the State of Florida

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chairwoman Castor, Ranking Member Graves, and Committee members, thank you for the invitation to testify on the issues of importance to my constituents as the Select Committee on the Climate Crisis continues to develop its legislative agenda.

I want to begin by giving you some numbers:

Since 1950, the sea level in South Florida has risen 8 inches, and it is only speeding up. By 2030, the sea level in South Florida is projected to rise up to 12 inches, and by 2100, perhaps 80 inches.

According to UN projections, the average temperature on the planet will rise by 5 to 9 degrees Fahrenheit by the end of the century. This will cause a sea level rise that will virtually submerge all of South Florida.

If we continue to do nothing on climate change, my community, Chairwoman Castor's Florida community, as we know it, will disappear.

We have a moral obligation to mitigate and adapt immediately, as we are already seeing the effects of climate change and sea level rise.

It no longer takes a strong hurricane to flood our streets; they now flood just from a particularly high tide—such as the King tides. In fact, tidal flooding has become three times as common in South Florida in just the past 19 years, causing so-called sunny day flooding affecting our streets, our schools, our tourism economy.

90 percent of South Florida's drinking water comes from the underground Biscayne Aquifer.

Because of Florida's porous limestone bedrock and the diversion of fresh waterways, as sea levels rise, salt water reaches further inland and our drinking water is seriously threatened.

If we do not address sea level rise through infrastructure, this salt water intrusion will destroy our only source of drinking water long before Miami is underwater.

With more powerful storms causing more destruction than ever before, category 4 and 5 hurricanes are projected to be at least 45% more common because of rising ocean temperatures.

Combined with higher sea levels, when these storms make landfall, they don't just flood roads and stop traffic, they destroy homes and lives.

But with thorough legislation from this Committee, we can combat rising sea levels and a warming planet by crafting and pushing forward with legislation to mitigate the effects of the climate crisis.

Perhaps more importantly, we can reduce emissions and transition away from fossil fuels, so we can leave a healthy planet to future generations.

For those on this committee who also sit on the Transportation and Infrastructure Committee, my testimony likely sounds very similar to the one I gave at that committee's Member Day in the spring.

That's because, particularly for my constituents, addressing the climate crisis means addressing our crumbling, climate change-exacerbating infrastructure.

We have a real opportunity to use climate-smart infrastructure to prepare for higher sea levels, mitigate the effects of climate change, and protect our communities.

So I ask my colleagues on the Select Committee on the Climate Crisis to make sea level rise and climate resilient infrastructure a fundamental component of their climate legislation.

We have already had success designing effective infrastructure projects in Miami that are actionable and scalable to the national level.

In my district, as Chairwoman Castor knows well because she visited us last week, the City of Miami Beach spent $500 million installing massive water pumps that can move 30,000 gallons of water a minute from streets into the ocean, draining over 7 inches of water a day.

Combining these projects with natural "green" infrastructure can result in even better—and more environmentally friendly—results.

Miami Waterkeeper, a non-profit organization that advocates for South Florida's watershed and wildlife, is working to address climate change and sea level rise locally by promoting green infrastructure and natural defenses, such as coral reefs, mangroves, and dunes.

North Bay Village, also in my district, is taking an innovative approach, encouraging the private market to take the first step in raising the elevation of this island community, as much of the waterfront property is privately owned.

I've always believed that the federal government should pay close attention to what's happening at the local level. In my district, on the front lines of climate change, local governments and organizations are leading the way, with innovative approaches to tackle one of the most consequential issues we face.

It's on us, here in Washington, to take the giant steps in pushing our country towards a 100% clean energy economy, but we can't forget to look to what's happening at the ground level to address this crisis.

Ultimately, this Committee has the opportunity to address the climate crisis and protect communities across the country by integrating projects such as these into your bills.

We cannot wait. My district, and many others, are already seeing the disastrous effects of sea level rise, as homes and lives are destroyed by flooding and storms.

Our children cannot wait.

Thank you for addressing climate change and sea level rise with the seriousness it demands.

Ms. CASTOR. Great. Well, thank you, again. You are absolutely right, that is what I heard from community leaders with you in Miami Beach. They want a better Federal partner, so thank you very much. And I bet the former mayor of Phoenix would echo those comments.

Mr. Stanton, you bring a great deal of expertise to the halls of the Congress. You are recognized for 5 minutes.

STATEMENT OF THE HON. GREG STANTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARIZONA

Mr. STANTON. Thank you very much, Chair Castor. Thank you for your leadership on this critically important select committee. Thank you for allowing me to participate in today's hearing. I look forward to your visit to Arizona, because climate change is ravaging the American Southwest. Arizona is getting hotter and dryer and more vulnerable to disaster. It is screaming out for Congress to do something for those of us in a position of power to take action.

My home State of Arizona has earned headlines for its ranking as one of the fastest growing States in the Nation, but I am concerned about another ranking, though: that Arizona is the third fastest warming State in the country. Since 1970, temperatures have risen 3.2 degrees in Arizona. In the cities of Tucson and Phoenix, temperatures have risen 4.5 and 4.4 degrees, respectively. They rank as the third and fourth fastest warming cities in America.

In the West, water is becoming more and more scarce. In Arizona, we are in our 19th year of drought. The federally funded National Climate Assessment found that rising global temperatures have changed the southwest water cycle and decreased snowpack. Less snowpack, of course, means less water. That changing water cycle has created an alarming situation on the Colorado River, which provides water to Arizona, California, Colorado, Nevada, New Mexico, and Utah. The Colorado River supplies the City of Phoenix with 40 percent of its water, but its future is in peril.

The once mighty river has experienced severe drought conditions since the time of the Clinton administration. Today, it remains dangerously overallocated, chronically overused, and is on the verge of collapse. The lack of water is forcing severe change in the

southwest forest ecosystems and agricultural centers. Wildfires are becoming more frequent, more intense, more destructive, and more deadly. A recent study cited by the National Climate Assessment compared total acres burned in western forests under current climate conditions and without human-caused warming. It found that between 1984 and 2015, the area burned by wildfire was double what it would have been without rising temperatures. As a result, wildfires have burned more than 1.5 million pine forest acres in Arizona.

Climate change is hurting farmers, growers, and ranchers too. For the agricultural industry, which has more than a $23 billion economic impact in Arizona, rising temperatures and water scarcity will change where crops can grow and endanger the health of livestock, all of which has the potential to displace growers and ranchers, impacting rural communities in my State and across the southwest. Not only is our environment being impacted by the effects of climate change, those in the southwest will suffer more health risks as well, including increased risk of exposure to infectious diseases, heatstroke, and more allergy problems.

Cities across the United States are doing their part to combat climate change by embracing public transit, energy efficient buildings, making direct investments in clean, renewable energy. I am proud that when I left my post recently as mayor of the city of Phoenix, we had passed a $31 billion plan to expand the city's light rail system, we installed 32 megawatts of solar energy on city-owned sites, we built one of the largest municipal fleet of clean energy vehicles in the country, we replaced Phoenix city vehicles with vehicles that run on alternative fuel or electric batteries. Every city garbage truck uses alternative fuels. Three-quarters of the city's buses run on natural gas, but it is time for the Federal Government to step up and take bold action to address it as well.

One easy thing we can do is to support our local governments by passing the legislation that Congressman Marc Veasey and I have introduced, H.R. 2088, to reauthorize the Energy Efficiency and Conservation Block Grant Program. It is a simple reauthorization. This would create jobs, help consumers save on their energy bills, and reduce carbon pollution. In fact, a national evaluation of the Program's effectiveness found that just 1 year of funding avoided the emission of 25.7 million metric tons of carbon equivalent. Imagine what would happen if we provided funding for this program over several years.

When this program was last funded, State and local governments were able to pursue a wide range of projects, from energy retrofits to deployment of LED street lighting and solar energy systems, to EV charging stations and alternative fuel pumps. These same cities and communities, backed by the U.S. Conference of Mayors and the National League of Cities, support reauthorizing this program, just one of many policy ideas that this committee will hear about and many others that, of course, you will be considering. And I urge this committee to act with the urgency that the crisis demands before it is too late.

Thank you so much. I yield back.

[The statement of Mr. Stanton follows:]

Testimony of the Hon. Gregory "Greg" Stanton
A Representative in Congress from the State of Arizona

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Chair Castor, Ranking Member Graves, and members of the Committee, thank you for allowing me to participate in today's hearing.

Climate change is ravaging the American Southwest. Arizona is getting hotter and drier and more vulnerable to disaster. It is screaming out for Congress to do something, for those of us in a position of power to take action.

My home state of Arizona often earns headlines for its ranking as one of the fastest-growing states in the nation. I'm concerned about another ranking, though: That Arizona is the third fastest-warming state in the country.

Since 1970, temperatures have risen 3.2 degrees in Arizona. In the cities of Tucson and Phoenix, temperatures have risen 4.5 and 4.4 degrees, respectively. They rank as the third and fourth fastest warming cities in America.

In the West, water is becoming more and more scarce. In Arizona, we are in our 19th year of drought. The federally-funded National Climate Assessment found that rising global temperatures have changed the Southwest's water cycle and decreased snowpack. Less snowpack means less water.

That changing water cycle has created an alarming situation on the Colorado River, which provides water to Arizona, California, Colorado, Nevada, New Mexico and Utah. The Colorado supplies the city of Phoenix with 40 percent of its water. But it's future is in peril.

The once-mighty river has experienced severe drought conditions since the time of the Clinton Administration. Today, it remains dangerously over-allocated, chronically overused and is on the verge of collapse.

The lack of water is forcing severe change in the Southwest's forest ecosystems and agriculture centers. Wildfires are becoming more frequent, more intense, more destructive, and more deadly. A recent study, cited by the National Climate Assessment, compared total acres burned in western forests under current climate conditions and without human-caused warming. It found that between 1984 and 2015 the area burned by wildfire was double what it would have been without rising temperatures. As a result, wildfires have burned more than 1.5 million acres of pine forest in Arizona.

Climate change is hurting farmers, growers and ranchers too. For the agriculture industry, which has a more than $23 billion economic impact in Arizona, rising temperatures and water scarcity will change where crops can grow and endanger the health of livestock. All of which has the potential to displace growers and ranchers, impacting rural communities in my state and across the Southwest.

Not only is our environment being impacted by the effects of climate change, those in the Southwest will suffer more health risks as well, including increased risk of exposure to infectious diseases, heat stroke, and more allergy problems.

Cities across the country are doing their part to combat climate change by embracing public transit and energy-efficient buildings, making direct investments in clean, renewable energy.

I'm proud that when I left my post as mayor of Phoenix, we had passed a $31 billion plan to expand the city's light rail system. We had installed 32 mega-watts of solar energy on city-owned sites. We built one of the largest municipal fleet of clean-energy vehicles in the country. We replaced Phoenix city vehicles with vehicles that run on alternative fuels or electric batteries. Every city garbage truck uses alternative fuels. Three-quarters of city buses run on natural gas.

But it is time for the federal government to step up and take bold action to address it as well.

One easy thing we can do to support our local governments is pass legislation Congressman Marc Veasey and I have introduced, H.R. 2088, to reauthorize the Energy Efficiency and Conservation Block Grant Program. It's a simple reauthorization. This would create jobs, help consumers save on their energy bills, and reduce carbon pollution. In fact, a national evaluation of the program's effectiveness found that just one year of funding avoided the emission of 25.7 million metric tons of carbon equivalent. Imagine what could happen if we provided funding for this program over several years. When this program was last funded, state and local governments were able to pursue a wide range of projects from energy retrofits to deployment of LED street lighting and solar energy systems to EV charging stations and alter-

native fuel pumps. These same cities and communities, backed by the U.S. Conference of Mayors and the National League of Cities, support reauthorization of this program.

This is just one of many policy ideas that this committee will hear about and there are many others you should consider. I urge this committee to act with the urgency that this crisis demands before it is too late.

Ms. CASTOR. Outstanding. Thank you so much.

Ms. Pingree, thank you for your leadership, especially your attendance at our last hearing. You are recognized for 5 minutes.

STATEMENT OF THE HON. CHELLIE PINGREE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MAINE

Ms. PINGREE. Thank you very much, Madam Chair. Thank you for letting me attend that hearing. And thank you and the entire committee for the incredible work that you are doing, and also for letting us have this day where Members give their input. Just as a little aside, I feel you look very regal there in this committee room and that should be captured forever. We will give you a wand and it will be done.

So I will submit my longer written testimony, but I just want to summarize a few things while we are talking here today. I want to just highlight some of the ways that climate crisis is affecting my home State of Maine, as well as some of the solutions that we are discussing and implementing. For Maine and so many other communities across the Nation, as I have heard listening to my colleagues speak, it is just not an abstraction; it is a tangible threat to our communities, to the people who live there.

Farmers in the State of Maine are being impacted by the changing growing season and extreme weather events. The productivity of our State forest is threatened by temperature changes and invasive species. The ocean in the Gulf of Maine is warming at a rate 99 percent faster than the rest of the world, so you can imagine that we are frightened about that. Sea level off of our coast is 8 inches higher than it was in 1950, and continuing to rise at a rate of 1 inch every 8 years, threatening homes and businesses.

Ocean acidification is yet another problem that we are dealing with, but the good news is, earlier this year, the Maine legislature and our brand-new Governor, Governor Mills, enacted a sweeping bipartisan climate change bill that will put us in the forefront of taking on many of these challenges. We want to be ahead of the curve, and let me just tell you a couple of ways we are doing that.

For the last 10 years, the University of Maine has led in developing an economic way to harness renewable energy, and last week, our Public Utilities Commission approved a contract for Maine AquaVentus. This is the first of its kind floating offshore wind pilot project which was developed at the university. It is expected to provide a tremendous amount of energy, but also $152 million in economic input and more than a thousand jobs.

We have a lot of concerns about the ocean. We are doing a tremendous amount of research at our universities and our scientific institutions, whether it is about sea level rise or the future of our lobsters. But let me tell you about just one business that has taken this on themselves. One company noting the changes in the oyster stock due in part to increasing acidification where he farms, Bill Mook of Mook Sea Farm, started adapting his business. He created

a filtration system to ensure appropriate pH levels are maintained to protect the growing shellfish. He is also growing his own oyster food through a unique heterotrophic method to produce algae. This unique process differs from the industry standard phototrophic process and reduces time, labor, and electrical cost, and most importantly, allows him to adapt so that he can continue in business.

Our forest industry has a lot of innovative programs going on. We are the most forested State in the Nation, and we have been working on a lot of renewable products made from wood, including nanocellulose, which will be used in bioplastics and fully recyclable materials, also cross-laminated timber, which is now being used in buildings from 6 to 10 stories high. Far more sustainable, less of a carbon footprint than steel or cement.

As you know, I was lucky to attend your agriculture hearing, and I have been working on this issue, in particular myself, and working on a bill which I hope to share with your committee and even more ideas. But I did start with a set of principles. Those are to prioritize soil health initiatives, to protect farmland and improve farm-viability, to support pasture-based livestock systems, and invest in on-farm and rural energy initiatives, and reduce food waste.

Let me just quickly tell you about a couple of those projects that are going on in Maine. We just recently announced OpenTEAM. It is a private-public partnership with the Wolfe's Neck Center for Agriculture and Environment and Stonyfield Organic, as well as research which comes from the Foundation for Food and Agriculture Research, which receives their funding through the farm bill. This will create a platform that farmers can use and deal with the question that comes up frequently, how do we measure the amount of carbon being sequestered in the soil and how do we make sure farmers receive that award.

As many of my colleagues have mentioned, farmers are ahead of the curve in many places. They can be an incredible ally in helping us to sequester carbon, and we need to use them in partnership in anything that we do.

Another interesting project is Exeter Agri-Energy. They take the manure from a thousand cows, as well as the food waste from our largest grocery store chain, they use an anaerobic biodigester, and then they turn it into fertilizer bedding, but more importantly, they convert it to electricity. They don't have to use the natural gas pipelines, and it is an excellent way both to deal with manure that is produced on farms as well as food waste, which about 30 percent of the food is wasted in this country, and we can't underestimate the challenges that the methane that it produces provide to our environment.

You have a huge charge in front of you. I am so grateful that this committee exists and the hard work that you are all doing, and thank you for letting me give my input today.

[The statement of Ms. Pingree follows:]

Testimony of the Hon. Chellie Pingree
A Representative in Congress from the State of Maine

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you to Chairwoman Castor, Ranking Member Graves, and Members of the Select Committee on the Climate Crisis for holding this Member's Day event and for the opportunity to speak today. I would like to highlight the ways the climate crisis is affecting my home state of Maine, as well as discuss solutions being developed and implemented there that can serve as models for other communities and are potential areas for new or further federal investment.

For Maine and so many communities across our nation, climate change is not an abstraction, but rather a tangible threat to local economies and the people who live in them. Farmers are already being impacted by changing growing seasons and extreme weather events. The productivity of our state's forests is also threatened as the temperature changes and invasive species outbreaks increase. Additionally, the ocean in the Gulf of Maine is warming at a rate 99 percent faster than the rest of the world. The sea level off our coast is 8 inches higher than it was in 1950, and it is continuing to rise at the rate of about 1 inch every 8 years, threatening homes, businesses, ecosystems, and endangered species. Ocean acidification is another harmful side effect of climate change. Almost 30 percent of carbon dioxide emissions are absorbed by our oceans, and as our oceans get warmer, their composition changes, further affecting the ways aquatic plants and animals grow.

This all poses a massive threat to Maine's key industries. Farms, forests, fisheries, working waterfronts, and tourism are all grappling with the implications of changing temperatures. The future of Maine's communities, economy, and the lives and health of our citizens depends on policymakers' ability to confront the challenge of the climate crisis.

But Maine is not standing idly by; we are tackling this challenge head-on. Earlier this year, the Maine Legislature and Governor Mills enacted a sweeping bipartisan climate change bill, which includes slashing greenhouse gas emissions by 80 percent and increasing the amount of electricity from renewable sources to 100 percent by 2050. In addition, the legislation created a 35-member Maine Climate Council charged with developing specific plans to meet these goals. Although the Governor's goals seem lofty, they are in keeping with the spirit of innovation on display by so many of our public and private sector citizens. Our state motto, Dirigo, means "I lead," and Mainers are demonstrating that leadership in many fields.

For over 10 years, the University of Maine has led the country in developing an economical way to harness renewable wind energy in deep ocean waters. Last week, the Public Utilities Commission approved a contract for Maine Aqua Ventus, a first-of-its-kind floating offshore wind pilot project developed at the University. This project is poised to be the first offshore wind project in the country that features a floating platform. In addition to providing renewable energy, the University has estimated the project will produce nearly $152 million in total economic output and more than 1,000 Maine-based jobs.

Individual citizens are also taking action. After noting the changes in his oyster stock due in part to increasing acidification in the water ways where he farms, Bill Mook of Mook Sea Farm started adapting his business. He created a filtration system to ensure appropriate pH levels are maintained to protect the growing shellfish. He is also growing his own oyster food through a unique heterotrophic method to produce algae. This unique process differs from the industry's standard phototrophic process and reduces time, labor, and electrical costs.

Additionally, Maine's forestry sector provides a range of solutions to climate change, from creating wood products to providing renewable energy sources. Maine has the highest percentage of forest land in the country, the vast majority of which is privately owned. Exciting new technologies are being developed in Maine that convert forest residues from harvesting and processing wood into renewable chemicals, biofuels, and other bio-based materials. For example, the University of Maine's Advanced Structures and Composites Center has developed a way to make nano cellulose for use in bio-plastics and fully recyclable materials using wood products and lumber.

The intersection of agriculture and climate change is especially of interest to me, having been an organic farmer since the 1970s. Earlier this year, I released a document with five principles to help guide discussions around climate change and agri-

culture, and I am currently working on legislation that I look forward to sharing with the Select Committee. Those five principles are:

- prioritize soil health initiatives;
- protect farmland and improve farm viability;
- support pasture-based livestock systems;
- invest in on-farm and rural energy initiatives; and
- reduce food waste.

I would like to thank the Select Committee for holding a hearing on agriculture last month, including a farmer on the panel, and facilitating a conversation that recognizes how vital farmers are to climate change mitigation and adaptation. Agriculture is one of the few industries that can actually reverse the effects of climate change by storing carbon in the soil. We have not given farmers enough credit for this fact, and I am excited about the efforts in the private sector to figure out how we can better compensate farmers for the ecosystem services they provide.

One innovative project in Maine that will help farmers sequester more carbon and reduce greenhouse gas emissions is OpenTEAM, or Open Technology Ecosystem for Agricultural Management. OpenTEAM is a public-private partnership between Wolfe's Neck Center for Agriculture and the Environment based in Freeport, Maine; Stonyfield Organic; and Foundation for Food and Agriculture Research, which receives farm bill funding. Right now farmers have a multitude of options when it comes to decision-making software, but most of those platforms do not communicate with one another so it is difficult to share information up and down the supply chain. OpenTEAM is an interoperable platform to help farmers make soil health decisions by offering a range of tools in one place, from carbon measurement to remote sensing.

Confronting the climate crisis requires us all to work together to develop, implement, and share the best solutions. States, communities, and individuals have already begun this work, and I look forward to continuing to work with the Select Committee as you develop policy recommendations. I would like to again thank the Committee for your important work on this topic.

Ms. CASTOR. Well, you are just getting started, Congresswoman. Thank you very much for your leadership, and I look forward to working with you.

Dr. Schrier, welcome. You are recognized for 5 minutes.

STATEMENT OF THE HON. KIM SCHRIER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Ms. SCHRIER. Thank you, Madam Chair. It has been an absolute delight to hear so many of my colleagues talking about this issue. It is very refreshing, so thank you for having this special committee.

I wanted to talk about this issue because, if there was ever an issue that would unite our country and should unite the world, it is really combating climate change. And you have heard from a lot of people here about how it is affecting their States. Washington State is not very different. We are in the West. We have wildfires that are growing in intensity, scope, and duration. We have warming tributaries, warming rivers that are affecting our Chinook salmon population and others. Kids are getting asthma because of these wildfires, and you heard from Derek Kilmer about displaced Native American populations.

But it turns out that wherever you are in the country, frankly, wherever you are in the world, there is one population that suffers more than any other, and that is kids. Whether it is from natural disasters and seeing their house disappear, whether that is from asthma attacks, whether that is from changes in nutrients or even from vector-borne diseases or cholera, kids are suffering the most and stand the most to lose.

There are a couple ways that I am looking to address this. One is that we just had a study out yesterday that confirmed that chil-

dren are the most affected, but we also recently had a study about nutrients in plants and in agriculture. And it turns out that with more CO_2, you would think that plants would grow better, and it turns out that they do grow well, but they increase, you know, in carbohydrate, and at the same time, there is decreased protein, B vitamins, iron, zinc, and foliate. And here in this country, we can take a multivitamin, but there is a lot of places around this country where potatoes, wheat, and rice really make up the main part of people's diets and children's diets, and a zinc or iron-deficient child has less potential for learning, for growth, and for everything else. Not to mention that pregnant women who don't get enough foliate, and there is about a 30 percent decrease in foliate, have a much higher risk of having children with neural tube defects.

And so this issue of food and nutrients becomes a pressing one for our global community, and so I am close to introducing a bill to make sure that we can have more research into the effects of climate change on nutrients and also incentivizes researchers to look into how we can remedy the problem and find a solution.

There is another area where I can see a need for improvement here, which is to take on this issue of vector-borne diseases. Think about Dengue fever, think about Zika virus and what would happen if that made a great entrance into the United States and what affect that would have on generations. And so having NIH funding for research into vaccinations for vector-borne diseases would be critical.

The last thing I wanted to talk about is that I wanted to thank you, first, for having paper cups and pitchers of water, because I find on a daily basis that I am aggravated by the amount of plastic that is used here in the Capitol. So Haley Stevens and I have created a plastics caucus, and I have already drafted a letter to Representative Zoe Lofgren, chairman on the House Committee on Administration, with the goal of having a more sustainable Capitol, that we should be leading on this, and how hypocritical, frankly, is it for Democrats to be leading and to still have plastic water bottles at all of our meeting rooms and breakfasts. And so this letter concerns making sure that anything that is sold to or offered for sale in the Capitol should be sustainable. This means getting rid of the plastic silverware that we use, and the next step is making a huge dent in single-use plastics.

I think that is all I have to add today. I wanted to thank you very much for hosting this, and I am excited to partner with you and my colleagues on all of these issues. Thank you.

[The statement of Ms. Schrier follows:]

Testimony of the Hon. Kimberly "Kim" Schrier
A Representative in Congress from the State of Washington

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

I want to express my appreciation for the work Chairwoman Castor and her staff are putting forth on the critical issue of climate change. In my mind, there is no

greater threat facing our world today and our actions, and our inaction or inaction, will have consequences for generations to come.

As a pediatrician, I have seen firsthand the impact climate change is having on our children. Increased rates of asthma, longer allergy season, and increased risk of disease. Pregnant women and children are especially vulnerable to these changes.

According to the Lancet Countdown's 2019 report, which was released yesterday, global air pollution driven by fossil fuels, and compounded by climate change, led to seven million premature deaths. Already in 2016, there were 2.9 million premature pre-mature deaths related to increasing pollution.

A warming climate is resulting in lower crop yields and affecting the overall nutritional density of our foods. Research has shown that carbon dioxide (CO_2) levels this century will alter the protein, micronutrients, and vitamin content of staple crops around the world. One of the few studies which looked at this issue involved researchers from the University of Washington, the USDA and international partners. They looked at 18 rice lines and grew them under conditions that you would expect later in the century. Among the findings included a 30 percent decline in folate. Folate is critical for healthy child development. Pregnant women who don't get enough folate are at much higher risk of having babies with birth defects.

I am working on a bill now to ensure our researchers have dedicated funding to study this issue further and proactively address it.

I also want to note that as temperatures rise, there is more of a chance for disease to spread. Nine of the 10 most favorable years for the spread of dengue fever have happened since 2000, and vector borne disease is on the rise. These things can be mitigated.

Thank you again for the opportunity to speak on such an important issue and I yield the remaining amount of my time.

Ms. CASTOR. Well, thank you very much for your testimony. You know, as a pediatrician, you bring such a unique perspective to the issues of the climate crisis, and we are going to need your help going forward. So thank you very much.

Next I am going to turn to my colleague from the Energy and Commerce Committee.

Mr. Kennedy, you are recognized for 5 minutes.

STATEMENT OF THE HON. JOSEPH P. KENNEDY III, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. KENNEDY. Madam Chair, thank you. Thank you for your extraordinary leadership on this issue and so many others. Thank you for convening this opportunity for Members to contribute their input and for bringing us all together today.

If we are going to confront a multigenerational crisis like climate change, we must pay close attention to our prior failures—not just failed environmental policies and the illogical idea that reducing environmental regulation would somehow encourage fossil-fuel companies to protect our air, water, and land on their own, but the reforms that Congress and administrations have championed for decades that too often left far too many clinging to the margins of our Nation.

A New Deal that excluded agricultural workers and domestic workers from its benefits and protections. A National Housing Act that institutionalized redlining and housing discrimination so effectively that it has resulted in a staggering racial wealth gap that still persists today. A GI Bill that denied 1.2 million black veterans the same benefits that lifted up millions of white veterans who fought shoulder-to-shoulder on the same battlefields. A war on drugs where the enemy was far too often young black men rather than the drugs devastating our communities. A welfare reform bill that implemented work requirements on striving Americans and

denied them access to critical antipoverty programs that would have otherwise lifted them out of poverty.

War, poverty, employment, housing, justice—all of it shaded by our inability or unwillingness to see entire segments of our society at the moment when they needed the help the most.

Now, as climate change threatens our way of life, we are dangerously close to repeating those same mistakes of our past. Wildfires burn thousands of homes in California, and we see how effective fire prevention efforts save wealthy areas while displaced families go homeless because affordable housing is nowhere to be found.

A hurricane that causes increased devastation because of nonexistent zoning laws in Texas garners immediate government attention, but one that leaves Puerto Ricans hungry, homeless, and helpless receives government derision. Wealthy beachfront homeowners leverage flood insurance to boost property values on second or third homes, while working Americans have seen their home value crater as sea level rises.

Nearly 80 percent—80 percent—of African Americans live within 30 miles of a coal plant, breathing in toxic chemicals and living with the health consequences of generations of deference to fossil fuels. More than 80 percent of Latinos live in American counties where at least one Federal air pollution law has been violated.

In cities across our country, low-income communities suffer from extreme-heat zones and lack of tree canopy and air conditioning, raising the risks of asthma and heart disease for people already living in areas with limited access to quality, affordable healthcare.

The climate crisis is intersectional, it is intergenerational, and it demands that we acknowledge and address the failures of our past, which is why we must seek more than old ideas of incremental change and, instead, demand a climate justice that looks deeper than the purity of our air and water; why any carbon tax must be more than a regressive tax passed along to rate payers at a higher cost but, instead, an investment in the low-income communities that have been left on the front lines of the economic and healthcare costs of inaction.

But any plan for green jobs and green energy cannot be allowed to lead to green gentrification that pushes out residents who have been forced to breathe dirty air and drink harmful water and, instead, lifts those working Americans up with careers in emerging green-economy sectors through policies like the Blue Collar to Green Collar Jobs Development Act.

Any tax credits that incent clean-energy expansion, like offshore wind, should be targeted towards corporations that build these emerging sectors in low-income communities, train American workers, and create American jobs.

Any structural reforms in how regulators approve energy development should be transparent and accountable to the consumers who will be left with the bill.

Now, as we make this transition to a new energy future, any existing or proposed energy infrastructure projects must not be approved solely on its individual merit but on how it fits into a broader energy and climate landscape.

Climate change on its own does not discriminate. It targets us all. But just as human activity undeniably causes climate change, human choices have put communities of color and low-income Americans in its cross-hairs.

Now we are presented with an opportunity to right the wrongs of our past and do right by generations that will follow in our footsteps. Working with this select committee, I know we can bring those communities who have been on the front lines to the forefront of this debate and the policies that will emerge from it.

Thank you. Thank you for your leadership.

[The statement of Mr. Kennedy follows:]

Testimony of the Hon. Joseph "Joe" P. Kennedy III
A Representative in Congress from the State of Massachusetts

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chairwoman Castor, for convening this Member Day and for your leadership of this Select Committee on the Climate Crisis.

If we are going to confront a multigenerational crisis like climate change, we must pay close attention to our prior failures.

Not just failed environmental policies and the illogical idea that reducing environmental regulations would somehow encourage fossil fuel companies to protect our air, water and land on their own.

But the reforms that Congress and Administrations have championed for decades that too often left too many clinging to the margins of our nation.

A New Deal that excluded agricultural workers and domestic workers from its benefits and protections.

A National Housing Act that institutionalized redlining and housing discrimination so effectively that it resulted in staggering racial wealth gap that still exists today.

A GI Bill that denied 1.2 million black veterans the same benefits that lifted up millions of white veterans who fought shoulder-to-shoulder in the battlefield.

A War on Drugs where the enemy was far too often young black men rather than the drugs devastating our communities.

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War. Poverty. Employment. Housing. Justice. All of it shaded by our inability or unwillingness to see entire segments of our society at the moment they needed our help most.

Now, as climate change threatens our very existence, we're dangerously close to repeating the same mistakes of our past.

Wildfires burn thousands of homes in California and we see how effective fire prevention efforts save the Reagan Library and some wealthier mansions while displaced families go homeless because affordable housing is nowhere to be found.

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More than 80% of Latinos live in American counties where at least one federal air-pollution law has been violated.

In cities across our country, low-income communities suffer from extreme heat zones and a lack of tree canopy and air conditioning, raising the risks of asthma

and heart disease for people already living in areas with limited access to quality, affordable health care.

The climate crisis is intersectional and intergenerational and demands that we acknowledge and address the failures of our past. That's why we must seek more than old ideas of incremental change and instead demand climate justice that looks deeper than the purity of air and water.

Why any carbon tax must be more than a regressive tax passed along to ratepayers as higher costs, but instead an investment into the low-income communities that have been left with the economic and health costs of inaction.

Any plan for green jobs and green energy cannot be allowed to lead to green gentrification that pushes out the residents who have been forced to breathe dirty air and drink harmful water, and instead lifts those working Americans up with careers in this emerging green economy through policies like the Blue Collar to Green Collar Jobs Development Act.

Any tax credits that incent clean energy expansion like offshore wind should be targeted towards corporations that build these emerging sectors in low-income communities, train American workers and create American jobs.

Any structural reforms in how regulators approve energy development should be transparent and accountable to the consumers who will be left with the bill.

And as we make this transition to a new energy future, any existing or proposed energy infrastructure projects must not be approved solely on its individual merit, but how it fits into the broader energy and climate landscape.

Climate change on its own does not discriminate—it targets us all.

But just as human activity undeniably causes climate change—human choices have put communities of color and low-income Americans in its crosshairs.

Now, we are presented with an opportunity. To right the wrongs of our past and do right by the generations that will follow in our footsteps.

Working with this Select Committee, I know we can bring those communities that have been on the frontlines to the forefront of this debate and the policies that will emerge from it.

Thank you.

Ms. CASTOR. Thank you, Mr. Kennedy, for bringing a moral clarity to our discussion today.

Mr. Rouda, you are recognized for 5 minutes. Welcome.

STATEMENT OF THE HON. HARLEY ROUDA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. ROUDA. Thank you, Madam Chair. I will be submitting written testimony, but I wanted to say a few words.

Where we have built our farms, our cities, and our homes are all based on predictable weather patterns over the last thousand years. When we raise the ambient temperature of our atmosphere by even a few degrees, where we have built, literally, our homes, our cities, and our farms are in the wrong place because of these shifting weather patterns.

That is why there are estimates right now of over 200 million climate change refugees by the year 2050. This is the largest mass migration of humankind since World War II. There will be competition for water, food, and safe areas around the world.

And when you look at the fact that 40 percent of the world's population sits in coastal communities and 50 percent of the United States population sits in coastal communities, you get a sense for how extreme climate change will impact our coastal communities and inland areas as well.

The Department of Defense has recognized that climate change is a primary threat to our national defense. It has also been estimated that over $300 billion will be needed to upgrade defense installations around the world, with a significant number of them being in coastal areas.

In California, where I am from, Orange County, it has been shown that in the last 100 years we have seen our oceans rise by only 9 inches in the State of California, but the projections are, through the end of this century, that we are looking at a 9-foot rise in sea levels.

So my bill, the Coastal Communities Adaptation Act, H.R. 1317, provides the assets and resources for coastal communities to be able to address climate-change impact on their ability to maintain some level of support in addressing how it is going to impact their communities and make a difference in the lives of those in those communities.

And, again, emphasizing the fact that 50 percent of Americans live in coastal communities, you can see how important this legislation would be for their ability to maintain their neighborhoods.

I appreciate the opportunity to testify here today and yield back. Thank you.

[The statement of Mr. Rouda follows:]

Testimony of the Hon. Harley Rouda
A Representative in Congress from the State of California

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

I would like to thank Chairwoman Castor and Ranking Member Graves for providing this opportunity to come and testify today to recommend an important piece of legislation aimed at ensuring that our communities are resilient to the impacts of climate change.

As you and the members of this committee already know, climate change is not only real—it is already happening and Americans throughout the country are experiencing serious effects.

That's why, earlier this year, I introduced H.R. 1317, The Coastal Communities Adaptation Act. This piece of legislation is important to the district I represent and coastal districts across the country and has earned the support of 33 cosponsors.

For far too many coastal districts like the one I represent, climate change has already increased the frequency of coastal flooding, including what we would consider "regular" tidal floods. The combination of water expansion as the ocean has warmed and the melting of land ice into the oceans has driven sea level up about seven inches since 1990, and this rise is accelerating.

Just this summer, the Los Angeles Times reported that, "In the last 100 years, the sea rose less than 9 inches in California. By the end of this century, the surge could be greater than 9 feet."

My bill would jumpstart research and grant funding by the National Science Foundation (NSF) and the National Institute for Standards and Technology (NIST) into improved buildings and structures to account for extreme weather, create a prize competition to stimulate innovation for new techniques into natural shoreline risk reduction measures, direct the Department of Housing and Urban Development (HUD) to promote the adoption of windstorm preparedness and mitigation measures for HUD-code housing units, and order new research by National Oceanic and Atmospheric Administration (NOAA) into the use and effectiveness of nature-based and nonstructural approaches to reduce flood risk.

Higher sea levels mean that deadly and destructive storm surges push farther inland and bring more frequent flooding to coastal communities. With sea levels expected to continue to rise, many vulnerable coastal populations will be further impacted. What was once a niche planning effort to limit seasonal storm damage is now a broad effort to integrate hazard planning and water management into all aspects of local comprehensive plans and related development codes.

We must consider high and extreme sea levels when making decisions that directly impact people and critical resources in coastal California and in the other 29 coastal states (including Great Lake states) across the country.

Coastal communities recognize the necessity of integrating climate change considerations into their planning—resiliency planning is a fundamental part of how communities plan, grow, and prosper. This is not a one-size-fits-all solution to a diverse and multi-faceted challenge. The financing tools provided by my bill will help communities large and small turn their unique resiliency plans into a safer reality.

The shorelines of Louisiana, Virginia, and Texas are shrinking. Beaches in North and South Carolina are disappearing. Places like Florida, Hawaii, and Guam are already drowning. And, California's coast is eroding more and more with each storm surge.

Our coastal lands are treasured natural resources, and they are also something else—they are places that many Americans call home. This is about more than sandy beaches, surf breaks, and boardwalks—this is about our lives, our businesses, and critical infrastructure.

Thank you again for the opportunity to testify today, and I urge the Select Committee to consider supporting this legislation because we need to address the reality of climate change if we want to maintain the same quality of life—our planet's oceans will not wait until we're ready—sea levels will continue to rise, whether we are prepared or not.

Ms. CASTOR. Well, thank you very much. As a Member who represents a coastal community, I will look forward to reviewing your legislation. Thank you for being here.

Mr. ROUDA. Thank you.

Ms. CASTOR. Speaking of a coastal community, you can't get much more coastal than the Florida Keys and South Miami-Dade. Thank you, Congresswoman Mucarsel-Powell, for touring me around to see the climate impacts in your district.

You are recognized for 5 minutes.

STATEMENT OF THE HON. DEBBIE MUCARSEL-POWELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Ms. MUCARSEL-POWELL. Thank you, Madam Chair.

And thank so much for taking the time to come down to south Florida and my beautiful district. And as we discussed last week and you saw firsthand, we really are ground zero for the effects of climate change.

The storms are getting much stronger. We see continued sea-level rise, which is already affecting our infrastructure. And, more urgently, what we are seeing recently is that our coral reefs are dying; the rainforests of our oceans are dying. So it is definitely a very urgent situation for my district, along with so many other coastal communities.

I wanted to bring attention to this picture. Parts of Key Largo and many areas of south Florida have experienced more than 40 days of flooding due to king tides just this fall alone, fall of 2019. And king tides, as they are called, they are normal to a certain point, because they are the result of the gravitational pull of the sun and the moon as well as the low pressure systems and strong winds. But, this year, the flooding has been higher and longer than we can ever remember. And with sea-level rise and changing weather patterns, it will only get worse. And so this is definitely something that we have seen just this year alone.

Climate change is not only an environmental issue; it is something that we have to deal with in the far off—not something that we are going to have to deal with in the far-off future. It is already

changing our way of life. It is putting our property in the path of destruction. It is already affecting our fishing industry, our tourism industry, and our economy as a whole.

And while some want to put their heads under the sand on this issue, I think that we are stepping up to the challenge in south Florida, and I am very, very proud of my community and the steps that we are taking. I don't want to only be an alarmist. I want to bring solutions to the table that we can actually address and take action on immediately.

So Florida International University, in my district, is filled with forward-thinking, creative, and innovative minds that are working every single day, all day long, trying to come up with ways not only to fight climate change but also to adapt to the consequences that climate change will inevitably bring.

Researchers there are working to advance green infrastructure initiatives, which you were able to see firsthand, like protecting our coral reefs and seagrass beds, which dissipate wave action; restoring coastal wetlands, which clean our fresh water; and restoring our mangroves, which absorb vast amounts of CO_2. They protect against storm surges and also weaken strong winds.

I know that here in Congress, with the will and commitment, we can support these innovative efforts.

So some of the work that our researchers have done, which I am really proud to show you here—and I will leave you one so that you can take a look—is, at the FIU's Institute of Environment, they have printed these 3D mangroves that are made out of Eco-Cement, and they can actually be planted along our coasts. And they will restore the natural growth of other mangroves, so it will act as a foundation for creating new habitat.

And all we need is the commitment to support innovation like what we are seeing right in my district, in Florida's 26th District, at FIU and invest in these ideas. We can do it here in the United States, but we just can't wait any longer.

So I really am grateful for your support, for coming down, and to allow us to testify today before your committee.

[The statement of Ms. Mucarsel-Powell follows:]

Testimony of the Hon. Debbie Mucarsel-Powell
A Representative in Congress from the State of Florida

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you, Chairwoman Castor. And thank you again so much for taking the time last week to visit my beautiful district in South Florida. As we discussed and saw first-hand, South Florida—and more specifically—the Florida Keys, is ground zero for climate change.

We are seeing dramatic sea level rise. We are seeing stronger storms. And our coral reefs—the rainforests of the ocean—are dying.

I'd like to bring your attention to this picture. Parts of Key Largo and many areas of South Florida experienced more than 40 days of flooding. King tides, as these are called, are normal to a certain point, because they are the result of the gravitational pull of the sun and the moon, as well as low pressure systems and strong winds. But this year, the flooding is higher and longer than we can remember. And with sea level rise and changing weather patterns, it will only get worse.

Climate change is not just an environmental issue, and it's not something that we have to deal with in the far-off future. It is already changing our way of life. It is already putting our property in the path of destruction. It is already affecting our fishing industry, our tourism industry, and our economy as a whole.

While some have chosen to put their heads in the sand on this issue, South Florida is stepping up to the challenge.

Florida International University in my district is filled with forward-thinking, creative, and innovative minds that are working day in and day out, coming up with ways to not only *fight* climate change, but also *adapt* to the consequences that climate change will inevitably bring. Researchers there are working to advance green infrastructure initiatives, like protecting coral reefs and sea grass beds, which dissipate wave action, restoring coastal wetlands, which clean our fresh water, and restoring our mangroves, which absorb vast amounts of CO_2, protect against storm surges, and weaken strong winds.

In Congress, we must support innovative efforts, like researchers' work at FIU's Institute of Environment to 3–D print mangroves using eco-cement. These can then be planted along our coasts to help restore natural mangrove stands and act as a foundation for new habitats.

Innovation like this is the answer. The Committee must take full advantage of the talent we have in our own backyard.

Ms. CASTOR. Well, thank you again.

You know, the trip to Florida International University, one of the things that stuck with me is when the scientists there advised that they thought that hurricanes now are becoming so intense that we need to go a Category 6.

And the juxtaposition of that idea and that thinking with, now, the everyday flooding on Key Largo has—I mean, you can't help but, after that visit, come back here and say, we have to take climate action now. We don't have time to waste. So thank you for showing me firsthand the impact in your district.

You know, in so many ways, it is a slow-moving catastrophe—and we heard that from the scientists there—but not in your district. Boy, the everyday impacts of extreme temperatures, the rising seas, the flooding, the impact on coral reefs, it just—it is a call to action.

Ms. MUCARSEL-POWELL. Yes. And, you know, a lot of the parts in south Florida have been built on top of this coral rock, so water seeps very easily through the pavement. So we are seeing flooding events that we haven't really seen in the past two, three decades.

It is really urgent, which is why I think that we really don't have time to waste, especially when we have ideas and we have some great innovation that we can put into effect right away just by supporting it. And I think in Congress that is something that we need to do right away.

Ms. CASTOR. Thank you very much.

Ms. MUCARSEL-POWELL. Thank you.

Ms. CASTOR. Mr. Malinowski, are you going close us out here? Welcome. I am interested in hearing your ideas and recommendations. You are recognized for 5 minutes.

STATEMENT OF THE HON. TOM MALINOWSKI, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. MALINOWSKI. Thank you so much. Thanks for saving the best for last. So thank you so much for having me, and I do appreciate the chance to testify on behalf of the Seventh District in New Jersey.

And I want to talk about the climate crisis, of course. And I know that I don't need to tell you or anybody on this committee that the

case for action to prevent climate change is strong. Every catastrophic storm, whether it hits Florida or New Jersey or any other part of this country, makes the case for us.

Outside the political realm, I don't think anybody really disputes it. And yet here in Congress, every time we consider doing something, we are confronted with the old, reflexive argument that we can't afford it.

Senator Marco Rubio, somebody who I have known for years, actually, and have worked with on many, many issues, recently wrote an op-ed, which I am sure you saw, saying that, yes, climate change is real, but instead of trying to stave it off, we should brace for impact, resigning ourselves to, quote, "adaptation."

Every plan that has been put forward to actually do something to prevent disaster, he said, would, quote, "constrain our economy and neutralize our tenuous economic advantage over China."

Well, I don't just question the morality of that argument; I question its connection to economic reality. China today is investing three times as much in clean energy as the United States. Twenty percent of the energy it consumes comes from renewable sources, compared to just 11 percent in the United States. Why is China doing this? It is not because the Communist Party loves trees. It is because they want to win the future. And I am here because I want America to win the future.

In New Jersey, the companies I meet with are eager to lead the way. Their customers demand it. The employees they are trying to recruit expect it. What they ask from government is that we set a goal, backed by tax and regulatory policies that give them an incentive to meet that goal, and that once we commit, we stay committed so that they have the confidence to make the necessary upfront investments.

It is what New Jersey has done. We are committed to get to 50 percent clean power generation by 2030 and 100 percent by 2050. We should do the same here.

We have 52,000 jobs in New Jersey in renewable energy, such as wind and solar, clean vehicles manufacturing, energy efficiency, led by many companies in my district, like Green Power Energy in Annandale, New Jersey. That is as many jobs as Walmart, UPS, and Verizon combined in the State of New Jersey. And we know we can have far more if Washington just follows where States and the private sector are leading.

That is why I am a cosponsor of H.R. 763, the bipartisan Energy Innovation and Carbon Dividend Act, which, as you know, would put a fee on the production of fossil fuels and return the money raised through equal shares to the American people to spend as they see fit.

I recently met with around a dozen large and small companies in New Jersey under the auspices of the Chamber of Commerce, and I asked them, do you support putting a market price on carbon? Every single hand shot up.

But whatever market-based mechanism we adopt, America's leading Fortune 500 companies agree with climate activists, with scientists, that it is past time for Congress to catch up and start acting. Companies from Bank of America to DuPont, to Procter & Gamble, to Johnson & Johnson, The Walt Disney Company, have

all urged us to stay in the Paris Climate Agreement and to take the sorts of actions that will incentivize them to do what they want to do.

There are not a lot of socialists on the boards of those companies, Madam Chair, just Americans who want our innovators and our entrepreneurs to lead the global movement to a clean-energy future. Let's stand with them before it is too late.

Thank you.

[The statement of Mr. Malinowski follows:]

Testimony of the Hon. Tomasz "Tom" Malinowski
A Representative in Congress from the State of New Jersey

Before the U.S. House of Representatives, Select Committee on the Climate Crisis
Member Day

November 14, 2019

Thank you Chairman and Ranking Member. I appreciate the chance to testify today on behalf of New Jersey's 7th Congressional District.

I know I don't need to tell you the case for action to prevent climate change. Each catastrophic storm makes the argument for us, on top of all the other signs that something is happening to the planet that will affect the lives of generations to come. Outside the political realm, virtually no one disputes this.

Yet here in Congress, every time we consider doing something, the old—we can't afford it. Senator Rubio, someone I respect and with whom I have worked on many issues, recently wrote an oped saying that yes, climate change is real, but instead of trying to stave it off we should brace for impact, resigning ourselves to "adaptation." Every plan that's been put forward to actually prevent disaster, he said, would "constrain our economy and . . . neutralize our tenuous economic advantage over China."

I don't just question the morality of this argument. I question its connection to economic reality.

China today is investing three times as much in clean energy as the United States—that's half of all global investment; 20% of the energy it consumes comes from renewable sources, compared to just 11% in the U.S. Why is China doing this? It's not because the Communist Party loves trees. It's because they want to win the future. I'm here because I want America to win the future.

In New Jersey, the companies I meet with are eager to lead the way. Their customers demand it. The employees they want to recruit expect it. What they ask from government is that we set a goal, backed by tax and regulatory policies that give them an incentive to meet that goal. And that once we commit, we stay committed so that they have confidence to make the necessary upfront investments.

That's what New Jersey has done. We've committed to get to 50% clean power generation by 2030, and 100% by 2050.

We have 52,000 jobs in areas of renewable energy such as wind and solar, clean vehicles manufacturing, and energy efficiency, led by many companies in my district, like Green Power Energy in Annandale, NJ—that's as many jobs as in Walmart, UPS and Verizon combined, and we know we can have far more if Washington just follows where states and the private sector are leading.

This is why I am a cosponsor of H.R. 763, the bipartisan Energy Innovation and Carbon Dividend Act, which would put a fee on the production of fossil fuels and return the money raised through equal shares to the American people to spend as they see fit.

I recently met with around dozen large and small companies in New Jersey under the auspices of the Chamber of Commerce. I asked them if they support putting a market price on carbon—every one immediately said yes, that it would encourage and reward the very things they want to do.

But whatever market-based mechanism we adopt, America's leading Fortune 500 companies agree with climate activists and scientists that it's past time for Congress to catch up and start acting. Companies from Bank of America to Dupont to Proctor & Gamble to Johnson & Johnson have all urged us to stay in the Paris Climate Agreement.

There are not a lot of socialists on their boards, Mr. Chairman. Just Americans who want our innovators and our entrepreneurs to lead the global movement to a clean energy future. Let's stand with them before it's too late. Thank you.

Ms. CASTOR. Thank you, Mr. Malinowski.

Your expertise in foreign affairs will prove invaluable to this committee. We need your thoughtful, reasoned recommendations as we develop our policy recommendations. And I would like to continue the dialogue with you after this on what we need to be doing through Foreign Affairs to give our businesses, give our families, give our scientists every opportunity to compete on a level playing field across the globe.

Mr. MALINOWSKI. Thank you. If we don't do it, someone else will.

Ms. CASTOR. Thank you.

All right. So I really appreciate the professional staff, all the input of the Members today. We are going to wrap a lot of the recommendations we heard here into our policy recommendations going forward. So thank you all very much.

The committee is adjourned.

[Whereupon, at 4:31 p.m., the committee was adjourned.]