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6	THE FISCAL YEAR 2019 DEPARTMENT OF ENERGY
7	BUDGET
8	THURSDAY, APRIL 12, 2018
9	House of Representatives
10	Subcommittee on Energy
11	Committee on Energy and Commerce
12	Washington, D.C.
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16	The subcommittee met, pursuant to call, at 10:00 a.m., in
17	Room 2123 Rayburn House Office Building, Hon. Fred Upton [chairman
18	of the subcommittee] presiding.
19	Members present: Representatives Upton, Olson, Barton,
20	Shimkus, Latta, Harper, McKinley, Kinzinger, Griffith, Johnson,
21	Long, Bucshon, Flores, Mullin, Hudson, Cramer, Walberg, Duncan,
22	Walden (ex officio), Rush, McNerney, Peters, Green, Doyle,
23	Castor, Sarbanes, Tonko, Loebsack, Schrader, Kennedy,
24	Butterfield, and Pallone (ex officio).
25	

Staff present: Mike Bloomquist, Deputy Staff Director;
Samantha Bopp, Staff Assistant; Daniel Butler, Staff Assistant;
Kelly Collins, Legislative Clerk, Energy/Environment; Wyatt
Ellertson, Professional Staff, Energy/Environment; Adam Fromm,
Director of Outreach and Coalitions; Jordan Haverly, Policy
Coordinator, Environment; Ben Lieberman, Senior Counsel, Energy;
Mary Martin, Chief Counsel, Energy/Environment; Drew McDowell,
Executive Assistant; Brandon Mooney, Deputy Chief Counsel,
Energy; Mark Ratner, Policy Coordinator; Annelise Rickert,
Counsel, Energy; Dan Schneider, Press Secretary; Peter Spencer,
Professional Staff Member, Energy; Jason Stanek, Senior Counsel,
Energy; Austin Stonebraker, Press Assistant; Hamlin Wade, Special
Advisor, External Affairs; Everett Winnick, Director of
Information Technology; Andy Zach, Senior Professional Staff
Member, Environment; Priscilla Barbour, Minority Energy Fellow;
Jeff Carroll, Minority Staff Director; Jean Fruci, Minority
Energy and Environment Policy Advisor; Tiffany Guarascio,
Minority Deputy Staff Director and Chief Health Advisor; Zach
Kahan, Minority Outreach and Member Service Coordinator; Rick
Kessler, Minority Senior Advisor and Staff Director, Energy and
Environment; Jourdan Lewis, Minority Staff Assistant; John
Marshall, Minority Policy Coordinator; Alexander Ratner,
Minority Policy Analyst; Tim Robinson, Minority Chief Counsel;
Tuley Wright, Minority Energy and Environment Policy Advisor;

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Mr. Upton. Good morning, everyone. So it has been 6 weeks to the day, Mr. Secretary, since you last appeared here and I certainly welcome you back. We all do. And at that October 12th hearing we talked about your efforts to refocus the Department's limited budget resources to address what you see as the most pressing challenges.

You outlined a number of priorities which included promoting the nation's energy security, strengthening the nation's national security and nuclear deterrent, spurring innovation, and yes, cleaning up the legacy Cold War sites. The proposed \$36.6 billion budget that we are discussing today reflects those priorities.

There is \$15 billion for the National Nuclear Security Administration which would continue critical spending for DOE's defense and national security programs at a level some \$200 billion higher than the previous administration spending. The budget maintains about five and a half billion dollars for the Office of Science and its fundamental and basic research programs which is the seed bed for innovation. That is up somewhat from the previous administration spending. And there is \$6.6 billion for the Office of Environmental Management, the highest level in some 15 years. Concerning the various energy programs, the budget provides two and a half billion which represents a substantial cut, overall, from the previous spending across these programs. And I would encourage you to continue working with the committee to identify additional authorities that you need to be more effective and I know that you will do that.

We also need to recognize that as our energy systems, market mechanisms, and federal and state environmental policies become more entangled, existing and emerging hazards to energy systems may have far more reaching consequences than we may be accustomed to. For example, a successful cyber attack on certain business systems would certainly undermine confidence in energy trading systems even if it doesn't pose a threat to physical operations.

A major cold event like January's bomb cyclone can lead to severe shortages in power or energy when people need it most or, as testimony at our second modernization hearing this year noted, factors that lead to the decline in our nation's nuclear infrastructure can undermine long-term national security and the national leadership on nonproliferation and safety.

So these energy policies and energy securities present serious challenges, no question, challenges that transcend our current market setup. It is essential for you as Secretary of Energy to survey energy and national security risks, to identify the implication of our existing energy policy and energy infrastructure, recommend appropriate action, and help us make more informed policy decisions. Your budget should provide the resources for you to do that work and your leadership should focus

122	on tackling those large and consequential questions.
123	I look forward to this morning's discussions and would yield
124	for an opening statement to the ranking member of the Energy
125	Subcommittee, Mr. Rush from Illinois.
126	[The prepared statement of Mr. Upton follows:]
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Mr. Rush. Good morning. I want to thank you, Mr. Chairman, and I want to welcome you, Mr. Secretary. And, Mr. Secretary, I really like how you entered into the room. You came over and shook hands on the side of the aisle, here, and your personal touch means a lot. And in this era of extremism on both sides, really, the human touch you exhibited means a lot to me and I want to thank you for it.

Mr. Secretary, I look forward to working with your office to ensure that the Department moves the nation's energy policies forward in a way that benefits all Americans and, indeed, benefits all communities. History has shown all of us the importance of having people with different perspectives and different life experiences at the proverbial table when important and consequential decisions are initially being considered.

So when I talk about having diversity in leadership positions at DOE, it is just not for the sake of having diversity. But rather, it helps to ensure that specific groups or communities aren't being excluded whether it is intentional or not. When decisions are being made regarding which universities are awarded research grants, or which businesses can receive contracts, or even how a specific policy might impact a particular community, having a sense of diversity, having real diversity in demographics and in opinion, helps to make sure certain groups aren't being left out. So, Mr. Secretary, I look forward to meeting with you

soon to discuss your thoughts on this very issue and to see how we might be able to work together to make sure that the Department is providing aid and resources to all communities in a way that is sustainable regardless of the administration that is in office.

Mr. Secretary, besides the objective of making sure the Department elects inclusive policies I also have strong views in regards to the fiscal year 2019 budget proposal that was put forth by the administration. Specifically, this budget proposal will cut the Office of Energy Efficiency and Renewable Energy by 70 percent from fiscal year 2018 levels with over \$600 million of these reductions coming from energy efficiency programs.

These proposed cuts are a nonstarter as far as I am concerned. They would severely and negatively impact low-income families throughout my home state of Illinois and the nation by eliminating extremely popular and much-needed initiatives such as the Weatherization Assistance Program and the STAR ENERGY program. Additionally, the proposal would increase funding of the Office of Science, which funds the 17 national laboratories, by \$869 million from fiscal year 2018 levels, eliminating the Advanced Research Program Agency, slash, Energy, or ARPA-E.

The budget proposal would also get rid of all DOE loan programs including the Title XVII innovative clean energy projects loan program and the Advanced Technology Vehicles

Manufacturing loan program. Mr. Secretary, this fiscal year 2019

budget proposal reflects exactly the wrong vision for the nation 177 178 and it would take us backwards on critical issues like climate 179 change, while also hampering American innovation and global 180 competitiveness. 181 Mr. Secretary, again I want to thank you for being here and I look forward to working with you to address these important 182 183 issues going forward. With that, I yield back the balance of 184 my time. The gentleman yields back. The chair would 185 Mr. Upton. 186 recognize the chair of the full committee for an opening 187 statement, the gentleman from the good state of Oregon, Mr. 188 Walden, for 5 minutes. 189 The Chairman. You know, last time it was the great state 190 of Oregon. 191 Mr. Upton. I know. 192 The Chairman. I don't know how we slid downhill. 193 Michigan is the great state. Oregon is a good Mr. Upton. 194 state. 195 The Chairman. Oh, I see. 196 I want to start of course by welcoming the Secretary and 197 Mr. Vonglis, thank you both for being here. I believe it is the 198 Secretary's second visit before our committee and we appreciate 199 that. We like regular visitors here. We don't give, you know, 200 Hilton Honor points or anything for your stays, but we do

appreciate your being here and especially to discuss the fiscal year 2019 budget request from the President.

As we have explored through the DOE modernization hearings, lots has changed at the Department of Energy over the 40 years since it was first created especially on the national security and energy front. And I know that is a passion of yours on cybersecurity, Mr. Secretary, and protecting our energy grid, our gas pipeline system and all from attack. Under your leadership, Mr. Secretary, the Department is undertaking a very ambitious set of reforms to strengthen our energy security, to reduce regulatory burdens, and to spur economic growth in America. Today's hearing will provide you with an opportunity to update the committee on the progress made toward achieving those goals and to discuss how the budget request will help further DOE's mission to advance the national economic and energy security of the United States.

As we have discussed before, DOE and Congress must work cooperatively to adapt management and mission priorities to reflect the realities of today's world. At my direction, Chairman Upton and Vice Chairman Barton have been working with Mr. Rush and others in terms of how do we organize the Department of Energy for the next generation. And we appreciate that work that is underway and we also appreciate the work of your team, Mr. Secretary, to give us counsel and guidance from time to time

as we work on legislation here to strengthen the physical security and cybersecurity of the nation's electric grid and pipelines and streamline the process for reviewing LNG export applications.

The Department of Energy has been a good partner and we appreciate the testimony and your assistance in fine tuning these bills. It is my expectation this constructive approach will continue to pay off as we dig deeper to address DOE's core missions of nuclear energy, environmental cleanup, and mission-enabling science.

The President's fiscal year 2019 budget requests \$30.9 billion for the Department to deliver on its commitments to the American people. Almost half that budget would go toward the Department's nuclear security mission, roughly a quarter would be spent on environmental management, the remaining amount would go toward DOE's energy and science programs. I am pleased to see that the budget also includes funding to fulfill the Department of Energy's legacy cleanup responsibilities including at the Hanford Site.

Now it is located along the Columbia River, you and I both went there last August and I appreciated your doing that and touring McNary Dam as well. The cleanup work at Hanford requires deliberate, careful, and very clear oversight by the Department of Energy and we will continue to monitor the projects, particularly involving worker safety.

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As we talked before the hearing, Mr. Secretary, I would love to explore your views on what has happened recently there with some potential radiation emissions from dust and the effect on workers and the overall cleanup. While many technical and logistical challenges remain, we are beginning to see some progress and I trust your renewed focus on Hanford will accelerate the results of cleaning up that mess. I am pleased the budget includes funding to restart Yucca Mountain project -- Mr. Shimkus also probably shares some happiness with that move -- so the waste currently sited at Hanford and around the country will be permanently disposed of. That remains a big priority for this We will get Yucca legislation to the floor. committee. passed out it here on a big bipartisan vote, we want to get it down to the President's desk.

This year's budget request is notable in its emphasis on energy security, in particular in combating physical and cyber attacks to our nation's energy infrastructure. As the sector-specific agency for cybersecurity for the energy sector, the Department of Energy must ensure unity of effort and serve as the day-to-day referral interface for the prioritization and coordination of activities across the government.

As I said, I got a firsthand look at some of DOE's testing capabilities and unique facilities and advanced tools during a recent visit to the Idaho National Laboratory in Idaho Falls.

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Mike Simpson, my colleague from Idaho, and I were there. Your experts are working to protect our economy and safety of our citizens from hackers who are waging a continuous cyber war on our critical infrastructure in this country.

Just last month for the first time ever, the Department of Homeland Security and the FBI jointly issued an alert formally accusing the Russian Government of a widespread hacking campaign targeting a wide swath of our energy infrastructure including our grid, pipelines, and nuclear facilities. I commend you, Mr. Secretary, for taking this threat as seriously as you do and for your efforts to improve the Department's ability to detect and respond to these emergency threats.

While the Department works to keep the lights on in the event of a cyber attack, it is also working to improve the resiliency and reliability of the electric grid in the face of a rapidly changing power generation mix. So, Mr. Secretary, we appreciate that. I will have questions for you about making sure that the Bonneville Power Administration remains a vibrant part of the Northwest infrastructure. I know the administration may have a different view on that but we will overcome that.

So thank you, Mr. Secretary, delighted to have you here, and I yield back the balance of my time.

[The prepared statement of The Chairman follows:]

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Mr. Upton. The gentleman yields back. The chair would recognize the ranking member of the full committee, the gentleman from New Jersey, Mr. Pallone, for 5 minutes.

Mr. Pallone. Thank you, Mr. Chairman.

Secretary Perry, welcome back. I hope you feel welcome, because judging by President Trump's fiscal year 2019 budget, I think here in Congress we have more confidence in you and your Department than in the President. I say that because we recently passed a bipartisan omnibus appropriations bill that not only increased funding for many DOE programs above the President's budget request, but also increased funding above 2017 enacted levels.

And I am glad that Congress is going on record that it will not accept these severe cuts being proposed by the President.

I don't envy the position you are in today, having to defend a Department of Energy budget that slashes funding for clean energy research, walks away from popular efficiency programs that save consumers money, eliminates programs that fund cutting-edge energy research, and helps low-income families weatherize their homes.

And this budget also slashes federal investments in DOE programs that help mitigate carbon emissions which are, as the science clearly shows, the main drive of climate change. The President's budget proposes a particularly crippling 70 percent

cut to DOE's Office of Energy Efficiency and Renewable Energy and that office has succeeded in growing clean energy technology deployment, developing cost-saving energy efficiency programs, and promoting advanced vehicles and alternate fuels. If we put the brakes on clean energy research, development, and deployment, we risk falling behind countries like China that are prioritizing clean energy investments that are spurring new industries and creating jobs and this is not a way to grow and expand our economy, in my opinion.

I am also very concerned about the budget cuts to efficiency programs. My frustration is compounded by the fact that this administration has been slow-walking the publication of four product efficiency standards that were completed over a year ago. I simply do not understand why you would block the completion of these standards which are cost effective and will save consumers money. The standards have also been fully negotiated. The U.S. District Court has ordered DOE to finally publish these standards, but the Trump administration is currently wasting taxpayer money to appeal the order. The law requires the DOE to publish these standards and it should be done immediately.

The budget proposal also makes several misguided changes to the structure of the power marketing administrations, PMAs. It directs the federal government to sell off a large portion of the transmission system in several PMAs; it also requires the

PMAs to charge consumers for electricity based on the rates of comparable private utilities instead of simply recouping costs.

And both of these actions, I think, are ill-conceived and will lead to higher electricity bills for those who purchase electricity from a PMA and that is clearly bad for consumers.

Another proposal I find especially foolish is the President's plan to abolish the Northeast Gasoline Supply Reserve which was launched after several gasoline shortages during Superstorm Sandy. The administration's reasoning for this shortsighted proposal that the reserve, and I quote, has not been utilized since its establishment. By that logic, we might as well discard the federal government's stockpile of smallpox vaccines because the vaccines have not been used since the stockpile was created. And I have introduced legislation to authorize the reserve. I would prefer to work with you, Mr. Secretary, to perfect and move that legislation, but I certainly will fight any attempt to eliminate the reserve.

And, finally, I must address the recent request the Department received from FirstEnergy and Murray Energy to use section 202(c) of the Federal Power Act to keep the companies' cash-strapped coal and nuclear plants operational. Mr. Secretary, judging by your recent statements and those of Assistant Secretary Walker, it sounds like you appreciate that section 202(c) is for serious grid emergencies as explicitly

designed in the statute and not designed to bail out power plants that are using money.

So this request by FirstEnergy, in my opinion, is like calling 911 because your credit card got declined. It has united Republicans, Democrats, energy companies and environmental groups, regulators, and consumers in opposition because it is clearly and simply not just inappropriate but, I think, illegal.

So again thank you for testifying before our committee today.

I know you were here before and, believe me, we appreciate the fact that you as a Cabinet member don't hesitate to come here.

Thank you.

I yield back, Mr. Chairman. Mr. Upton. The gentleman yields back. And I would just echo many of the positive comments from both sides of aisle that we do appreciate your presence here and your frequent visits to Capitol Hill and ability to reach out again to both sides. And, Mr. Secretary, you are recognized to give an opening statement and then we will proceed with questions.

STATEMENT OF THE HONORABLE RICK PERRY, SECRETARY, U.S. DEPARTMENT OF ENERGY

## STATEMENT OF SECRETARY PERRY

Secretary Perry. Thank you, Mr. Chairman. And Chairman Walden, thank you for your comments. And Ranking Member Rush and along to each of you, it is my privilege to be back in front of you again. And, Mr. Rush, just as a side comment, I hope that we all can reflect a real civility and, frankly, brotherly and sisterly love as we go forward in this process. And it is my honor to get to serve this country once again in this role that I have today and it is a great privilege to be interacting with each of you as public servants. You all sacrifice to serve this country and I am greatly appreciative of that.

This budget represents a request to the American people through their representatives in Congress to fund the priorities of this Department. It underscores DOE's commitment to stewardship, accountability, service; I hope that our interactions with you and other committees of Congress over the past year have underscored that commitment. Our DOE leadership team has appeared before congressional committees 23 times in 2017 and we are proud of the strong relationship that we have built on the Hill.

When I first appeared before this committee last year, I

committed DOE to advancing several key objectives. I noted that we needed to accelerate our exascale computing capability; to modernize our nuclear arsenal; to continue to address the environmental legacy of the Cold War; advance domestic energy production; better protect our energy infrastructure. This fiscal year 2019 30.6 billion budget request for the Department seeks to advance these and other goals.

Mr. Chairman, DOE's supercomputing and other advanced technology capabilities play a crucial role in combating threats to our energy and national security infrastructure. As this committee knows from its strong bipartisan support of the 21st Century Cures legislation, these supercomputing assets are also critical to finding cures for cancer, cardiovascular disease, and other health challenges.

In the Precision Medicine Initiative section of the Cures Act, section 2011, you encouraged the Secretary of Health and Human Services to coordinate with the Secretary of Energy to identify and address the technology needs for the initiative. So last week I met with HHS Assistant Secretary for Health and the Surgeon General to discuss how we can work together to address these goals and further utilize our capacity to address similar health problems faced by American veterans.

Mr. McNerney, you and I had talked about this with a little more specificity and I hope to be able to come up and sit down

with you because I know that you have a very real interest in this particular area and I just think there is extraordinary opportunity here.

On a parallel track, DOE has been working with the VA to utilize information from millions of cancer patients' records to determine optimal treatment. We are now bringing these tools to bear on veterans' health issues ranging from traumatic brain injury to suicide prevention, prostate cancer, cardiovascular disease; in addition, we recently announced a major RFP to accelerate our efforts to regain American leadership in supercomputing. The machines we will build and will deploy will be 50 to 100 times faster than any of our current computers and will hold immense potential to help to answer the most challenging questions in science and medicine and national security.

Regarding national security let me say that the United States Government has no greater or more solemn duty than to protect its citizens. Because nuclear deterrents is critical to our defense, last year we promised a much-needed upgrading of our arsenal. This year we requested an 8.3 percent increase to align ourselves with the President's Nuclear Posture Review and the National Security Strategy. We also focused on addressing the environmental legacy left at the Department's sites and this year we are requesting additional funds for that obligation.

We also have a duty to advance American energy independence.

Thanks to ingenuity innovation, we are on the cusp of realizing that objective. In the coming years we will produce an abundance of energy from a diverse number of sources. Not only are we becoming energy independent, we are exporting to our friends, our allies, and our partners. Just last year we became a net exporter of natural gas and today we are exporting LNG to 27 countries on five different continents.

And as our economy expanded and the energy development reached new heights, our environment became cleaner. From 2005 to 2017, we led the world in reducing carbon emissions cutting them by 14 percent over that time. The lesson is clear, we don't have to choose between growing our economy and caring for our environment and that is the heart of the new energy realism that I recently described.

To drive further energy innovations we are requesting continued funding for our energy program offices as well as more funding for research in fossil fuels and nuclear power including small nuclear reactors, the modular reactors. At the Department we have a duty to ensure our energy actually delivers to its place of use without interruption. Our national and economic security depend on a diversity of fuel sources and the ability to deliver electricity where and when consumers need it.

My greatest focus as the Secretary of Energy is to ensure that our grid is not only reliable but that it is resilient.

That is why last year I promised to step up our efforts to protect and maintain America's energy infrastructure in the face of all hazards. The devastation caused by the 2017 hurricanes highlighted the importance of improving grid reliability and resilience in the face of natural disasters. We also need to protect it from manmade attacks including cyber attacks. So this year we have requested funding increases to strengthen cybersecurity as well as the Department's cyber defenses. We are also seeking to establish a new Office of Cybersecurity, Energy Security, and Emergency Response which will be led by a new assistant secretary.

Now since many of our nation's greatest energy breakthroughs have come through the work of our national laboratories, we need to ensure their ability to innovate. Meeting the people driving our innovation agenda and imploring them to reach even higher are some of the reasons I am committed to visit each of our national labs. Thus far, I have visited 13 of those 17 labs and also visited other key DOE sites. At each site one thing was made abundantly clear, those who work for the Department are patriots committed to serving the American people.

In the end it will be you, our elected representatives, who will decide how to best allocate the resources of our hardworking taxpayers. My pledge to you is that we will do our best to use those resources wisely and in pursuit of the vital goals that

808	I have just outlined. Thank you and it is my privilege again
509	to be in front of you and attempt to answer your questions.
510	[The prepared statement of Secretary Perry follows:]
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Mr. Upton. Well, thank you, Mr. Secretary. At this point we will move to questions from both sides. We appreciate again your presence here.

I want to first ask, going back to what Chairman Walden said, the great state of Michigan, one of the reasons why it is such a great state is because of the Great Lakes. And I would like to talk to you briefly about the Straits of Mackinac which you know that we both deeply care about. About a week and a half ago, we learned that two high voltage transmission cables that run under the straits near the Mackinac Bridge were destroyed by a ship's anchor and was taken out of service. Enbridge's Line 5 which carries not only crude oil, light crude, and also propane, also runs under the straits only a short distance away, was also struck by that same anchor and the pipeline was damaged. It was a near miss. It could have been catastrophic for sure.

And even though the strike on Line 5 did not cause an oil spill, that is something we all worry about. Earlier, Governor Snyder and I reached an agreement with Enbridge who maintains that line to look at a number of options to replace that line. In my view, it needs to be directionally drilled in terms of a new line that needs to replace the existing line. I know that they are looking at a number of different options, and particularly with the events of the last 2 weeks it prompts us to try and expedite that process even faster. A couple

questions I have as I work with the governor's office and others, can you help us in looking at a replacement for this line as it relates to the permitting that would be required and other efforts within the administration to replace that Line 5 with a safer option than we have today?

Secretary Perry. Yes. Well, the short answer is yes. But if I could just expand a moment, I think it is really important for us to recognize that our infrastructure not only in some cases as this one, I would suggest, is aging, but also the expansion of that infrastructure to be able to take advantage of this new energy resource, if you will. 12 years ago there was a fellow traveling around the country making a pretty good living giving a speech about peak oil, and the world has so changed and America is in such a different position and being able to move those resources safely and efficiently is really important to the economy and to the national security of this country.

Mr. Upton. Well, you might remember that there was an Enbridge pipeline break a number of years ago and when that happened we actually passed the Upton-Dingell bill and -- John Dingell -- and it passed with maybe one vote against it in the Congress. We upgraded all of the safety standards and fines for new pipelines, and one of the provisions in that bill in fact was that any new pipeline built that goes underneath a body, a significant body of water, major river, et cetera, certainly the

Straits of Mackinac, would have to be buried underneath that lake or riverbed and not be trenched or simply laid on the top.

So what I have been pushing Enbridge to do, and I know the governor is on board as well, is to actually go underneath and use that technology that is available today so that we can get this thing replaced. One other question relating to that, can you ask your department of energy and reliability to actually study what would happen if this line went out for some type of duration? It leads to a major refinery over in Detroit and then that oil is refined and wholesaled throughout the Midwest. And I would like to know what the impact might be particularly on the consumers, and if you could help us get that, that would be good.

Secretary Perry. I would be happy to do that, Mr. Chairman. Your common, or let me put it this way, I think our common sense, collectively, tells us that if we lose a major line to a refinery like that, that it is going to have a negative impact not only on the consuming public, but also I will suggest, and it is one of the things I think you are very wise to ask us to take a look at this, on the national security side of it.

I don't know where that fuel goes in its final stages, but you all have major military bases in that part of the country and it could have a negative impact on their ability to have fuel available for the security of this nation.

Mr. Upton. The last question I have is while we are talking about pipeline safety I want to turn to the recent news regarding cyber attacks on pipelines and as you know that there was a published report just in the last week or 2 as to a cyber attack on one of our pipelines here. I know that that is almost a daily occurrence.

Why is it so important that DOE take a strong role in coordinating the federal response? You may know that I have a bill, H.R. 5175, the Pipeline and LNG Facility Cybersecurity Preparedness Act, which would enhance DOE's ability to coordinate pipeline security and emergency response. Can you work with us as we move that bill forward?

Secretary Perry. Yes, sir. Obviously, the world has really changed from the standpoint of, and it is not just a few times. It is thousands of times a day that there are bad actors out there whether they are nation states or whether they are just a single individual with ill intent in mind that are trying to penetrate into systems all across this country, some of them that could have catastrophic impact on our ability to deliver energy.

It is the reason that we have asked for these additional funds to stand up this office that we refer to as CESER or Cybersecurity. I want to thank Joe Barton for the work that he has done on reorg to help us from the standpoint of modernizing the agency to look at the changes that have just happened, let's

say, in the last decade in this country relative to the new energy resources we have available, the infrastructure that we are going to need, and the security and resiliency of that infrastructure, obviously including the grid that is out there.

Mr. Upton. Thank you much. I would yield to the ranking member, Mr. Rush.

Mr. Rush. Well, thank you, Mr. Chairman. Mr. Secretary, again I want to thank you for agreeing to meet with me in the near future to discuss ways that we can ensure that the Department of Energy reflects the nation's diversity not only within the mid-level staff levels, but also within the highest levels of the decision making process and positions. With your help, Mr. Secretary, I want to ensure that we have diverse perspectives structurally in the most critical areas, and these areas include within your office, the Institutional Review Board, the Energy Advisory Board, the Senior Executive Service, now, and of course at the highest levels of the national labs.

That said, Mr. Secretary, what is the justification for cutting the Office or Energy Efficiency and Renewable Energy by 70 percent from fiscal year 2018 levels? As you know, energy efficiency is one of the few issue items that enjoys widespread, bipartisan support here in the Congress. Initiatives like the Weatherization Assistance Program are extremely popular not only with policymakers here, but really all across the country as it

helps to conserve energy while also lowering utility bills for low-income families. Why is the administration proposing to cut or completely eliminate these critical programs?

Secretary Perry. Mr. Chairman, Ranking Member, thank you. Let me address, you asked two questions. On the focus on minorities and minorities at the DOE, I think we are focused on that. Twenty seven percent of our entire enterprise is made up by minorities. I think it is really important to bring to the committee's attention that we also have a focus on small business contracting at the laboratories so that women-owned and minority-owned businesses have the expertise to be able to make their way through the myriad contracting issues that are there.

One of the other things I am really proud of is that we have a program at the DOE to promote diversity in the STEM area back in both high schools and colleges to be able to get young diverse members of our society pointed in the right direction, engineering, math, science, technology, those, and I am really proud of what DOE is doing in that line. And I want to come and sit down with you in your office and talk more about this and the ways that we can do better.

Let me shift over to the EERE and to your concerns. And I heard Mr. Pallone's concerns as well dealing with EERE and the reductions there and I want to try to explain them in this way and then have one comment at the end of that. One of the things

that we have seen is that as technology has become more mature, you know, for instance, both solar and wind, and I try to remind folks that while I was the Governor of Texas we produced more wind energy than any other state in the nation, you know, passed up every state in the country and produced more wind energy than five countries and I am committed to having that diverse portfolio, but those are now becoming mature in the sense of their market, marketability and going to the market and being commercialized.

So the dollars that have historically been spent to bring those up to the place where they can be mature, we don't feel like those dollars need to be expended now. Are there other areas that we need to be focused on and yes, grid integration is a great example of it, energy storage, you know, kind of beyond batteries, if you will. Another DOE area that we are focusing on is in hydrogen R&D. Those are early stage and that is where you are going to see us focused with the dollars.

So, you know, we will always, you know, have a give-and-take back-and-forth about are you spending enough here, are you spending enough there, and I respect that. As a farmer appropriator, as a farmer agency head, and then as a CEO as the governor, I really respect the authorizers, the appropriators, and the administrative or the executive side of this. I know what my job is, and my job is to work with you, which I will do

on a daily basis to find that appropriate ground. But I will promise you this that where you appropriate and where you authorize we will work to make you very proud that we manage it absolutely the most efficient way that it can be.

Mr. Rush. I yield back, Mr. Chair.

Mr. Upton. The chair would recognize the gentleman from Oregon, a good state, Mr. Walden.

The Chairman. We are now a good state now, thanks. Thank you, Mr. Chairman. And, Mr. Secretary, again thank you for being here. Before I say anything we should also draw attention to the fact it is Mr. Walberg's birthday today so happy birthday -- from Michigan, the great state of Michigan.

Mr. Secretary, I want to start by talking about Bonneville Power Administration. I appreciate your just most recent comments about respecting the will of the authorizers, which is what we are. So along those lines, this idea of selling off the electric transmission assets and abandoning cost-based rates proposal has been roundly rejected by virtually every member of the Pacific Northwest congressional delegation. It is the one idea -- bad idea -- that unites all of us in the Northwest. I am afraid this move could do nothing but harm my constituents, drive up electricity costs, hurt consumers across the region; so can you assure me the DOE will leave Bonneville alone unless Congress provides explicit authorization -- that authorization

word again there, Mr. Secretary.

Secretary Perry. Yes, sir.

The Chairman. Thank you. Now moving along, as you know the Hanford Site is just across the river from many of my constituents. And not only are safe and secure operations a concern, and I appreciate your commitment not only to that and the lab nearby but also the help to do the cleanup here, the committee right now is working with the GAO to identify some options for improving operational performance. Will you work with us on this as we develop findings?

Secretary Perry. Yes, sir.

The Chairman. Thank you. Let me ask a broader question. As we look at modernizing the Department we are focusing on emergency and security issues, but also how the Department can better expend its limited resources. We are also cognizant of the Department's vast technological capabilities which can help accelerate innovation across national security, energy, manufacturing, even medicine as you have referenced in your testimony, but we also have to watch our taxpayers' wallets. Can you speak to your support of DOE's science, technology, computing facilities and how best to enable innovation in the private sector while tentatively managing limited taxpayer resources?

How are you going to balance all that because your labs are

doing amazing work. It is phenomenal. And for our committee members, if you haven't interacted with these labs we should figure out a way to do that and get some briefings. It is really terrific, the work that is being done there. So, Mr. Secretary, what can you tell us about how to balance all that and where you are headed in terms of the direction of the labs and, yes.

Secretary Perry. Technology transfer is, I think, one of the real goals of this agency from the standpoint of working with the labs and we are consolidating the EERE's tech-to-market functions over in the office of Technology Transfer. And just as a bit of a background I have a fairly substantial amount of experience with that. We created some programs while I was the Governor of Texas, the Emerging Technology Fund which basically is taking a very, very early stage technology and getting it to the market.

So I have had some experience of dealing with that as the Governor of Texas which, you know, I am not going to say this is apples-to-apples, but the point is we have in place the office of Technology Transfer and it is looking at how to coordinate best practices across the complex and to, you know, whether it is agreement provisions and abilities to consider equities and licensing, I mean there is a host of areas.

And I don't want to drill down all that deep, but the point is we are sensitive to one of our goals in a limited budget

situation is to be able to help these technologies get to 753 754 maturation, if you will, or at least to the point where they are 755 ready to be commercialized in the private sector. 756 All right, good. And in conclusion for my The Chairman. 757 few minutes here, this work on reorganizing and modernizing the structure of your agency is something that I take seriously. 758 759 It is a goal for our committee and I know Mr. Barton is leading that effort and working with Mr. Rush and others to get that done. 760 761 So we take it seriously here, we want you to know that. 762 We look forward to a partnership to look at how to reauthorize 763 and modernize the agency. Our committee has a pretty good track 764 record looking at other agencies, and like the FCC we reauthorized 765 for the first time since 1990, your agency is one that goes back 766 before that. And so we look forward to continuing to work with 767 you on that effort and so we want to move forward. 768 I will thank the chairman for this hearing and return the 769 balance of my time. The gentleman yields back. The chair 770 Mr. Upton. 771 recognizes the gentleman from New Jersey, Mr. Pallone. 772 Mr. Pallone. Thank you, Mr. Chairman. Mr. Secretary, how 773 many LNG export applications to Non-Free Trade Agreement countries are currently pending before the DOE, if you will? 774 775 Secretary Perry. There is 19, correct? I think there is 776 19.

777 Mr. Pallone. Do you believe that --778 Secretary Perry. Let me, I will get you the --779 Mr. Pallone. Yes. I will accept that. And if you want 780 to get back to me if you think it is slightly wrong, please do. 781 Do you believe that the DOE should continue to have a role in approving the LNG export applications, yes or no? 782 783 Secretary Perry. Yes, sir. 784 And does the EPA, now I am talking about the Mr. Pallone. 785 EPA, does the EPA play any role in DOE's public interest 786 determination process, yes or no? 787 Secretary Perry. I am sure they do, but I am no expert on 788 how the EPA functions, sir. 789 Mr. Pallone. Okay. Well, whether or not you agree that the U.S. Government should be promoting exports of American LNG 790 791 that is an activity that would clearly fall within the mission 792 of your Department or maybe the Department of Commerce. But as 793 you know, I think late last year EPA Administrator Scott Pruitt traveled to Morocco to pitch that country on buying LNG from the 794 795 Obviously I am very concerned that that doesn't fall within 796 the EPA's mission. Do you think that this falls within EPA's 797 mission? 798 Secretary Perry. Mr. Pallone, I am going to leave that up 799 I try to stay in my lane as best I can. So again as 800 I shared with you, I don't know what EPA's statutory

responsibility and authorizations are relative to promoting energy sales and/or what else might have been going on that I don't know about on that trip. So I think it would be a little inappropriate for me to be making a, you know, public or private observation about that.

Mr. Pallone. All right. Well, let me just ask. I think I know your answer, but did you or your Department have any role in Mr. Pruitt's Morocco trip?

Secretary Perry. Again there may have been some staff-to-staff level conversations that I am not privy to, but from the standpoint of Secretary-to-Secretary I don't recall any conversations relative to an EPA trip to Morocco.

Mr. Pallone. All right, thank you. I just wanted to point out that when Administrator Pruitt testified before this committee late last year he used the phrase "core mission" many times and argued that he was working to take EPA back to focusing on its basic responsibilities. And I found it strange that Administrator Pruitt thinks that visiting foreign countries to promote the sale of fossil fuels from private companies falls within the EPA's core mission. I don't think it does.

But let me ask you a second question, Mr. Secretary. I note that the Department has established a web page and email address to accept public comments and requests regarding emergency must-run orders under the Federal Power Act, section 202(c).

825 And I am supportive of efforts to expand public participation 826 in government processes, however, I don't see anything on that 827 web page that indicates that these comments, whether as-is or 828 redacted, will be posted for the public to see. 829 You know, if you want me to repeat this I will, but I am 830 basically trying to get a commitment from you to posting the 831 comments you receive on your website or at the very least providing 832 this committee in real time the comments you received on this 833 matter for all of us here to review. Is that something you can 834 commit to? 835 Secretary Perry. Yes, sir. And I think we have a place 836 for public comments because this 202(c) is just now being analyzed 837 and I don't think we even have a process in place yet for the 838 public --839 Mr. Pallone. You do have on the website a page and email 840 address to accept public comments and requests regarding the Federal Power Act section 202, but I just want to make sure that 841 842 they will be posted for the public to see. That is what I am 843 asking. 844 Secretary Perry. Yes, sir. We will. 845 Mr. Pallone. All right, thank you so much. I yield back. 846 The chair recognizes the vice chair of the Energy

Subcommittee, the gentleman from Texas, the good state of Texas.

Oh, Mr. Barton, I am sorry. Mr. Barton, I recognize Mr. Barton,

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849	the vice chair of the full committee.
850	Mr. Barton. All right. Well, you sometimes are too many
851	Texans, right?
852	Mr. Upton. Mr. Barton, whose picture is right above you
853	on the right, is recognized for 5 minutes.
854	Mr. Barton. As Mr. Upton's is right up there.
855	First of all, welcome, Mr. Secretary.
856	Secretary Perry. Yes, sir.
857	Mr. Barton. I think you and I should acknowledge at the
858	beginning that our basketball team got hammered by Mr. Upton's
859	team in the Sweet 16.
860	Mr. Upton. One point.
861	Mr. Barton. One, we got beat 27 points. My lord, they put
862	it to us. So I know I can't speak for Secretary Perry, but I
863	wasn't real happy that afternoon.
864	Mr. Upton. Thinking about Houston that was the
865	three-pointer there.
866	Mr. Barton. Yes, the game before you barely won, you put
867	the wood to us. Anyway, we are glad to have you, Mr. Secretary.
868	Secretary Perry. Yes, sir.
869	Mr. Barton. I am tempted to go down the rabbit hole that
870	Mr. Pallone introduced about your colleague at the EPA, but I
871	don't think so. I will say on my own behalf that any Cabinet
872	Secretary that encourages things that are of strategic interest

to the United States of America in his overseas travels is not necessarily a bad thing. And I am glad to learn that Mr. Pallone agrees that there are limits to what EPA should be involved with. So in that sense it was a good exchange.

I want to ask a few budget questions, but I am going to ask one policy question. You probably can't read this. This is today's business section of the Wall Street Journal. It says oil hits highest price since 2014. I am sure you read that before you came up here. And inside it has another article about Treasury bonds are beginning to inch up and tension in the marketplace over that.

What, if anything, should the Department of Energy under your stewardship do with the Strategic Petroleum Reserve to try to, I am not going to say manage the market, but make sure oil prices don't go too high in the near term, if anything?

Secretary Perry. Well, Mr. Chairman, I think one of the things that DOE needs to do and can do from the standpoint of making sure that there is a ready supply of energy, whether it is renewables, whether it is hydro, whether it is nuclear, whether it is coal, whether it is natural gas, the Strategic Petroleum Reserve, I think you bring up a really interesting opportunity for this body and for Congress and the administration to have, and obviously the public to have an open conversation about is the SPRO the way that it is structured today the proper structure?

897 898 899 I will leave that to all of us, collectively, to have that 900 But it was put in place after World War II and conversation. 901 902 903 904 905 906 its current form? 907 908 909 Mr. Barton. 910 911

Is there enough, too much? Is the operation of it on a yearly basis, the cost of the upkeep of that in our best interest?

there may be, and after the shortage of the '70s when we saw the need for that really exploding, if you will. And I think the question now is that with the resources that the United States has with the new innovation, with the new energy portfolio that we have, does the Strategic Petroleum Reserve need to stay in I am not ready to sit here and tell you I know the answer to that, but I think it is important the issue that you brought up that we need to have that conversation.

The GAO has done a study of the Strategic Petroleum Reserve and it basically says we need to do more study. You and I are going to meet next week and I think we are also going to have the staff begin to meet also with our friends on the minority side and that will be something that we bring up.

I have a few quick just dollar questions since this is --Secretary Perry. I will try to give you yes or no answers, sir.

Do you support us funding Yucca Mountain, Mr. Barton. Yes. us, the government, funding Yucca Mountain? I hope you say yes.

Secretary Perry. The dollars that you all are going to appropriate we will spend efficiently and appropriately, yes.

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921	Mr. Barton. Okay, finally, we have a Northeast Home Heating
922	Oil Reserve that I put into a bill with Congressman Markey back
923	in, oh, about 10 years ago. We spend \$10 million a year on it.
924	It has never been used. Is that maybe something we could save
925	a little money on?
926	Secretary Perry. Well, certainly, you know, when you have
927	dollars sitting in an account that is not being used it is
928	Mr. Barton. Something to look at.
929	Secretary Perry. Yes.
930	Mr. Barton. Okay. And you have 159 million in your budget
931	for something Called Legacy Management. Do you happen to know
932	what that is?
933	Secretary Perry. Yes, sir. Those are areas that older
934	facilities that, on the cleanup side that is over in EM.
935	Mr. Barton. I am very proud that you knew what it was.
936	Secretary Perry. Yes, sir. The Cold War cost a lot of money
937	as did the Manhattan Project. Still costing us a lot of money
938	but it was worth it, sir.
939	Mr. Barton. Let's see if we can save some money there.
940	Thank you, Mr. Chairman. And thank you, Mr. Secretary.
941	Mr. Upton. The gentleman's time is expired.
942	The gentleman from California, Mr. McNerney.
943	Mr. McNerney. I thank the chairman.
944	Mr. Secretary, I really appreciate your interest in veterans

945 issues and particularly using science and computing power to make 946 advances in PTSD and traumatic brain injuries and other 947 veteran-centric issues and I look forward to any collaboration 948 949 Secretary Perry. Yes, sir. 950 Mr. McNerney. -- between us in the future. There is two 951 issues I want to bring up today. One is resiliency of the electric 952 grid, especially in the face of the wildfires we had in California, 953 and other threats that we are seeing and ARPA-E funding. 954 Regarding resilience, does the DOE have any tools to help ensure 955 resilience despite some of the gaps we have in our current law? 956 Are there any tools that we can use that you can use to help 957 us make our grid more resilient to these things in California 958 and elsewhere? 959 Secretary Perry. Obviously the test grid, if you will, at 960 Idaho National Lab is one of the resources that we have available 961 where we can literally go in and break that grid and to see what 962 happens and how to address it. 963 Mr. McNerney. Well, I think, you know, what I am really 964 thinking about is federal tools to work between the DOI and the 965 Forest Service to ensure rights of way so that brush can be cleared 966 in federal lands, those kind of things. 967 Secretary Perry. I am sorry. I was going down a different

path here.

969 Mr. McNerney. Sure. 970 Secretary Perry. Let me get back to you. I don't off the 971 top of my head know that we have any resources available for that 972 specific --973 Mr. McNerney. Or authorities. 974 Secretary Perry. Or authority, yes, sir. 975 Mr. McNerney. Thank you. 976 Secretary Perry. But I will get back to you. 977 Mr. McNerney. Well, the current budget proposal reduces 978 funding for resilience and reliability from 89 billion in 2017 979 to 61 billion in 2019. And we have seen an increase in some of 980 these threats, wildfires, hurricanes, storms and so on, so that 981 budget direction seems to be going the wrong way. I mean I think 982 we need increase in that so that is a point of recommendations. 983 Secretary Perry. Yes, sir. Mr. McNerney, I don't want to 984 quibble with you about the issue of is it a reduction of dollars 985 or, one of the things that we have done, I believe, in that particular line item is that we bifurcated it. And that is where 986 987 cybersecurity, and we split that historic line item up and are 988 creating this new office of cybersecurity emergency response and 989 that has an 8.3 percent, yes sir, I think that is right.

But the commitment to resiliency and to reliability from

a substantial increase over on that side and you may be seeing

the EERE budget that is lower.

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993 my perspective has actually increased. And so let me come over 994 and sit down with you and we can look at this a little closer 995 to make sure that -- I know what you want to do and I want to 996 get to the same place that you are. I think the membership wants 997 to get from the standpoint of making sure that we have the 998 resiliency, the reliability in our grid. 999 Mr. McNerney. And of course then that applies to the whole 1000 country not just to California. 1001 Secretary Perry. Yes, sir. 1002 Mr. McNerney. Regarding ARPA-E, this program is designed 1003 to help keep the United States at the forefront of energy 1004 Energy innovation, I think that is a key element innovation. 1005 in ensuring our strong market position on energy issues. How 1006 determined is the administration in eliminating this program? 1007 Secretary Perry. It shows up on the budget. I am a good 1008 enough historian that we are going to do what the Congress wants 1009 to do on this. As a former CEO of the State of Texas I put some 1010 budgets forward from time to time that actually had zero line 1011 items in them. And --1012 That is kind of the same answer you gave 6 Mr. McNerney. 1013 months ago so. 1014 Secretary Perry. Yes, sir. And that was not particularly 1015 well received by the appropriators. 1016 Okay. Mr. Secretary, do you support robust Mr. McNerney.

1017 funding for fusion energy research and development? 1018 Secretary Perry. Yes, sir. 1019 Mr. McNerney. Thank you. Your predecessor was deeply 1020 involved in the negotiations for the Iran nuclear agreement. 1021 This administration has considered scrapping that agreement. 1022 Are you involved in those deliberations? 1023 Secretary Perry. Well, being on the National Security 1024 Council yes, sir, to some degree. I would not put myself as the 1025 lead negotiator, but certainly am involved with the conversations 1026 generally in rooms that we can't be having conversations with 1027 here. 1028 Mr. McNerney. Can you disclose your opinion on that? 1029 Secretary Perry. Well, I think like any of our deals whether it is NAFTA, whether it is JCPOA, whether it is the negotiations 1030 1031 that are ongoing with Saudi Arabia for a civil nuclear agreement, 1032 we need to get the best agreement that we can get. I think one 1033 of our main responsibilities is to, in the nonproliferation area 1034 is to make sure that the fewer individuals who have access to 1035 those types of materials that can be made into weapons we need 1036 to restrict that so. 1037 Mr. McNerney. I mean the agreement is already in place. 1038 Secretary Perry. I understand that, but so is NAFTA and 1039 we are renegotiating NAFTA. So I think the administration's 1040 point is can we re-engage and get a better deal.

1041	a problem in the world with that no matter what it might be, whether
1042	it is NAFTA, whether it is JCPOA. I mean renegotiating I mean
1043	we have people renegotiating LNG deals that they signed 3 years
1044	ago.
1045	Mr. McNerney. I think the chairman is going to cut us off
1046	here so thank you.
1047	Secretary Perry. I know. Yes, sir. Thank you.
1048	Mr. McNerney. Thank you, Mr. Secretary.
1049	Mr. Upton. The chair recognizes now the vice chair of the
1050	powerful Energy Subcommittee, Mr. Olson, from the great state
1051	of Texas.
1052	Mr. Olson. I thank the chair.
1053	And, Secretary Perry, a big old Texas howdy.
1054	Secretary Perry. Howdy.
1055	Mr. Olson. It is great to have you back before the panel.
1056	As a personal note, I am glad you did not leave DOE for VA as
1057	was rumored. Houston Texans are happy to have your hat hang where
1058	it is hanging today.
1059	Secretary Perry. Yes, sir.
1060	Mr. Olson. I want to talk about section 202(c) of the
1061	Federal Power Act. I was one of the members of last Congress
1062	to lead an effort to amend section 202(c). That change was signed
1063	into law. The intent was limited. Talking about, quote,
1064	continuance of war, end quote, or a, quote, sudden increase in

demand for electric energy, or a shortage of electric energy, end quote, there have been proposals to help failing coal and nuclear plants through section 202(c). I support coal and nuclear power and I believe we have to have a diverse grid.

Hurricane Harvey showed that dramatically. In my district, as you know, NRG's Parish power plant has four coal generators and four natural gas generators. Fifty inches of rain or more wiped out that coal, made it wet. They ramped up natural gas production at that facility. Forty miles south is the South Texas Nuclear power plant in Bay City. That never had a flicker despite having the brunt of Harvey's force. Could you please talk about your view of section 202(c) and the powers it gives you?

Secretary Perry. Yes, sir. And if I may, I would like to go back and just if I could very quickly clarify a conversation with Mr. Pallone where we talked about the email address on the 202(c) comments. And we have an address that is on our website that is the destination for correspondence for this and future applications. So it is not a formal comment period because there has been no formal comment opened up so I just wanted to clarify that.

The 202(c) is in place and I think you did a very good job, Mr. Olson, of basically laying out why a 202(c) could be used in this case. When we look at national security in particular, if you are in New York City and Wall Street were to lose power,

I think anyone would say that puts our national security in jeopardy. We have military bases in a lot of different places around the country that rely upon their energy from the grid.

Losing power to that grid would put our national security at risk.

So this administration looks at the national grid and the resiliency of it as well as the reliability of it as a national security issue. Having a very broad portfolio of renewables, of natural gas, of coal, of nuclear, of hydro, those are, we think, instrumental in being able to send the message across this country that whether it is in your private life or whether it is in your public life and I am talking about national security at that particular point in time versus, you know, why should anyone be put in the situation of having to choose between turning the lights on and keeping my family warm.

And this administration believes strongly that if we don't have a diverse portfolio and to try to keep these plants online obviously doing it with as much sensitivity as we can to the environment, and again in my opening remarks I made a comment that with 14 percent decrease in carbon emissions in this country that is leading the world. So the innovation and the technology that we have coming out of this country, but it is imperative that we don't allow political decisions to be made relative to our electrical, or excuse me, our power security in this country.

Mr. Olson. Yes, sir. One further question on India, I went there last week on a mission to talk about LNG being exported to the great nation of India and they were gushing, guess who is coming this week or the next couple days, Secretary Rick Perry. You get there and find out that Prime Minister Modi has a very aggressive plan to clean up their extremely dirty air and that is with renewables, mostly wind and solar.

But the energy minister and their foreign secretary stated over and over that LNG natural gas is the economy of the now. The future is renewables. As you know, we have had a private contract between Cheniere and a company, a group called GAIL, there in India to export approximately seven metric tons of liquefied natural gas over the next 20 years. We agree that to make this viable and to make that transition they want to make they have to have better battery power, better storage and better power lines, and also make wind viable. So I want you to take that technology message to them. We are going to help you. And so any comments about your trip to India?

Secretary Perry. Yes, sir. 2 weeks ago, the first molecules of U.S. natural gas arrived at GAIL. I think the issue for them is to build out their infrastructure to be able to move that gas around. Not unlike, Mr. Chairman, what we have in this country. Yes, we are way ahead of them, but the point is if you are really going to be able to satisfy the economic needs and

1138 to have to have the distribution system as well. 1139 So that is another area. U.S. pipeline technology, U.S. 1140 pipeline companies, I think there is a real opportunity in not 1141 just India, but India is obviously a huge market in our ability 1142 to deliver U.S. innovation, U.S. natural resources into that 1143 country are a great opportunity and that is the real driving factor 1144 of why we are headed that way. 1145 I yield back. Mr. Olson. Namaste. 1146 Mr. Upton. The chair recognizes the gentleman from 1147 California, Mr. Peters. 1148 Thank you, Mr. Chairman. Mr. Peters. 1149 And I thank you, Mr. Secretary, for being here. I have the 1150 exact quote I will just read to you. When I asked you about the 1151 budget that was proposed by the President you said I didn't write 1152 this budget, my job is to defend it which from time to time is 1153 counter to what I think is good. So I know you are here to do 1154 a job, but maybe we can --1155 Secretary Perry. Yes, sir. 1156 -- get some of your personal opinions on this. Mr. Peters. 1157 The budget makes cuts to the Office of Science which includes 1158 an important project named the International Thermal Nuclear 1159 Experimental Reactor which is sometimes referred to as ITER. 1160 Here is a program where the United States is one in an

satisfy the national security needs of your people you are going

international partnership developing energy of the future by proving we can make fusion work. The U.S. contributes 9 percent of the project funding, but 80 percent of it is spent in the United States and we have access to a hundred percent of the intellectual property. And perhaps most important, when the technology is proven we can be part of the group that has ownership with monetizing capabilities instead of being a country that has to buy into the group.

So with all these benefits, why does the budget cut contributions to ITER?

Secretary Perry. Mr. Peters, I think the basic messaging here on the reduction in that line item was, this is my observation just being a manager and having been in negotiations before, it was really poorly managed. And I think you know that. You all have been briefed on it. The previous management of ITER was very, very poor. They wasted a lot of money.

And they have new management in there. Mr. Bigot came over and we sat down and discussed this. I was impressed with his focus, his understanding, his recognition of the poor management before. We have as a matter of fact out of your district a couple of projects that are being funded, the Solenoid, \$75 million, and I think another aspect of the project that is ongoing that General Atomics is the deliverer, the manufacturer of and we certainly support that and are funding that.

But with that said, if this committee and if Congress in a whole get comfortable along with obviously the administration, that it is headed in the right direction, we will make sure that the U.S. dollars that are expended there are expended properly and that there is good oversight and that we have the proper outcomes that we would be looking for.

Mr. Peters. I appreciate the comment about the management.

That is fair. Now that we have improved that, I certainly hope we appreciate the leverage that we get out of this potential.

Secretary Perry. Yes, sir. Thank you.

Mr. Peters. And so just outside my district, San Diego Gas & Electric built and it runs the largest lithium ion battery in the world as part of its grid operations. It is proving that projects like this can be a valuable part of the grid particularly for resiliency and safety. How does the DOE budget ensure new technologies for grid resiliency can be implemented and tested properly?

Secretary Perry. And that goes right to the heart of our both Office of Science, Paul Dabbar, who is now the assistant secretary there I have great faith in his focus, and particularly we are supporters of, I have said before, the battery storage, the holy grail of electric power. I believe that. DOE and DOE labs working with private sector organizations like your constituents or right outside of your district are going to be

1209 So I am confident that what is happening in our key to that. 1210 national labs, the funding of those is appropriate to meet the 1211 needs of the battery challenges that face us. 1212 Thank you. And just with respect to NAFTA, Mr. Peters. 1213 do you think that the disruption of NAFTA will have a negative 1214 impact on energy prices for Americans and supplies for U.S. energy 1215 companies who sell to Mexico and Canada, even the way we talk 1216 about it right now? 1217 Secretary Perry. Not necessarily. I think generally 1218 speaking people are able to divorce the rhetoric with reality. 1219 For instance, Ray Washburne, who is the head of OPIC, he and 1220 I have had conversations with my counterpart in Mexico and private 1221 sector operators in the U.S. and their Mexican counter partners, 1222 if you will, to invest in Mexico's energy infrastructure. 1223 I feel confident. I think there is an extraordinary opportunity 1224 there. I am going to run out of time. 1225 Mr. Peters. I appreciate what you say about rhetoric. I have got to tell you that NAFTA 1226 1227 is so important --1228 Secretary Perry. Yes, sir. 1229 -- to our country and to my district in Mr. Peters. 1230 particular and I understand the talk about improving it. 1231 we had more leverage when we were dealing with 11 other countries. 1232 We could offer more to Mexico. But I certainly don't want to go backwards and some of the talk is, it looks like rhetoric is turning into policy and it concerns me. I just want to express that to you.

Secretary Perry. Mr. Peters, just as an aside, every time I see Ambassador Lighthizer I tell him we have got to get a deal. Get a good deal, but we have got to get a deal.

Mr. Upton. Mr. Latta?

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Thank you, Mr. Chairman. And, Mr. Secretary, Mr. Latta. thanks very much for being with us again today. I really appreciate seeing you. And I think it is really important, because also in reading your testimony about cybersecurity it is a big issue and in recent weeks we have read news stories about malicious agents working to undermine the safety and security of our nation's energy infrastructure. According to the Department of Homeland Security, this includes Russian cyber attacks that have remotely targeted the power grid, energy, nuclear, and commercial facilities in critical manufacturing More recently, we have seen cyber attacks against the electronic communication systems of several American pipeline DHS is still working to determine who is responsible companies. for these specific attacks.

And I believe from your response from the chairman of the subcommittee, the gentleman from Michigan, that you would agree that more needs to be done to address these attacks on our energy

infrastructure. Is DOE working with DHS to identify the vulnerabilities that were exploited through these attacks and rectifying them and, if so, can you tell us what might be done and what is being done?

Secretary Perry. Well, there is nothing more essential to America's national interest and for that matter our national and security than our energy supply. The Department of Energy plays a very important role with that. We are the specific agency that deals with the energy side of particularly grid security, but we are also working with the other sectors, or not the other sectors but the other agencies as well, DHS, Department of Transportation, and DHS and Transportation Department leads cybersecurity support to pipelines. DOE works closely with them and other departments and we have some other stakeholders to protect the energy sector including the secure transport of our oil and gas. So we recognize the real challenges there.

One of the reasons that we are asking for the additional dollars to stand up this office of cybersecurity that we refer to as CESER, C-E-S-E-R, is so that we can focus the resources, use our national labs, working with these other agencies of government, to assure the American people that we have done everything within reason possible to protect the American people from these cyber attacks that are only increasing in intensity and frequency.

Mr. Latta. Thank you. Given the nature of these threats, I believe it is more important than ever that Congress acts. That is why I have worked with my colleague, Representative McNerney, to introduce two bipartisan pieces of legislation to address the threat of cyber attacks. These two bills, H.R. 5239, the Cyber Sense Act, and H.R. 5240, the Enhancing Grid Security Through Public-Private Partnerships Act, was the subject of a legislative hearing held in this subcommittee last month.

Under H.R. 5239, the Secretary of Energy would be directed to establish a voluntary cyber sense program to identify and promote cyber secure products intended for these in the bulk power system. And do you believe that this policy would help improve the safety and security of our energy infrastructure and address these threats?

Secretary Perry. It certainly on its face sounds like it.

We will work with you in any way that we can to flesh out any
details and information that we have privy to.

Mr. Latta. I really appreciate that. Thank you. And along with Representative McNerney, I am also the co-chair of the Grid Innovation Caucus here in the House. The purpose of this caucus is to discuss the challenges facing the electric grid and to come up with ways that we can enhance its capabilities and securities. In addition to guarding against the threat of cyber attacks, will you go into more detail about other ways in

1305 which DOE is trying to improve the electric grid's capabilities 1306 to protect it from these cyber attacks? 1307 Secretary Perry. Yes, sir. We will work with you in --Well, I really appreciate it. Thank you very 1308 Mr. Latta. 1309 much, Mr. Chairman. I yield back the balance of my time. 1310 Mr. Upton. The gentleman from Pennsylvania is recognized. 1311 Thank you, Mr. Chairman. Mr. Doyle. 1312 Mr. Secretary, welcome back. 1313 Secretary Perry. Mr. Doyle. 1314 Mr. Doyle. Like many on this panel, I am greatly concerned 1315 by the premature closures of nuclear plants around this country. 1316 John Hanger who was former Secretary of the DEP in Pennsylvania 1317 and head of the Public Utility Commission in my state put it 1318 He said there are now 18 nuclear units that have 1319 closed or are scheduled for closure in the last 5 years. 1320 are in my state of Pennsylvania, Beaver Valley I and II, and Three Those three nuclear units generated 22 terawatt 1321 Mile Island. 1322 hours of energy in 2017, all the wind and solar in Pennsylvania 1323 generated 4 terawatt hours in 2017. This is putting my state 1324 at the edge of a clean air climate disaster. 1325 Secretary Perry, I echo his concerns and would add that these 1326 nuclear plants not only provide good family supporting jobs, but 1327 also affordable, reliable, and greenhouse gas-free electricity. 1328 I just saw an interesting study that has come out by a think

tank The Third Way that takes a look at the effect of these retirements of the nuclear portfolio and how it affects our ability to meet our climate change goals to reduce greenhouse gases below, 80 percent below 2005 levels by 2050. It would be virtually impossible for us to make that up, because as every nuclear plant retires even if we start, you know, greatly upping our renewables, they would have to make up for that loss before we start to add more carbon-free energy to our cycle. So I think it is a real problem.

I know FirstEnergy recently filed this 202(c) request with your Department and I saw you quoted as saying than that may not be the most appropriate and efficient way to deal with this, but it is not the only way. And while I applaud your caution on the 202(c) request, I am curious what other options you think are on the table. Is this something that can be settled at DOE or in Congress or at FERC? What are the other ways that this might be dealt with?

Secretary Perry. Mr. Doyle, let me just say you are absolutely correct, very prescient in your observation about this country and the ability to deliver the energy needs with the premature in particular taking offline of coal and nuclear plants.

I, like you, share a great concern about our ability to stay economically viable, but more importantly from a national security standpoint of taking care --

Mr. Doyle. And an environmental standpoint if we are ever going to meet our goals for climate change.

Secretary Perry. Absolutely. So to address the specific question, if you will recall, I want to say 6, 7 months ago, we put a 403 request in to the Federal Energy Regulatory Commission, to FERC, which we thought was an appropriate way to address this. They obviously did not. 202(c) is an option. You know, I would like to work with you and members of Congress on any other options that are out there that are reasonable that get the result of which we need in the result from my perspective is a diverse And let me just add, I think it is really important for this country to have a nuclear, civil nuclear program in place. Too many previous administrations made some decisions that from my perspective put particularly the nuclear energy industry in jeopardy and we now see the results of that whether it was regulations, whether it was, you know, not supporting them in various --

Mr. Doyle. Mr. Secretary, I would be happy to work with you on ideas to ensure that we keep our nation's leading source of carbon-free power online.

Let me ask you another question. Existing energy markets they don't seem to consider the environmental attributes of nuclear power, but there are some states like New York and Illinois that have implemented strategies focused on ensuring that the

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environmental benefits of nuclear are recognized. Other states, including mine in Pennsylvania, are considering similar strategies, but I understand that some parties are proposing rule changes at PJM that could punish these states by making it more difficult for certain plants or units to participate in the markets. Do you think that is good policy?

Secretary Perry. I think any policy that restricts your diversity of your energy portfolio is not necessarily good policy.

I think it is shortsighted.

Mr. Doyle. I see my time is up. Thank you, Mr. Chairman.

Mr. Upton. Mr. Shimkus?

Mr. Shimkus. Thank you. Mr. Secretary, welcome. Since you appeared before us, our nation's nuclear waste management has passed a few notable anniversaries. December marked the 35th anniversary of passage of the Nuclear Waste Policy Act of 1982 which formalized the federal government's nuclear waste management program, as well as the 30th anniversary when Congress designated Yucca Mountain in Nevada the site as the location of our nation's first repository. Of greater consequence, January 31st marked the 20th anniversary from the year in which DOE was legally required to take title to spent nuclear fuel for disposal at Yucca Mountain. Since then American taxpayers have been paying billions of dollars to manage spent nuclear fuel in 121 communities around the country.

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1401	Secretary Perry, I would like to run through a few numbers
1402	with you quickly, and you probably know some of these and we can
1403	just kind of stick to the numbers because I have another question
1404	I want to get to.
1405	Secretary Perry. Yes, sir.
1406	Mr. Shimkus. As of the end of fiscal year 2017, what is
1407	the approximate amount rate payers paid into the Nuclear Waste
1408	Fund to construct/oversee our nuclear waste management program?
1409	Secretary Perry. It is approaching \$40 billion. I think
1410	it is about 37, 37.7 billion.
1411	Mr. Shimkus. And those are rate payers, people from states
1412	that had nuclear power that have paid in to solve this problem.
1413	Secretary Perry. That is correct.
1414	Mr. Shimkus. How much did the value of the Nuclear Waste
1415	Fund increase during fiscal year 2017?
1416	Secretary Perry. Almost 2 billion, I think 1.7 billion is
1417	the specific.
1418	Mr. Shimkus. That is the accrued interest on the base of
1419	the account.
1420	Secretary Perry. Right.
1421	Mr. Shimkus. As of the end of fiscal year 2017, what is
1422	the total cumulative liability cost including future payments
1423	because Yucca Mountain is not yet open?
1424	Secretary Perry. Just a touch over \$34 billion.

1425	Mr. Shimkus. So that is payments that we are liable for
1426	because we are not complying with law.
1427	Secretary Perry. That is correct.
1428	Mr. Shimkus. And you are saying then the 30-plus billion.
1429	Secretary Perry. Yes.
1430	Mr. Shimkus. How much did American taxpayers pay in legal
1431	costs during the fiscal year 2017 because Yucca Mountain is not
1432	open?
1433	Secretary Perry. \$700 million.
1434	Mr. Shimkus. So for my colleagues, we move this bill, this
1435	an issue I am fighting with appropriators and budgeteers. This
1436	is money that taxpayers are paying that is really not on the books
1437	and it accrues to almost \$800 million. What was the total
1438	increase in fiscal year 2017 in taxpayer liability in both actual
1439	payments as well as future projected liabilities?
1440	Secretary Perry. That one grew substantially, \$3.3
1441	billion.
1442	Mr. Shimkus. If you break this total cost down to a daily
1443	cost to taxpayers that escalated during just last year how much
1444	are taxpayers liable for on a daily basis?
1445	Secretary Perry. \$9 million per day.
1446	Mr. Shimkus. That is a day. That is money that we could
1447	do, help our national defense, Title I programs, anything. That
1448	is just being paid because we are not complying with the law.

1449 So when people wonder why I get so focused, these are some of 1450 the reasons why. Last question in this area, how much was 1451 provided to the Department in fiscal year 2017 -- and I think 1452 I can add 2018 now -- from the Nuclear Waste Fund for DOE to move 1453 forward with our Nuclear Waste Program and ultimately reduce our 1454 taxpayers' legal payments? 1455 That is a zero, I am assuming. Not a one, it is a zero. 1456 That is a zero. Secretary Perry. 1457 Mr. Shimkus. Okay. And that is our liability as 1458 authorizers to push our appropriators to do what --1459 Secretary Perry. And, I think, Mr. Shimkus, that is the 1460 reason that we requested, the administration requested \$110 1461 million for the legal process to go forward, to be able to get 1462 the answer of whether or not this facility is in fact what you 1463 all in Congress have said it is. 1464 Mr. Shimkus. Yes. So the appropriation money is really 1465 to do the final adjudication with the Nuclear Regulatory 1466 Commission with you as an intervener with the State of Nevada 1467 to clarify the science. And that is the last part before we can 1468 then really start moving and addressing this. 1469 With my 30 seconds left, I won't read the whole question 1470 but you have talked about the DOE and the great work it does. 1471 Obviously I am also very much engaged in the renewable fuel debate 1472 in this country. DOE has done a lot of good work on a study,

1473	I have quoted it before, the Co-Optima study. Are you familiar
1474	with it and what is your thoughts on it?
1475	Secretary Perry. Say it again, sir?
1476	Mr. Shimkus. The Co-Optima study?
1477	Secretary Perry. I am not.
1478	Mr. Shimkus. It is the high octane, it basically is
1479	addressing the high octane issue. We have a hearing tomorrow.
1480	Secretary Perry. I will get up to speed on it and get back
1481	with you and have a conversation.
1482	Mr. Shimkus. Not a problem, I appreciate your time. Thank
1483	you.
1484	Secretary Perry. Yes, sir.
1485	Mr. Upton. The gentlelady from Florida.
1485 1486	Mr. Upton. The gentlelady from Florida.  Ms. Castor. Thank you, Chairman Upton. Good morning,
1486	Ms. Castor. Thank you, Chairman Upton. Good morning,
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rebuild what was there, which if we did that that would not protect the taxpayers. So thank you and we will be watching for the modeling he said is necessary to do something very innovative there.

But then we get the budget request. And I am very concerned about how anti-consumer the administration's budget request is by eliminating our weatherization initiatives and energy efficiency initiatives that really help put money back in the pockets of consumers. This will hurt real people out there in the world. And then it is a budget request that sidelines science with devastating proposed cuts to clean energy research, smart grid R&D, and energy storage.

And I think in doing this kind of budget request really cedes
America's leadership and it says to consumers you are going to
have to pay more. And you know how competitive we are out in
the world, it just doesn't meet the challenges that we currently
face with the cost of the changing climate and watching the
transformation in the energy sector.

The EIA has said wind, solar, and hydro now account for 18 percent of the energy generation in America. Solar is the fastest growing source of new energy worldwide because of its declining cost. And yet, and you have said it yourself in testimony energy storage is the Holy Grail and yet what you said certainly doesn't match the budget request because developments and innovations

in energy storage are absolutely crucial for modernizing our electric system.

The U.S. just hit a major milestone. We now have capacity to store 1 billion watts of power for an hour and while the U.S. is still leading in energy storage development, everyone says China is likely to pass us in the next 5 years. So it is very troubling your budget proposes to cut energy storage R&D by almost 75 percent.

And let me read to you directly from your budget request, so folks, get a handle on this. You want to discontinue support for engagements with states, utilities, and storage providers for conducting grid-scale field tests and trials. Discontinue support for engagement with state and federal regulatory officials on efforts to understand regional market barriers to energy storage deployment. Discontinue support to states and regional entities on procurement, commissioning, and techno-economic analysis of deployed systems. Eliminate support for new collaborative test bed and field trials. Discontinue support for development of enhanced tools and data to U.S. industry for development and use of grid-scale batteries. I mean and this goes on.

But why, I mean you talk about energy dominance, but this is like waving white flags. Why would you propose such devastating cuts for a technology that would only increase the

use of clean energy especially when our U.S. industries are in the fight of their life with China? So how do you explain that?

Secretary Perry. Ms. Castor, thank you for recognizing the great job that was done by particularly the private sector down in Puerto Rico. They were men and women who left their families for long periods of time. I was on a call yesterday with the subsector council and just said thank you as you have today. So thank you for recognizing that.

Let me just briefly address your concerns here particularly on the issue of -- and again I don't want to go back over what I talked with Mr. Rush about, but we see a lot of the dollars that have flowed into this area before particularly on wind and solar as areas where they are being substantially more mature. I mean the cost of those have gone down. I think each one of them 65 percent at least over previous year to date costs. So we have seen some substantial decreases in the cost of getting those technologies to the marketplace.

And I think we are going through a shifting, a shifting to battery storage and beyond batteries, if you will, which is a new focus in the fiscal year 2019 budget that we are going to be within EERE we are taking a holistic approach to energy storage. Early stage R&D is focused on controllable loads, on hybrid systems, new energy storage technologies, and again, you know, this process is about finding the right balance and we are going

to work with you to find that right balance.

I not only recognize but respect your position here and you are absolutely correct. We have a huge challenge with China not just in this area but in a host of other ones. Supercomputing is one of them that I will suggest to you is at the top of that list. If we don't get that one right we are in trouble.

Mr. Upton. Thank you.

The gentleman from West Virginia, Mr. McKinley.

Mr. McKinley. Thank you, Mr. Chairman. And thank you, Mr. Secretary, for particularly for your interest in preventing the premature closing of our country's coal and nuclear power plants.

But let me speak to a broader audience. This committee has held numerous hearings on this topic of grid reliability over the past few years. During that time, your last 10 years, 531 coal-fired units and 11 nuclear plants have been closed. Their output has been replaced with gas plants, but unfortunately only half of those plants have a firm supply for gas, meaning without a supply contract in a cold spell gas is understandably diverted from creating electricity for home residential heating. And according to NERC, in the past 3 years America has experienced over 4,000 forced outages of power plants across America due to a lack of fuel. Ninety four percent of those outages were gas-driven power plants. So this should not, unfortunately, these statistics don't give me the confidence that

closing more coal units and nuclear power plants is a dependable option for national security. And you have been talking about national security throughout your presentation today. For example, nationally, in January, NETL reported without the resilience of coal the East Coast would have suffered severe electrical shortages, leading, likely, to widespread blackouts.

And earlier this year, ISO New England concluded the possibility that power plants won't be able to get the fuel they need to run is the foremost challenge to a reliable power grid in New England. According to PJM, the PJM's market, it can also be shown that the demand for the grid could not have been met These are all quotes that are coming from major without coal. sources, major reliable sources. So taking these reports in consideration, can you just imagine what our grid stability was going to look like with dependability and resilience if we have fewer coal and nuclear plants? Mr. Secretary, you and I have had numbers of conversations about it and this committee has been saying all along that our fuel security is a national security issue. So, Mr. Chairman, I would like to submit for the record a series of documents, a letter that we have from 23 bipartisan members of Congress asking you to invoke 202(c). I have another letter that is written to the President, bipartisan support for some kind of implementation to save our aging coal and nuclear And we have four other letters of support from power plants.

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labor unions across the country and interest in saving and implementing 202(c).

Quite frankly, Mr. Secretary, I believe it is time. You tried the 403. Some form of 202(c) or some other emergency act is necessary if we are going to have national security. So I am calling on you to use whatever legal power you have so that we can meet the challenges that our manufacturers need and our communities need all across America with having a reliable grid system.

So I would like to have your thoughts. Last Thursday I was with the President and he specifically said, I think in a crowd in West Virginia, I think we can work something out on 202(c). I know he has had conversations with you about that. Can you share the extent of not your private conversations, where do you think we are going with 202(c) or some component of that? Thank you.

Secretary Perry. Mr. McKinley, I hope that your remarks have been televised and we can put them up because you have succinctly made the point for exactly what has to happen in this country from the standpoint of being able to protect the resiliency and the reliability of our electrical grid. And if you do not have sufficient coal and nuclear plants, the day is coming when particularly in the Northeastern part of the United States because of other restrictions that they have on energy

1641 flowing into that part of the world that the national security 1642 of this country is jeopardized. 1643 I don't think that is appropriate in any way. Political 1644 decisions that put people's lives in jeopardy are inappropriate 1645 and I think this President understands that. He has had multiple 1646 conversations with me and others in his administration to find 1647 That is exactly what we are working on today. a solution to that. 1648 There are a number as you said 202(c) is one of those, there 1649 may be other options which we need to look at as well. 1650 Mr. McKinley. Are we getting close to a decision? 1651 Expedition is of importance. Secretary Perry. 1652 Mr. McKinley. Thank you. Thank you, Mr. Secretary, and 1653 I yield back. 1654 Mr. Upton. The gentleman's time is expired. 1655 The gentleman from Maryland, Mr. Sarbanes. 1656 Mr. Sarbanes. Thank you, Mr. Chairman. Thank you, Secretary Perry, for being here. 1657 Last October 1658 when you were here we talked about these ongoing threats to our 1659 national security, a little bit different from what you were just 1660 speaking about, which is the national security associated with 1661 maintaining a kind of diversified portfolio of energy sources. 1662 This is more about the cyber attacks that are coming in and we 1663 already know that there has been hacking attempts by the Russians 1664 against our elections last year.

But we now know last month the Department of Homeland Security, FBI, publicly accused the Russian Government cyber actors of a multi-stage intrusion campaign that is going after the energy infrastructure. And I assume, I know that you view that as intolerable those kinds of attacks on our energy security framework, presumably.

Secretary Perry. Oh, absolutely. Yes, sir.

Mr. Sarbanes. And in the budget for fiscal year 2019 there is \$96 million proposed for a new office to address cyber threats coming in against the energy sector and I appreciate that attention being given. I think we need a little bit more knowledge here in Congress to be able to respond appropriately to the proposal with respect to cybersecurity in combating these cyber threats. And last October you may recall I asked whether you would be willing to come and do a briefing on that specific topic. We haven't had that yet so I would like to reiterate that request for a briefing.

We can try to work with the committee. Obviously

Congressman Latta, McNerney, and others have a real interest in
this. I am sure the chairman does as well. So I just wanted
to ask if you would be willing to work with the committee and
our office to try to get that kind of a briefing together.

Secretary Perry. Yes, sir. We will work with the committee.

Mr. Sarbanes. Thank you very much. I want to talk now about a proposed cut in the budget. It is a 70 percent cut to the Office of Energy Efficiency and Renewable Energy for fiscal year 2019. This program, the EERE program, as many colleagues of mine have been pointing out, has been a very smart return on investment for taxpayers, a net benefit of \$230 billion when you look at what has resulted from it.

I wanted to talk a little bit about what it means in my own district. One of the programs inside the EERE program or initiatives was the SunShot Initiative and that has been targeted for a 67 percent cut. This initiative was one where the Department of Energy would set a goal of capturing the potential of solar technology, which everybody acknowledges is critical in making solar electricity more affordable, by 2020. In Baltimore we actually worked with the Department of Energy to bring that potential to low-income homeowners so that all communities would be able to take advantage of low cost solar and energy.

So it has meant a great deal to Baltimore. Over the last few years we have been able to put in 53 rooftop solar installations for low-income homeowners. There is 990 additional ones planned over the next 2 years and with DOE's continued support the Baltimore Shines model, which is our local sort of version of the SunShot Initiative, if you will. This

1713 can really be a model across the country and we think can lead 1714 in terms of what it means to have diversified financing for 1715 low-income solar installation. 1716 So the basic question here is does your Department remain 1717 committed to the goals of the SunShot Initiative which seems to be like the terminology of it or the name of it is being pushed 1718 1719 It is hard to keep track of where your commitment is and aside. 1720 the Department's commitment is to this solar technology 1721 advancement is. And will you maintain the same commitment within 1722 the Solar Energy Technologies Office that has been a hallmark 1723 up to this point and further commit to making sure that low-income 1724 communities are in a position to take advantage of these low-cost 1725 energy and skilled job opportunities which are available within the solar technology industry? 1726 Secretary Perry. Yes, sir. Mr. Sarbanes, let me work with 1727 1728 I am not that knowledgeable with that specific program from 1729 a granular standpoint and I want to be able to give you an 1730 appropriate answer so I will follow up. 1731 Mr. Sarbanes. I appreciate that. I think if you look 1732 inside the Department's data on this it is quite impressive and 1733 we can help present some of that back to you as well. 1734 Secretary Perry. Yes, sir. 1735 Mr. Sarbanes. Thank you. 1736 Mr. Kinzinger? Mr. Upton.

1737 Mr. Kinzinger. Thank you, Mr. Chairman. If I can get Mr.
1738 Flores' attention for a second, yes, there you go. Thanks.

Mr. Secretary, thank you for being here. As you may or may not know I have four nuclear power plants in my district which is the most of any in the country. It is eight reactors.

Obviously that is many locations for spent fuel storage and so nuclear is extremely important not just for our domestic energy production, but one of the things last time you were here you and I talked a little about was energy as a tool of national security and the importance of that and the role that that plays.

Just this week you made the point that every molecule of American gas that goes into Europe is a molecule that they don't have to get from Russia and be held hostage. I know you are aware the Russians are building or considering about 55 nuclear projects around the globe and for China that number is closer to 200 projects. Does your sentiment about Russian natural gas apply to nuclear power as well, sir?

Secretary Perry. Yes, sir. It does. And I think it goes right to the heart of the agreement with Saudi Arabia that is being negotiated now, the 123 Agreement, in the standpoint of if we do not succeed in that effort the alternatives are China or Russia. Number one, neither of those countries care about nonproliferation, and the other one is we will lose the opportunity to develop our supply chain and our intellectual chain

that will further put America at a disadvantage. And not just in the civil nuclear side, but sometime down the road on our ability to protect this country from a weapons standpoint. So this is a critical time in American history relative to supporting nuclear energy, civil nuclear energy.

Mr. Kinzinger. Thank you. And I appreciate that your budget request prioritizes nuclear energy research, nuclear security, and of course Yucca Mountain. However, I remain deeply concerned about the state of our domestic nuclear industry as we have talked about. I have introduced legislation with my friend, Mr. Doyle, to make common sense reforms at the NRC to provide existing plants some relief, but without a strong domestic industry how do we expect American technology and, more importantly, safety culture and nonproliferation standards to compete with state-run power companies like Russia and China. So, overall, what is the DOE currently doing or planning to do to support our domestic industry and reaffirm our global leadership?

Secretary Perry. Well, obviously the administration is the message is clear not just on the nuclear side but coal as well and it is not just those two. This administration is committed to a broad portfolio of renewables of gas, of hydro, coal, and nuclear.

Mr. Kinzinger. And while I believe that H.R. 1320 is part

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of the solution, there are several options to put the domestic nuclear industry on steadier ground and increase our global competitiveness. Can you elaborate as much as you can on DOE's Light Water Reactor Sustainability Program which is looking at extending existing licenses from 60 to 80 years?

Secretary Perry. Yes, sir. We will continue to promote those technologies as best we can. We think that again this plays into the diverse portfolio and new technologies whether it is clean coal technologies, whether it is -- I was on the West Coast at Livermore Lab 2 weeks ago looking at technologies that are making our wind turbines more efficient. So there is a host of innovation rather than regulation is the real motto here from our perspective.

And whether it is in the nuclear side of things, whether it is in the fossil fuels, whether it is in the renewables, the national labs and the dollars that you all are authorizing for these national labs will go a long way towards making America more competitive in the global energy marketplace.

Mr. Kinzinger. Thank you. And, lastly, do you believe that wholesale energy markets can do a better job at valuing the unique resource attributes of nuclear power, and if so how can DOE and Congress help to reform these energy markets? What role can we play in doing so?

Secretary Perry. Well, I think one of the roles that DOE

1809 needs to play in this is to rebalance that obviously previous 1810 to this administration coming into place there were some thumbs 1811 on the market and at least we should take that pressure off of 1812 the direction that those markets were headed. Obviously there 1813 were some political considerations in the previous administration 1814 that they were not fond of coal, they were not fond of nuclear, 1815 and both of those industries paid a price for it. They had their 1816 favorites in the arena and they supported those. 1817 looking at is to rebalance, if you will, to take the thumb off 1818 of the market scale. But with that in mind, the more important issue is one of 1819 1820 national security. Being able to know without a doubt that the 1821 energy supply will be there when we need it whether it is from 1822 a cyber attack that stops the gas somewhere, whether it is a 1823 hurricane that hits the, you know, God forbid, not again, the 1824 northeastern part of this country, the national security side 1825 of this is even more important than the economic side of it. 1826 Mr. Kinzinger. Thank you, Mr. Secretary. I appreciate you 1827 being here and I yield back. 1828 [Presiding.] Time has expired. Mr. Olson. 1829 Mr. Tonko for 5 minutes of questions. 1830 Thank you, Mr. Chair. Mr. Tonko. 1831 Welcome, Secretary Perry, and thank you for returning before

Over the past year I haven't agreed with all of

the committee.

your decisions or priorities. I thought the notice of proposed rulemaking was incredibly misguided, but overall, and it might surprise you to hear me say this, I think you have done a fine job as Secretary.

Secretary Perry. Yes, sir.

Mr. Tonko. As far as I am aware there have been no major scandals or extravagant waste of taxpayer dollars. You have visited many national labs and it seems like you believe in the mission of the agency, all of which is more than I can say for some of your cabinet counterparts.

With that said, I am concerned by a number of the proposed cuts in fiscal year 2019's requests. Many of them have been mentioned already, EERE, the Office of Science, grid modernization programs, and the elimination of ARPA-E. In the past you have stated support for ARPA-E and DOE's innovation budget. Last year you testified that energy innovation is a part of DOE's core mission and I think you might agree that cuts of the magnitude that have been proposed are not good for the future of America's global energy leadership.

So I would encourage you to push back on OMB to ensure innovation continues to be a top priority of the agency.

Specifically, now that Congress has appropriated fiscal year 2018 funding for programs that the previous request proposed eliminating, I expect we won't see a repeat of last year's

1857 impoundment of ARPA-E funds or a delay of weatherization funding 1858 to states which they are expecting on July 1. 1859 But I want to focus on a different issue. Mr. Secretary, 1860 are you familiar with this recent National Energy Technology Laboratory report entitled, "Reliability, Resilience and the 1861 1862 Oncoming Wave of Retiring Baseload Units"? It is dated March 1863 18th, or March 13th, excuse me, 2018 and it was posted on DOE's 1864 website on March 27th. 1865 Secretary Perry. I am not an expert at it, but I am certainly 1866 familiar with it. 1867 Are you aware of any DOE political Okay. 1868 officials that discussed this report as it was being developed by NETL? 1869 1870 Secretary Perry. I am not. 1871 Would you be willing to share any communications 1872 between DOE officials and NETL about the report with the committee? 1873 1874 Secretary Perry. I would be happy to. 1875 Mr. Tonko. Thank you. The reason I ask is because this 1876 report is cited numerous times in FirstEnergy's section 202(c) 1877 request which was submitted just 2 days after the report was published on DOE's website. I want to take issue with how the 1878 1879 report represents the data to conclude coal made the grid more 1880 resilient during the bomb cyclone.

I think most economists and grid operators agree on what happened. There was greater electricity demand, prices increased, and that allowed marginal power generators to come online. In PJM those are coal plants that under normal circumstances are not economically competitive. We saw electricity markets at work. When demand increased, more expensive generators could operate. This is evidence of coal's cost, not its resilience. In fact, according to PJM, at times coal plants experienced higher failure rates than other resources.

This notion that the only thing standing between us and blackouts is aging coal plants is just not accurate. What we might agree about, but I suspect for different reasons, is the premature closure of a significant amount of clean energy resources would be bad for air pollution as well as our short and long-term emissions reduction goals. If that is the case, we should look at what has been done by states, states such as my home state of New York, to preserve and compensate zero emissions generation. Or if you prefer an in-market solution, consider what New York's ISO is working on to develop to price carbon within the market.

These options are not without their flaws or opponents, but they do represent a serious path forward to address some of the issues you have been discussing this past year. But ultimately

these are policy decisions for states or for Congress. Acting under the pretense of an emergency to justify unilateral agency action is not good for consumers or the people responsible for operating our grid.

So, Secretary Perry, do you have any thoughts on the role or appropriateness of states taking action to support zero emission generators through clean energy standards or similar programs?

Secretary Perry. No, sir. I encourage states to get involved with making their states more competitive. I certainly did that when I was the Governor of Texas and we saw a reduction, almost 20 percent of total carbon footprint, over 60 percent of both NOx and SOx during that period of time. So the point is, states can have a real role in this. With that said, from my perspective this issue that we are facing and I recognize -- and by the way thank you for your kind remarks. My wife doesn't even agree with me all the time, so --

Mr. Tonko. Okay. Well, I need to meet her then.

Secretary Perry. Yes, sir. I am going to show her this, if you don't mind. But the point is that there are real national security implications here. And I will finish with this. As the Governor of Texas I brought in ERCOT, which is our big Electric Reliability Council that oversees our generation in Texas. And I think it was late spring of one year we had had a very hot summer,

which we typically do in Texas, and we had had some brownouts.

We were trying to manage the system.

And I shared with them, I said, listen, you are the expert here, but I don't want to get a phone call from citizens of this state because you weren't prepared and you didn't put in place the needed generation capacity to be able to deliver electricity to a city like Dallas that has had 15 straight days of 105-plus degree temperature and a grandmother has died. I said that is not a conversation that I am going to accept, and the same is true as the Secretary of Energy.

And the administration is focused on making sure that we have the resiliency and the reliability of our grid, and I want to work with you. I will work with the states as well to find the solutions to this. But I don't think we have time to be studying this anymore to the standpoint of oh, let's just kick the can down the road. I think we are facing with these plants being scheduled, some of them prematurely, to come offline, I just don't want a call from somebody in Upstate New York because the power has gone out because we didn't have the political courage to put into place a strategy that made sure that a citizen of New York is never going to have to make the decision of whether or not we are going to turn the lights on or are we going to keep our family warm.

Mr. Tonko. I have exhausted my time. I would just say that

1953 New York did make certain that they had their power supplies met 1954 and with zero emissions being the guiding force. So I think that 1955 is the difference here. 1956 But I yield back, Mr. Chair. 1957 Mr. Olson. Time is expired. 1958 Mr. Griffith, 5 minutes for questions, please. 1959 Mr. Griffith. Thank you, Mr. Secretary. I appreciate you 1960 All my questions have gone out the window because 1961 of comments that have been made of recent or at least a lot of 1962 them have. 1963 You were very kind to the previous administration to say 1964 they put their thumbs on the scale when they were looking at 1965 various energy sources. In my district which has got natural 1966 gas, predominantly coal, we felt like it wasn't a thumb on the 1967 scale, we felt like it was a boot on our necks. We had thousands 1968 of jobs lost, families disrupted, communities losing businesses 1969 left and right, hospitals closing down because they no longer 1970 had the big employer at the coal mine to pump in the insurance 1971 into the hospital and the money coming in there. 1972 devastating. 1973 And so I was kind of surprised, one, that Mr. McKinley missed 1974 the NETL report in his detail. He kept going. I guess he had 1975 to have some time for questions and so he left that one out. 1976 But further that Mr. Tonko doesn't understand. And he is a good man, but he doesn't understand. It would be easy for people who were that desperate like a thirsty man in the desert who finally discovers an oasis to consume that NETL report and put out the request for 202(c) relief within 2 days because the coal community has been desperate until you all have come along and not wanting to put your finger on the scale at all but wanting to make sure that there is an all-of-the-above strategy for the United States, and I thank you. Would you like to make any comment before I go on?

Secretary Perry. Go right ahead, sir.

Mr. Guthrie. All right. So I appreciate that and I do have this to say although it is not your Department. He indicated that, you know, the fact that we had to use the coal and it cost more that that was the markets at work. It is also federal regulation. Because what we need to do is we need to look at the New Source Review rules, because when a coal-fired power plant and lots of other businesses that use coal for power go in and they want to make one little change, even if it makes that plant more efficient, they have to then comply with all kinds of regulations.

I have a facility in my district which is not a power plant, another facility that I toured a number of years ago and they had a kink in their conveyor belt because at one time there had been a part of their paint shop on the end of the conveyor belt.

They no longer had that paint shop or that painting capacity, I think it was lacquer, but they left the kink. And so we walked over the conveyor belt once and then we walked over it a second time where it just went out into empty space, and the owner said that because he had to meet those EPA regulations it was easier just to leave the kink in the conveyor belt than to make his process more efficient. We need to make some changes there and I hope you would agree with that even though I know it is EPA's turf.

Secretary Perry. Right. Mr. Griffith, I think you bring in a very high level way what this administration is focused on. The President has given clear directives to people like myself, Scott Pruitt, Secretary Zinke from a regulatory standpoint that getting rid of regulations where the costs outweigh the benefit is one of the real goals. And it has been, I think, very successful to date.

And the key here is having some common sense applied, being able to recognize that we have overregulated this country and those overregulations have cost this country a huge amount of jobs and untold wealth.

So you were spot on from the standpoint of the single most important thing I learned as a governor that tax policy is important. You don't overtax, but businesses know how to deal with that. It is when you have a regulatory environment that is strangled where you will lose your businesses. It is one of

the reasons we were able to bring a lot of businesses out of California to Texas, no offense to anybody from California that is here. But the point is they were overregulating and businesses want to get out of that environment.

So the regulation side of what you are talking about is incredibly important. It is not just about being able to address the national security side of things, the issues that we talk about whether it is a 202 or whether it is some other avenue towards making sure we have a reliable portfolio, but the regulatory environment in this country has to be addressed.

Mr. Griffith. And I could not agree more. And I appreciate all the work that you all are doing in the administration to get this straightened out because it really has, I think, hurt our country.

That being said, let me switch to more positive things.

Ms. Castor complimented you on the testimony of one of your folks at the O&I subcommittee yesterday related to Puerto Rico. I think that they are doing great work down there and we appreciate it, but I think we can also use that as a test bed for other areas that might get isolated in a disaster and look at doing microgrids and other things that we can move this country forward to make sure that we have our grid resilient. We have a perfect example. We are going to spend a lot of money there anyway. Let's spend it doing experiments to see how we can build the system for the

2049	rest of the country as well.
2050	And with that, I know you agree but I have to yield back.
2051	Secretary Perry. Yes, sir.
2052	Mr. Olson. Time is expired.
2053	Mr. Loebsack, 5 minutes for questions.
2054	Mr. Loebsack. Thank you, Mr. Chair.
2055	Great to see you again, Mr. Secretary.
2056	Secretary Perry. Sure, thank you.
2057	Mr. Loebsack. We don't have a lot in common, Iowa and Texas,
2058	but we do have wind energy in common.
2059	Secretary Perry. I have spent a lot of time in your home
2060	state, sir.
2061	Mr. Loebsack. I am aware of that too. That is right.
2062	Seems like ages ago, but I am aware of that. Thank you. But
2063	I am happy about your support for wind energy. As you know that
2064	constitutes, it is about 37, 38 percent of the electricity
2065	generated in the state of Iowa so it is really a great program.
2066	And thank you for coming back to this committee. I do appreciate
2067	the accountability that you demonstrate here. I think all of
2068	us do on a bipartisan basis.
2069	As you know of course my home state of Iowa does lead the
2070	nation in biofuels production. It is an integral part of our
2071	economy, the farm economy, and right now the farm economy is
2072	suffering. We have concerns about trade issues too, we don't

need to get into that today. But that is certainly a bipartisan concern that we have in the state of Iowa, what is happening on that front. And I am sure that you are aware of the recent press reports about the waivers that the EPA has granted the small refineries to release them from their obligations under the Renewable Fuel Standard program including, actually, some of the nation's largest and most profitable refiners.

And as you can imagine, the biofuels community has significant concerns about the apparent increase in the awarding of these waivers by the EPA and about the implications for the biofuels industry, the corn market and of course the farmers who depend upon the market and the workers in the industry, all the John Deere and a lot of other, the implement companies that are all related to this as well economically. And the small refinery waiver process as you know requires the EPA to consult with the DOE and with you, the Secretary of Energy in particular, in review of the exemption petitions and unfortunately there is not a lot of transparency, if any, in this process.

So I do want to ask you, has the EPA consulted with the DOE on their issuance of these waivers as required by law?

Secretary Perry. Yes, sir. I would suggest to you they have. I don't know the intensity and that may be the wrong word, but the depth of those negotiations and what -- I know that they use us as the agency to advise them about how this would impact

2097 So, but for clarity purposes, EPA is who hands the energy sector. 2098 out those. 2099 Right. But they are required by law to 2100 consult with DOE, with the Secretary of Energy, right? 2101 Secretary Perry. But they do consult with us. 2102 Mr. Loebsack. Does your office recommend that EPA adopt 2103 any small refinery waivers this year, and if so what waivers did 2104 you recommend? 2105 Secretary Perry. Let me go back and get the details of that 2106 for you so that I can give you specific and correct information. 2107 Yes and I really do appreciate that because Mr. Loebsack. 2108 what I am going to ask you then, moving forward, just yesterday 2109 your counterpart at the USDA, Secretary Sonny Perdue, indicated that he believes the EPA is misusing the hardship waivers. 2110 2111 as you know our governor is in town today too and she is trying 2112 to get through to the President to talk to him about the RFS. 2113 Secretary Perry. Yes, sir. 2114 Mr. Loebsack. Do you agree with Secretary Perdue that the 2115 EPA has misused the hardship waivers? 2116 I can't speak to that because I don't know Secretary Perry. 2117 the details of the issue. If I could just add one side of the 2118 story, one of the things that we are working on is to find some 2119 other, it would be, number one, I know my Iowa corn farmers pretty 2120 well and they really don't care where this ethanol goes as long

2121 as it gets to go somewhere. 2122 I just had a meeting with a number of them Mr. Loebsack. 2123 last weekend. 2124 Secretary Perry. Yes, sir. And I respect that having been 2125 a former agricultural commissioner of the state of Texas. 2126 are in conversations with my counterpart in Mexico and we were 2127 talking to him as late as this last month about being able to 2128 move U.S. ethanol into Mexico into their fuel mix because they 2129 are in the process of we understand that they are going to be 2130 mandating some ethanol. 2131 And I really appreciate that. Mr. Loebsack. 2132 to keep in mind too that we are talking about a lot of production 2133 of corn here in the country and of course around the world and 2134 ethanol is obviously one use of that corn. There is no question. 2135 But we have to make sure in those NAFTA renegotiations that we 2136 don't get our corn market in Mexico cut off as well. 2137 So I just have some questions. I don't have time to go 2138 through them here, but I do want to submit these questions for 2139 the record having to do with the total number of refinery waiver 2140 applications that the DOE evaluated for the last 5 years. 2141 a number of those and I would like to submit those for the record, 2142 Mr. Chair. 2143 Secretary Perry. So we will have them ready for you. 2144 And thanks for your time today. Mr. Loebsack.

2145	it. And we look forward to your answers to our questions.
2146	Secretary Perry. Yes, sir.
2147	Mr. Loebsack. Thanks, Mr. Secretary. I appreciate it.
2148	I yield back.
2149	Mr. Olson. Thank you.
2150	Mr. Johnson, 5 minutes of questions.
2151	Mr. Johnson. Thank you, Mr. Chairman.
2152	Mr. Secretary, good to see you again.
2153	Secretary Perry. Thank you, sir.
2154	Mr. Johnson. I sure enjoyed our trip down to Piketon a few
2155	months ago.
2156	Secretary Perry. Yes, sir.
2157	Mr. Johnson. You know, you and I had extensive discussions
2158	when we were there and, like you, I support an all-of-the-above
2159	energy policy and I know you believe that as well. My district
2160	in Eastern and Southeastern Ohio, and you and I have talked about
2161	that a little bit as well, is no stranger to the benefits of a
2162	diverse generation with our abundance of both coal and natural
2163	gas. Many of the coal plants in the 6th District of Ohio, along
2164	the Ohio River are not only a reliable source of power but they
2165	are the strong economic drivers for the communities in which they
2166	exist. The people rely on them there for good paying jobs.
2167	So I worry about the recent retirements and announced

retirements of coal plants especially as federal and state laws

and regulations have played a major role in affecting these plants over the years. I know you have repeatedly expressed similar concerns and have pushed FERC on these issues. So my first question, are you satisfied with FERC's work to date on this issue and do you believe FERC and the RTOs and the ISOs are taking the right approach to these issues?

Secretary Perry. Well, relative to the 403 that we sent up, I would have to be on the opposing side of, I wouldn't have sent them our recommendations if we didn't think they were correct. So, you know, I am not going to -- that is the only dealings that I have had with them to date.

Mr. Johnson. Sure.

Secretary Perry. So my first experience of picking up that potato was it was pretty hot.

Mr. Johnson. Yes, yes. Well, second question, you state that the fiscal year 2019 DOE budget will help improve grid resilience and support generation diversity. Can you provide examples on how DOE will work towards these objectives?

Secretary Perry. Well, obviously having grid diversity has to do with having resource diversity. One of our challenges is that in the course of the last decade the resources have changed drastically. You think back to 2005, just as Hurricane Katrina was coming into the Gulf Coast there was a fellow giving a speech about peak oil. Fast forward 10 years and the United States is

in the process of becoming the number one oil and gas producing country in the world. I mean that literally happened in a decade, the explosion of renewables and the grid being able to manage all of that and so the technology to manage the grid. And I put that into the resiliency side and the reliability side.

So the challenges that are out in the world today and how quickly they came is a great testament to our national labs and the innovation that comes out of those national labs and our private sector working together in many cases. So the way we look at this is we have been blessed with a lot of resources. How you manage those resources both with innovation and with common sense, common sense part of this from my perspective is don't restrict resources getting into your grid that could put your national security in jeopardy, for instance.

So all of this is, it is quite a challenge, Mr. Johnson, as you know, but I am quite confident we are up to it and we will find the solutions that challenge us as a country.

Mr. Johnson. Yes. Well, thank you, Mr. Secretary.

You know, shifting gears just a little bit, when we were at Piketon, you and I, and I appreciate your support of all the stuff that is going on down at Piketon as well. I appreciate that very much. You have made reference to an Appalachian plan which relates to infrastructure to take advantage of our natural gas resources and other industrial resources in West Virginia

2217 and Ohio. Can you elaborate quickly what that vision looks like?

2218 Secretary Perry. Yes, sir. As the Governor of Texas I used

2219 to fret greatly in August and September about a Category 5

2220 hurricane coming up the Houston Ship Channel, Mr. Olson, and

2221 creating havoc in the petrochemical footprint in the state of

Texas which would have negative effect all over this country.

Having a duplication of that somewhere made a lot of sense to
me and why not put it where the resource is which is in the
Appalachian region. You are sitting on top of the Marcellus,
the Utica.

So if government will not be an impediment from a regulatory standpoint in particular, the private sector will come and fund that. This isn't a matter of, you know, coming to Congress and saying hey, will you put millions of dollars into this. Just don't get in the way.

Mr. Johnson. There you go.

Secretary Perry. And help those states, West Virginia,
Ohio, Kentucky, put that plan together. We are in the, I am not
going to say nascent but we are in the early stages of conversation
coordinating with those states, coordinating with other agencies
to be able to lay out a plan hopefully before this year is out
so that there is a clear opportunity for this country to have
a duplication of that petrochemical footprint in the Gulf Coast
of Texas in the Appalachian region. The economic impact would

be stunning. More importantly, the national security side of it would be far-reaching.

Mr. Johnson. Makes perfect sense.

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Thank you, Mr. Chairman. I yield back.

Mr. Olson. The gentleman yields back.

Mr. Schrader, 5 minutes for questions.

Mr. Schrader. Thank you, Mr. Chairman. And thank you, Mr. Secretary, for being here. It is nice to have a normal and competent member of the administration before the committee here.

I would like to go back to Chairman Walden's comments regarding the Power Marketing Administrations. imagine that is a bipartisan issue in my part of the country. On page 14 of your testimony you state budget proposes a sale of transmission assets of the Western Area Power Administration, Bonneville Power Administration, and Southwestern Power Administration and to reform the laws governing how the PMAs establish power rates, et cetera. Frankly, as a member of Congress in the Pacific Northwest, very concerned about the administration's continued insistence we sell off transmission assets at the Bonneville Power Administration and require them Mr. Chairman, I quess I would to sell power at market rates. like to enter into the record the bipartisan letter the Pacific Northwest delegation sent to OMB Director Mr. Mulvaney opposing this proposal in the 2019 budget.

2265	Mr. Olson. Without objection, so ordered.
2266	{The information follows:]
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Mr. Schrader. Thank you. The BPA is a nonprofit federal wholesale utility and power marketer that receives no congressional appropriations. I repeat that, no congressional appropriations, and must recover its costs with revenues it earns like the private sector from selling wholesale power and transmission services. BPA provides approximately half the electricity used in the Pacific Northwest and operates three-quarters of the region's high voltage transmission grid. Selling off these transmission assets would fragment the grid, be devastating to the region, and provide a meager one-time asset that would not have any long-term beneficial effects with regard to our economy.

By requiring BPA to sell power at market rates would essentially be the death knell of BPA. BPA serves the public interest and has other obligations and as such BPA markets its power at cost. Historically, it has provided some of the lowest cost electricity in the nation, natural gas having put some pressure on it obviously at this point. And that coupled with BPA's increased court-mandated spill and fish recovery operations, which account now for a third of the rates that Pacific Northwest folks pay and that Treasury consequently does not have to pay, has put additional cost pressures on the agency and driven their costs up some. Requiring BPA to sell its power at market rates would drive them into the red, make them unable to

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2293 meet their obligations to the Treasury, actually costing taxpayer 2294 money, strand the federal government with a very expensive, 2295 nonfunctioning asset and put federal taxpayers on the hook for 2296 the fish mitigation costs which come to the tune of almost a 2297 billion, or I think a little over a billion dollars a year. 2298 There has been overwhelming bipartisan, bicameral 2299 opposition as the chairman of the full committee testified to, 2300 opposition to the administration's proposal. Eight members of 2301 this committee including my fellow Northwest colleagues, Ms. 2302 McMorris Rodgers and Chairman Walden, sent a letter to our budget 2303 committee this year that I referenced asking them to reject the 2304 proposal, yet once again it seems like we are here. 2305 So our region already produces some of the cleanest power 2306 that we have talked about, very affordable. We repay the Treasury 2307 with interest. So if you can explain to me what problem the 2308 administration is actually trying to solve with this proposal. 2309 Secretary Perry. Mr. Schrader, let me just remark that maybe it is my best addition here would be I am reminded of a 2310 2311 Kenny Rogers song where he talked about you need to know when 2312 to hold 'em and know when to fold 'em. 2313 I understand and appreciate that response Mr. Schrader. 2314 and appreciate your --2315 Secretary Perry. Congress has been very clear about this 2316 I will be more than happy to carry the message back.

2317 Mr. Schrader. Thank you very much, Mr. Secretary. Thank 2318 you for being here. 2319 Secretary Perry. Yes, sir. 2320 Mr. Olson. The gentleman yields back. 2321 Dr. Bucshon, 5 minutes of questions. 2322 Mr. Bucshon. Welcome, Secretary Perry, from Southwest 2323 Indiana. 2324 Secretary Perry. Yes, sir. 2325 Mr. Bucshon. This committee has spent most of this Congress 2326 examining the country's electrical grid and throughout our 2327 hearings experts have stressed to us the importance of a reliable 2328 and resilient electrical grid. There are many sources of energy 2329 that can power the grid. However, coal-fired electricity is one 2330 of the most reliable fuel secure and affordable energy sources. 2331 This was evident during the 2014 polar vortex and again most 2332 recently with the bomb cyclone. It was the reliable baseload power plants such as coal and nuclear that prevented blackouts 2333 2334 in many regions of the country. Even with its reliability, coal-fired plants continue to 2335 2336 retire at alarming numbers, and I know Mr. Johnson just mentioned 2337 Since 2010 more than one-third of the nation's coal-fired this. power plants have shut down or announced plans to close. 2338 2339 is the equivalent of shutting down the entire electricity supply 2340 for Indiana, Ohio, Illinois, and Kentucky. Thirty nine coal

power plant, power generating units have been forced to close in my home state of Indiana alone.

The 8th District of Indiana which I represent is home to all the coal mines in the state of Indiana which is responsible for more than 70 percent of the state's energy. Without traditional baseload energy sources such as coal being properly valued in wholesale markets plants continue to be at risk of retiring, leaving many of my constituents at risk of losing their jobs, seeing higher electrical bills, and providing less reliable energy to power our homes.

This is why I have introduced H.R. 5270, the Electricity Reliability and Fuel Security Act, which would create a temporary tax credit covering a small portion of the cost to operate and maintain existing coal-fired power plants. I believe the temporary tax credit which would last for 5 years is necessary to avoid more coal retirements while Congress, the administration, and grid operators work together to ensure the grid remains reliable and resilient.

Secretary Perry, do you think that you would be supportive of this legislation and the other efforts that Congress, DOE, FERC, and the grid operators are taking to properly value coal to prevent more power plant retirements and provide our nation with a more reliable and secure grid?

Secretary Perry. Yes, sir. Mr. Bucshon, I think it is

2365 important that we put into place some processes that assure this 2366 country has a reliable and resilient grid and coal is going to 2367 be a part of that and coal is going to be a part of the future 2368 energy supply of the world. By 2040, the estimate is at 77 percent 2369 of the energy produced in the world will still be fossil fuel, 2370 coal will be playing a major part of that. 2371 Our goal and our part to play in this is that U.S. coal is, 2372 you know, coal imports are up 61 percent from a year ago, we are 2373 going to continue. When I go to India we are not just going to We are going to be talking about coal and 2374 be talking about LNG. 2375 clean coal technology that is developed in this country. 2376 them, they are going to burn coal and we want them to use our 2377 technology to be able to remove the emissions that are harming the environment in that part of the world and globally as well. 2378 2379 So any reasonable approach to making sure that we have a 2380 reliable energy source in this country we are going to be working with and we certainly think your legislation is reasonable and 2381 2382 heads in that direction. 2383 Mr. Bucshon. Thank you very much for being here, Secretary. 2384 Secretary Perry. Yes, sir. 2385 Thanks for your work. Mr. Bucshon. 2386 Mr. Chairman, I yield back. 2387 Mr. Olson. The gentleman yields back. 2388 The chairman calls upon the gentleman from Texas, Mr. Flores,

2389 | for 5 minutes of questions.

Mr. Flores. Thank you, Mr. Chairman. Mr. Secretary, I think you and I are equally supportive of LNG and we recognize the incredible importance of LNG exports not only in terms of our balance of trade and economy opportunity, but also the geopolitical position that it places us in vis-a-vis some of the threats that we face around the world.

I know that you have taken some good steps to improve DOE's permitting process when it comes to LNG to clear the backlog of the applications that were pending that you inherited from the last administration, but I also understand that FERC is understaffed and that they are overwhelmed with their own backlog. Is there anything that you as the Secretary of DOE can do to help FERC with their backlog?

Secretary Perry. I would be more than happy to, you know, have this conversation with the chairman and we are more than happy to assist them in any way we can.

Mr. Bucshon. Okay. It was my understanding you might be in a position to move some folks from Sandia temporarily to FERC to help with that. Anyway if you can answer that supplementally for us that would be great. So, now with LNG out of the way, the next area that I am particularly focused on today is nuclear, particularly advanced nuclear technologies. The alma mater that you and I share, which I am pleased to represent, is a partner

2413 on some of DOE's university engineering university programs. 2414 I understand that the administration is conducting a wide range 2415 in review of nuclear policy, but while we await the outcome of 2416 that broader review what are the most important policies that 2417 Congress can advance now in the short term, in the near term? 2418 Secretary Perry. I am sorry? 2419 What are the most important policies that Mr. Bucshon. 2420 Congress can advance in the near term while we wait for the 2421 administration to finish its overall nuclear review policy? 2422 Secretary Perry. Well, certainly I think that making sure 2423 that the resources are appropriate on this national nuclear policy 2424 review, and we have for too long, I guess, Mr. Flores, this country 2425 has kind of put nuclear, our arsenal on the back burner, if you 2426 will. 2427 Mr. Bucshon. Right. The mid '90s and the Peace dividend and 2428 Secretary Perry. 2429

Secretary Perry. The mid '90s and the Peace dividend and the world was going to live happily ever after and that is not the case. And we came to our senses, if you will, or the world became a little clearer in view and we saw that maybe we need to make sure that we have a nuclear arsenal that is modern. These things, they age just like any other infrastructure. Being able to modernize it, being able to look at new systems, whether it is delivery or whether it is the actual arsenal itself, is very much an important role that you in Congress are going to play

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from being able to fund it for one thing.

Mr. Bucshon. Sure.

Secretary Perry. We have a new administrator of the NNSA, a very capable individual who I think you will find very good to work with, very knowledgeable, and a good partner in this.

Mr. Bucshon. When we look at the nuclear technology of the future, advanced nuclear reactors and small modular reactors, any time you have a first-mover technology like that there are some challenges in terms of trying to help, that our nuclear innovators face in terms of trying to get them off the ground so that they can move forward and get it into a position to be a commercially viable power generation source. I would ask you if you would have your staff work with us so we can try to figure out what those challenges are and what Congress can do to develop the statutory framework to be able to address those challenges.

Secretary Perry. Yes, sir. We think SMRs are incredibly important going into the future, the application that they can play particularly in for our national security. If the concern is about keeping these devices secure, obviously being on a United States military base is as secure a site as you can have. So, you know, SMRs are going to play a very, very important role in the diversity of our portfolio energy production-wise going forward.

2461 Okay. Well, thank you, Mr. Secretary. Mr. Bucshon. Ι 2462 have reached the end of my time. I do have additional questions 2463 that we will submit supplementally and I look forward --2464 Secretary Perry. Yes, sir. 2465 Mr. Bucshon. -- to working with you as we address our 2466 nation's energy policy. I yield back. 2467 Mr. Olson. Time has expired. 2468 Mr. Cramer, 5 minutes for questions. 2469 Mr. Cramer. Thank you, Mr. Chairman. 2470 Thank you, Mr. Secretary, for being with us again. 2471 you for your excellent leadership at the very important agency. 2472 Before I drill down into what is most important to me today is 2473 specifically the fossil energy research and development budget, I want to associate myself with Mr. Peters' comments about ITER. 2474 2475 Even though San Diego is a long ways from North Dakota, his point 2476 about leveraging that resource, I think was made well. And I 2477 also want to associate myself with the fact that I do feel like 2478 there is a greater confidence given recent changes in leadership. 2479 Secretary Perry. Yes, sir. 2480 And I appreciate your attention to that and Mr. Cramer. 2481 your vast knowledge of it, so thank you for that. With that, 2482 I do want to get to the more concerning topic for me and that 2483 is the administration seems to be sort of sliding away from a

commitment to at least if not pilot scale, commercialization gap

with demonstration projects in the fossil energy R&D, particularly as it relates to where I think the folks ought to be and that is carbon capture and utilization and storage of CO2 from coal-fired power plants. Now we know and we appreciate in North Dakota your role, your agency's role in partnering with the Energy & Environmental Research Center at the University of North Dakota and some of our utilities, particularly Minnkota Power, in looking for some opportunity, testing some opportunity for Allam cycle or, you know, and some of these technologies that will bridge, bridge coal, coal's past and coal's future as a clean resource. But without the gap being filled or at least supplemented by the taxpayers, I don't know that we can get there, quite honestly, and yet we need it so badly.

Specifically, the administration's fiscal year 2019 budget proposal moves away from the research and development of carbon capture in reducing its R&D roughly 75 percent relative to fiscal year 2018. And of course both in '17 and '18, the Congress itself has had to sort of step it up. So given the fossil energy R&D request as a whole was increased relative to the President's request of fiscal year 2018, can you explain why the Department shifted so dramatically from carbon capture R&D?

Secretary Perry. Yes, sir. Here is my observation is that the fiscal year 2019 budget will not impact the current activities that the Department has funded up in your part of the world.

Plain CO2 reduction, Regional Carbon Sequestration Partnership, that is going to continue on; a feasibility study on the Tundra project, that one is in that money stream for fiscal year 2019.

The CarbonSAFE, S-A-F-E, activities, those are funded as well.

Additionally, on the carbon capture issue, last year in about May, I was in China for the Clean Energy Ministerial and we were able to get CCUS placed into that. Now obviously these are not dollars that are going to be spent in North Dakota and I understand that. But I think from the standpoint of the commitment of the agency to the carbon capture, utilization, sequestration — and actually yesterday Chairman Alexander in the Senate was talking about being able to find obviously using our national labs, using our universities that we have relationships with a use for carbon dioxide.

And again there is no eureka moment here, but, you know, those are the exciting technologies and opportunities that we think are out there in the future that we are going to be looking at funding and, you know, I hope you know that our commitment is very strong to that. Senator Hoeven, my former governor colleague, he and I talked at some length yesterday about the opportunities that we can work on together with North Dakota and DOE.

Mr. Cramer. In my remaining seconds let me, first of all, strongly encourage you and invite you to North Dakota as it now

2533 warms up and thaws out to come and see the work at the University 2534 of North Dakota. 2535 Secretary Perry. Yes, sir. 2536 Secondly, I want to ask for your assistance 2537 in advocating with us for a 45Q, you know, the 45Q tax credit 2538 which was slightly, you know, improved in the most recent bill 2539 but not very useful until we reconcile IRS and EPA rules so that 2540 it is more useful for these types of projects. It is essential. 2541 And then there is another credit, the refined coal credit that 2542 I think just has to be extended so we can build this bridge again 2543 between basic research and commercialization. We are at the cusp 2544 and we, you know, run the risk of losing all those opportunities. 2545 As you said, innovation not regulation is our motto. I like 2546 Let's live with it. Thank you. 2547 Thank you, Mr. Chairman. 2548 Mr. Olson. Time is expired. 2549 Mr. Green from Texas, 5 minutes for questions. ready, Mr. Green? 2550 2551 Mr. Green. Yes, Mr. Chairman. 2552 I want to welcome the Secretary. My other job is I am the 2553 ranking member on the Health Subcommittee and we just finished 2554 a hearing upstairs, Mr. Secretary. And you and I have known each 2555 other since we could actually play basketball in the state 2556 I want to thank Chairman Upton and Ranking Member Rush

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for having this hearing today and Secretary Perry for taking the time to testify with us.

DOE has many important missions in ensuring the adequate funding for the agencies essential. The President's budget fiscal year 2019 is a 3.8 cut from the fiscal year 2018 enacted level. Much of these cuts hit clean energy programs, grid operations, and next generation energy technologies. concerned that these cuts in these programs could have grave consequences to the environment at a time when many nuclear plants are going offline. Currently, there are four planned deactivation of nuclear plants in Ohio and Pennsylvania which generate 40 million megawatts of electricity, and PJM, more than all the power from wind and solar combined in PJM.

FirstEnergy Corporation recently filed a 202 request stating that immediate aid was needed for all coal and nuclear plants within PJM, not just their own. I have worked with many of my colleagues on this committee over the decades to updates to the Federal Power Act throughout the years including changes to the section 202(c). The current request concerns me in many ways. Section 202 has been used in the past for immediate crises from the California energy crisis in 2000 to the East Coast blackouts The mechanism has historically been used on a short-term in 2003. basis.

At a Bloomberg event recently, when asked to define an

emergency you responded that you flip a light switch on and nothing happens. I agree with that characterization. Can you elaborate on that quote and what is in your mind and constitutes an emergency that justifies the use of 202(c)?

Secretary Perry. Yes, sir. I think the observation is a very simplistic one that I use, but I think it cut right to the core. When you have a use for your energy whether it be a Wall Street financial institution, whether it be at the Federal Reserve and the computers that are there, whether it is on a military base to secure this country's liberties and freedoms, or if it is in your home and you have an all-electric home and it is a chill factor of minus 20 in the Northeast somewhere and you call for that power and it is not there that is an emergency.

And that is exactly the point that I was trying to make in a very simplistic approach, but I think it did make the point that if you don't have this electricity, if you don't have this reliable source, then we have a real challenge and a real problem in this country and that is the reliability and the resiliency issue of this grid. And being able to guarantee to the American people that that will be there is one of our roles, you as a United States Congressman and me as the Secretary of Energy.

So from my perspective, having a diverse portfolio it is one of the things that we did in your home state over the course of the, particularly in the 2000s when they deregulated the energy

market and we had this diverse, we developed more wind energy than any other state in the nation, the gas that came online, the other incentives that the state, and I think Mr. Tonko was talking about giving states some of this responsibility and I totally agree with that.

But my point is the time for study is over again from my perspective. We have got to act on this because I don't want to wake up next winter with a polar vortex that is bigger than the one that we had before and having taken some nuclear plants and some coal plants offline and not having that resource, not having that energy available to protect the citizens' safety and/or their security.

Mr. Green. Can you elaborate on the potential tools at DOE you feel could be better suited to securing a valuable emissions-free nuclear plants, for example?

Secretary Perry. Yes, sir. Well, this one is going to be a bit of a bank shot, but I think it makes the point, Gene, that we are in the process of, previous administrations, not just the last administration but if you go all the way back probably 20-25 years, previous administrations have not put into place, didn't respect the nuclear power industry. I think they overregulated them. They put a lot of cost on them through regulations. The last administration took away our ability to process high-assay uranium for the purposes of civil nuclear. That was started by

the administration before the Obama administration but they shut that down and then the private sector has no place for that fuel.

My point with all of this is we are at a critical place here today that if we don't send some messages whether it is making a good agreement with the Saudi Arabians to help them develop their civil nuclear program so that American contractors are going to have the supply chain to do that, that our universities don't have the incentives to put young men and women into the nuclear engineering field, all of that is going to come to a head and we are going to be at a critical position and I think it is sooner than we realize. And if we don't have a civil nuclear program that is robust, it will soon have an impact on our ability to keep our weapons programs at the place because we won't have the intellectual capability coming up through our national labs to do this. I mean I just think this is, you bring up an incredibly important issue, Mr. Green.

Mr. Green. Well, reliability is really important, like you said, when you turn on the light switch and they can't or the air conditioner or the heater, most of our problems in Texas when it gets real warm in the summer. Back we were joking yesterday, without air conditioning and elevators there would not be a Houston, Texas because of the heat from, literally, 1st of May to the end of September.

While I disagree with the recent notice of public review

2653 directed to FERC in the section 202 filing, I do think it is 2654 important we look at planned retirements across the country. 2655 While not rising to the level of immediate emergency, this is 2656 an issue both DOE and Congress should address putting forward. 2657 Obviously in Texas we get, we have two nuclear power plants. 2658 Now we have an abundance of natural gas, and of course producing 2659 more wind power that was created during your administration when 2660 you were governor than any other state in the Union. 2661 hopefully we will do some solar. 2662 But in the Northeast they don't have the ability to that 2663 oftentimes with wind or solar so it is basically older production 2664 whether it be coal or nuclear power. And that is why we need 2665 to see how we can do it because those folks, we don't want those 2666 folks freezing in the dark. But anyway I want to follow what 2667 the Department of Energy does and hopefully our committee will 2668 work with you on making sure that reliability is important, but 2669 we also need to see as best we can how we get it done. 2670 Secretary Perry. Yes, sir. 2671 Mr. Olson. My friend's time is expired. 2672 I will call upon the gentleman from Oklahoma for 5 minutes 2673 for questions. 2674 Man, Texans do stick together. Mr. Mullin. No, I am 2675 kidding. Anyways, hey, thank you, Mr. Chairman. 2676 Well, Mr. Chairman, Oklahoma also steals

Mr. Green.

2677 football players from A&M and University of Texas and my alma 2678 mater University of Houston. 2679 Mr. Mullin. No, we don't steal. We recruit better. 2680 obviously they want to go to, you know, a climate that they can 2681 Anyway, hey, thank you. 2682 And, Secretary Perry, I want to remind you of a time you 2683 met my son in Leader McCarthy's office. My boy wasn't very big 2684 at the time and he was talking to you. He was kind of like most 2685 little boys, he was looking around and you grabbed him by the 2686 shoulders and you set him on the chair and you said, young man, 2687 look at me in the eyes when you talk to me. And I had told my 2688 son that since the day he was born, and I really appreciate that. 2689 That meant a lot. I hope I did it in a very respectful way. 2690 Secretary Perry. 2691 Mr. Mullin. Oh, you did a hundred percent, but that is how 2692 we raise our kids. We are in Oklahoma too, and you look him in 2693 the eye and if he is not looking you in the eye I had probably 2694 thumped him in the head. It is just, that is called respect. 2695 So I appreciate that. That meant a lot to me. 2696 I want to talk to you obviously about Yucca Mountain and 2697 DOE's requirements. Can you summarize DOE's legal requirements 2698 pertaining to Yucca Mountain's licensing application? Secretary Perry. Yes, sir. This body as authorizers and 2699 2700 the appropriations process has, and I think the President's

2701	budget, \$110 million for the licensing to go forward. And I look
2702	at that as a way to get, you know, following the law. The law
2703	says that we will do this. There is an additional \$10 million
2704	in that appropriation request for temporary storage as well.
2705	Mr. Mullin. Is DOE required to create the Office of Civil
2706	Radioactive Waste Management to manage all these activities?
2707	Secretary Perry. Yes, by law.
2708	Mr. Mullin. In your last organizational chart for DOE was
2709	this office included in it?
2710	Secretary Perry. I can't answer that. You may know the
2711	answer to that.
2712	Mr. Mullin. Yes, I do, obviously. The answer to that is
2713	no. And as you alluded to a while ago, you are required by law
2714	to have that. Can you explain maybe why it was left out?
2715	Secretary Perry. Well, here would be my stab at that is
2716	that just because it is not named and doesn't have a line item
2717	does not mean that its duties are not covered in the agency.
2718	Mr. Mullin. Do you know who is covering that then? And
2719	I say that because we really aren't seeing any
2720	Secretary Perry. Can I get back with you and answer these
2721	questions after I have had some time to dig down into it and get
2722	you the proper answers?
2723	Mr. Mullin. Yes, absolutely.
2724	Secretary Perry. Yes.

2725 Because what I am trying to fish for here is Mr. Mullin. 2726 if it is from the appropriation process, is if that is why the 2727 office isn't manned, if that is why the duties of that office 2728 isn't being done, then for the committee's purpose we need to 2729 know and we need to know what is keeping it from happening. 2730 like I said, if it is from the appropriation perspective we also 2731 need to know what it is going to take to do that. 2732 I think Mr. Shimkus alluded to how much it was costing the 2733 taxpayers right now just from the lawsuits that are taking place 2734 from the storage that we are supposed to taking care of as the 2735 United States Government and so I want to be able to help you. 2736 I want to work with you on it. So if you could please get back 2737 to my office. 2738 Secretary Perry. Yes, sir. 2739 Mr. Mullin. Let us know how we can help you because that 2740 was really the line of the questions what I was going to, and I will actually yield back the remainder of my time. 2741 2742 Mr. Olson. Thank you to my friend from Oklahoma. Mr. Walberg, 5 minutes for questions, sir. 2743 2744 Mr. Walberg. Thank you, Mr. Chairman. 2745 And thank you, Mr. Secretary, for always being open to be 2746 here and answer the questions. Thank you for the energy you put 2747 into being the Secretary of Energy as well. It is encouraging 2748 for those of us in the northern climes to know that that is actually

happening.

I have the privilege of representing the energy district of the state of Michigan. Over 30 percent of all energy produced in Michigan is produced in my district. It is a fleet of all-of-the-above and some of that fleet sits right on one of the Great Lakes, Lake Erie, and so we are definitely concerned with cybersecurity. The challenge is not only that we are able to turn the lights on at any time but the environmental issues that go on thinking of the proximity there in the Great Lakes.

You recently formed the new Cybersecurity, Energy Security, and Emergency Response office. I think that certainly shows, I believe, that you believe that elevating cybersecurity functions to a Senate-confirmed assistant secretary level will help intergovernmental and interagency communications and multidirectional information sharing with the Department of Energy's ability to appropriately and quickly address cyber related emergencies, and I thank you for that.

My concern is the sustainability of the Department of Energy's leadership on this important issue. Cybersecurity was not a surpassing concern back in 1977 when the Department was organized. It certainly is today. In my bill with my colleague and Ranking Member Rush, H.R. 5174, we specify functions related to cybersecurity and emergency response that we believe should be specifically led by a Senate-confirmed assistant secretary.

2773 Will you work with us to ensure that we can elevate that, 2774 Secretary, to law? 2775 Secretary Perry. Yes, sir. 2776 Mr. Walberg. I appreciate that. Over the past 7 months 2777 you have had a lot of experience in dealing with emergency action 2778 in your Department. During appearances before the committee in 2779 January, your Deputy Secretary and Undersecretary for Energy said 2780 that expectations for DOE's emergency response exceeded its 2781 authorities, if I recollect correctly. From your experience to 2782 date, do you think there may be some additional tools or 2783 authorities DOE could use to help improve the ability of the 2784 agency's deployment of resources in an emergency? 2785 Secretary Perry. Yes, sir. I think it is always a 2786 thoughtful conversation to have to discuss with Congress and other 2787 agencies to make sure, you know, we complement when we need to But if there is a direct line of authority that it 2788 2789 is very clear, very precise so that no one gets confused about 2790 particularly during an emergency situation who is in charge. 2791 Mr. Walberg. I appreciate that and we would definitely want 2792 to work together with you on that. We want to examine things 2793 like surge funding or some other mechanism to enable DOE to have 2794 access to resources so the Department can respond more rapidly. 2795 So we hope that you can work with us on that. 2796 Secretary Perry. Yes, sir. Thank you.

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

Mr. Olson. The gentleman yields back.

The gentleman from South Carolina, Mr. Duncan, for 5 minutes.

Mr. Duncan. Thank you, Mr. Chairman.

And, Mr. Secretary, thank you for being here. I just want to lend my support at the outset here for the Nuclear Waste Policy Amendments Act that Chairman Shimkus and Markwayne Mullin from Oklahoma have mentioned. Getting Yucca Mountain back on track is imperative because we have a lot of waste sitting around this country and some of that is sitting at a place you visited back in February.

And I want to thank you for visiting the Savannah River Site and Savannah River National Laboratory this year. SRS is an integral part in the Department of Energy's industrial complex responsible for environmental stewardship and cleanup, waste management and disposition of nuclear materials, along with a lot of other missions, ongoing missions that Savannah River Site has and I thank you for recognizing the important role of SRS through the DOE's fiscal year 2019 budget. I believe it provided for about 1.7 billion, 287 million above enacted 2017 levels.

I am on the Cleanup Caucus and we are concerned about environmental management and cleaning up the tank farms at sites like Savannah River Site, Hanford, and others. And the South Carolina Department of Health and Environmental Control describes

the liquid waste management at SRS as the single greatest environmental risk in South Carolina. There are more than 30 years of nuclear weapons material that has been produced in South Carolina sitting in those tank farms and the ongoing environmental management efforts are there.

We also have the ability through the Defense Waste Processing Facility at SRS to vitrify that high level nuclear waste, turn it to glass so that it no longer poses a threat to leakage through those tanks and into the ground and aquifers. So the DOE's fiscal year 2019 budget requests an additional 74 million for SRS cleanup programs from the 2016 levels, emphasis on the liquid tank waste cleanup project.

What are DOE's top cleanup priorities for the site and how is your particular attention as Secretary going to facilitate tangible cleanup progress in South Carolina?

Secretary Perry. Obviously we have a court-mandated requirement that we are very sensitive to in making sure that we have the resources to be able to do that. You know, we have had the discussion substantially over the last year since I have been at DOE over the issue of how to deal with the plutonium and clean that up.

While I was out there I saw some good progress that is being made from the standpoint of the vitrification process that is going on there and the tanks that are going to be used to store

that, being able to move the plutonium out of South Carolina.

And we are already doing that with the D&D process, but to get

that substantially more robust to be able to move that waste out

of there on an expedited schedule is obviously high on our priority

list, if not the highest priority there.

Mr. Duncan. Well, I appreciate that, Mr. Secretary. And, you know, whether it is at Hanford with their waste facility trying to vitrify the waste that is coming out of their tank farms, ultimately this high level radioactive waste needs to go to Yucca Mountain and right now the vitrified waste is sitting on a concrete slab under a metal building at Savannah River Site. It is actually down in the concrete as you saw.

Secretary Perry. Yes, sir.

Mr. Duncan. Let me shift gears but stay at Savannah River Site because we have the MOX facility down there. We are under obligation under the Non-Proliferation Treaty with countries like Russia to do something with the nation's plutonium that is coming out of the nonproliferation aspects and I believe the MOX facility at SRS is the right thing to do with that plutonium. Currently, we are committed to rid the world of about, I think, enough plutonium to make 17,000 nuclear weapons.

So I would love to see the continuation of construction at the MOX program and eventually completion. We have already spent a ton of money down there and I truly believe we can bring more

efficiency to the project and it can be completed in a third of time and for almost half the additional cost than what the NNSA predicts. You indicated in your testimony that the 2019 budget continues termination activities for the MOX but provides 220 million for use toward orderly, safe closure for the project.

What do you envision for the future of this site, the MOX facility, and if not MOX, what do you determine to be the most efficient and effective way to remove the plutonium from South Carolina?

We didn't ask for the plutonium to come there. It is stored on site. It is not a long-term storage facility. It was brought there in order to be turned into mixed oxide fuel to be used in nuclear reactors around the country. That is what the purpose was.

Secretary Perry. Yes, sir.

Mr. Duncan. We spent a lot of money. Where are we going from here?

Secretary Perry. Yes, sir. And I will try to be as brief as I can. The issue on the reason that got started was an agreement with the Russians. The Russians have unilaterally walked away from that agreement. They said they would come back to the table if we met certain requirements and you know what those are, you know, and they are unacceptable. I mean they are asking us to do things that this country is not going to do to

2893 come back and sit down at the table. 2894 So the way I look at that is they have walked away and we 2895 have to look at our options. This is a facility that is obscenely 2896 And again I don't want to rehash and relitigate over budget. 2897 all these numbers, but the fact is there is an alternative and 2898 the alternative is dilute and dispose which we are using now as 2899 a matter of fact shipping plutonium out of South Carolina to WIPP 2900 at this particular point in time. We think that is --2901 The EPA has said that WIPP is not an acceptable Mr. Duncan. 2902 Yucca might be. The thing is, Russia has walked away but site. 2903 the facts of the matter are we have plutonium sitting in South 2904 Carolina that has come out of that nonproliferation agreement. 2905 WIPP is not going to be ready. Yucca, we are struggling around 2906 here to fund that. MOX is absolutely the right facility and I 2907 would love to sit down with you and talk with you about that at 2908 some point. 2909 Mr. Chairman, thanks for the leniency and I yield back. 2910 Secretary Perry. You are on. 2911 Mr. Olson. The time is expired. 2912 Mr. Long, 5 minutes for questions. 2913 Thank you, Mr. Chairman. Mr. Long. 2914 And thank you, Secretary Perry, for being here today. 2915 Secretary Perry. Yes, sir. 2916 Texas A&M University, where is that located?

2917	Secretary Perry. Where is it located?
2918	Mr. Long. Yes.
2919	Mr. Olson. College Station, Texas.
2920	Secretary Perry. It is, some would say that
2921	Mr. Long. I don't believe I yielded to you, did I?
2922	Secretary Perry. Some would say it is of the epicenter of
2923	the world, but we will just leave it at it is in Brazos County,
2924	Texas.
2925	Mr. Long. College Station, Texas?
2926	Secretary Perry. In the city of College Station.
2927	Mr. Long. And that is the only campus?
2928	Secretary Perry. No, sir. It is the main campus.
2929	There are
2930	Mr. Long. I didn't ask you about the main campus. I said
2931	where is it located?
2932	Secretary Perry. Oh, it is in College Station, Texas on
2933	Highway 6 and it goes both ways.
2934	Mr. Long. That is the only campus?
2935	Secretary Perry. It is the only main campus.
2936	Mr. Long. Where are the other campuses?
2937	Secretary Perry. The other campuses are
2938	Mr. Long. Outside of this country, I will cut to the chase.
2939	Secretary Perry. They are in a lot of different places.
2940	John Dalton

2941 Mr. Long. Like Oatar? 2942 Secretary Perry. And there is one in the country of Qatar 2943 right out of Doha. 2944 I was in Qatar 10 days ago. 2945 Secretary Perry. Yes, sir. 2946 Mr. Long. And walked in and they are all Aggie there, trust 2947 me. 2948 Secretary Perry. Sure. 2949 They are very, very happy with their affiliation 2950 and the students are doing great. Your picture was right there 2951 on the wall as I walked in and they are Aggie through and through. 2952 So I was pleased to see your picture on the wall when we went 2953 in and toured Texas A&M in Qatar just the other day. 2954 Speaking of universities, I would like to speak about another 2955 university. In recent hearings with your senior Department of 2956 Energy leadership I asked about the Department of Energy's support 2957 of the University of Missouri's MURR Nuclear Reactor. 2958 reactor trains nuclear engineers, some of who are funded through 2959 Department of Energy's Nuclear Energy University Program. 2960 Private companies in coordination with the University are 2961 seeking approval to produce lifesaving medical isotopes in 2962 partnership with the National Nuclear Security Administration, 2963 And the University is currently studying a partnership NNSA. with the NNSA to convert the reactor to use low-enriched uranium 2964

2965 instead of highly enriched uranium or HEU. I have got to tell 2966 you I was disappointed to see that the Integrated University 2967 Programs were defunded in your fiscal year 2019 budget, but I 2968 hope you see the value in these activities as we do at the 2969 University of Missouri. 2970 Will you please talk about the importance of our nuclear 2971 research infrastructure and how the Department of Energy supports 2972 this critical work particularly in its university programs? 2973 Secretary Perry. Yes, sir. I think you are making 2974 reference to the research reactor there at the University of 2975 Missouri and it is in medical isotopes and the manufacture of 2976 medical isotopes and there are a number of places across the country that we are partnering with that. It is for precision 2977 medicine for some of the things that we talked about with Mr. 2978 2979 McNerney. On our ability to practice precision medicine these 2980 facilities are really going to be important. They are very important. 2981 Mr. Long. 2982 Secretary Perry. We want to work with you and --2983 All right, thank you. With the ever-increasing 2984 cyber threats to the grid, I am pleased that the steps have been 2985 taken to create CESER, the Office of Cyber-, Energy Security, 2986 and Emergency Response and I look forward to that office getting

the electric grid become more or less responsive to cybersecurity

In your opinion, since your confirmation has

up and running.

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Secretary Perry. Well, I think the threat has increased but that shouldn't shock anyone. I think the threat potential is greater today than it was a year ago. Are we more resilient? I can't answer that with great definition. What I think is that we are exposed in certain areas. We need to be all hands on deck. That is the reason we are asking for the cyber office to be stood up.

With that said, our national labs are making some, I think, good inroads in both the defensive and offensive ways to deal with those that would attack our electrical grid.

Mr. Long. Let me ask you one more question and I will be about out of time at the end of this probably, but the fiscal year 2019 budget calls for 96 million in funding for the CESER, or for CESER. Can you explain a little bit about the program and how this money will be used to ensure we are securing our grid from the continuous cyber threats that we face?

Secretary Perry. Well, the focus is on the cyber threats from both state actors, you know, and we are talking about a year ago, Russia with Petya. We saw the impact on that. We have seen what has happened in Ukraine with two attacks on their power grid. The Iranians are who attacked the Aramco Electrical or their control panels. So nation state attacks are very real. You know, they are not going to -- as late as this last week we had

3013 conversations about, you know, what can we expect with the Syrian 3014 Should we be on more heightened alert? And I would issue. 3015 suggest to you yes. 3016 So the issue is this Office of Cybersecurity, our national labs working with the private sector, working with universities, 3017 3018 I don't think it has ever been more important for us to be able 3019 to maintain the national security of this country relative to 3020 our grid, both as we have talked about at length here today about 3021 the resources to be able to keep the power to that grid, but also 3022 to protect that grid from cyber attacks is as important as it 3023 has ever been in our country's history. 3024 Thank you. And thanks for being here today. Mr. Long. 3025 It has been a long hearing and I am sure you are kind of tired. 3026 And I yield back. 3027 Mr. Olson. Time is expired. 3028 The gentleman from Massachusetts has 5 minutes for questions, Mr. Kennedy. 3029 3030 Mr. Kennedy. One more to go, Mr. Secretary. Thank you. 3031 Thank you for your patience. Thank you for spending so much 3032 time with us and I will echo the comments of our colleagues, thank 3033 you for being so accessible, grateful that you are here. 3034 As our nation makes the transition from a 20th to 21st century 3035 energy economy we know that innovative sources of power will be

an important part of that generation mix. Wind power is a

steadily growing portion of the energy sector that provides clean power to millions of Americans and creates thousands of jobs across our country. Your home state of Texas, Mr. Secretary, during your tenure as governor wind power resources and energy grew by leaps and bounds. It is my understanding that according to ERCOT, wind made up 17 percent of the fuel mix in 2017.

So I wanted to ask you, I think, a pretty general question to start. Do you agree, Mr. Secretary, that wind energy is an important part of our nation's power sector?

Secretary Perry. Yes, sir.

Mr. Kennedy. So despite this growth, and I appreciate the answer, we have only one offshore wind project coming online in the United States. Other nations such as the U.K, Germany, and China have developed these projects in their own waters. My home state of Massachusetts proposes to be a leader in this effort. In my district we have made significant investments in Fall River and in Dartmouth and just across the border, the district in New Bedford, to become a national leader in offshore wind. Just recently, the Department of Interior announced proposed sales of two areas off the coast of Massachusetts to develop offshore wind.

Yet, unfortunately, Mr. Secretary, America risks being left behind as our allies and peers lead the growth of an industry that remains largely dormant here despite the potential to boost the economy and create jobs. Even more concerning, I know you have already touched about this a bit, is this year's budget request from the Trump administration that included a 72 percent cut in the DOE Office of Energy Efficiency and Renewable Energy.

I am not going to make you comment on that again. I think you have been pretty clear about where you stand on that cut.

But I do want to ask you how DOE is going to continue to support research and development of offshore wind.

Secretary Perry. Mr. Kennedy, we discussed, you know, this is an industry that is becoming mature. And so the private sector, the states, if, you know, in my home state one of the reasons we had that big wind energy growth was that the state invested in the CREZ lines. You know, we didn't subsidize the specific projects, but we basically said we are going to build these lines if you all will commit to building all these farms out. They did and you know what the results are. So I think not only the state but the private sector has the place to play this.

Here is what I will tell you that the DOE is going to continue to play a role in this, this is important. And again we were in Livermore this last week and the technology that is coming out of there, and this is on again rotor technology that makes these turbines substantially more efficient so that, you know, then that gets commercialized and goes into the private sector

where it makes it even more of a commercialized product in the market and more competitive.

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Mr. Kennedy. More viable.

Secretary Perry. So my point is we are going to continue to be a partner, maybe not as big as we were when wind and solar was more in its infancy, you know, we are shifting over to batteries and beyond battery to hydrogen fuels and some of the more immature but may have great potential energy sources in the So I am a big believer in wind and I hope that future. Massachusetts and other states that want to see a diverse portfolio, you know, I don't think it is a good idea to have Russian molecules of gas in Boston Harbor. But if you can't get it from the West you are going to get it from somewhere and I think that is another debate or discussion that we can have into the future about how we make sure that this entire country has got an infrastructure that will allow for all of our citizens to enjoy this energy revolution that is occurring in America.

Mr. Kennedy. And, Mr. Secretary, I appreciate that. I would agree with you it obviously gets complex as you try to look at the local resources and the voices of the local community. We do have a vibrant local community that is, I think, ready and willing to make this investment in coordination with our federal government partners, DOI, DOE, and I would ask just for you to keep it on your radar and as we to be a partner as we have

3109 seen and as we saw under your stewardship in Texas to see the 3110 growth of wind industry there. Just to finish this to make 3111 sure that the point is clear and I think it is, in 2017 the Clean 3112 Energy States Alliance, a coalition of state energy agencies, 3113 released three reports on the future of offshore wind in the 3114 Northeast, the reports which were actually partially funded by 3115 DOE that projected that offshore wind projects in the Northeast have the potential to add more than 35,000 jobs in the region. 3116 3117 My colleagues, Niki Tsongas and Bill Keating, just 3118 introduced a bill that would create a grant program to support 3119 offshore wind job training including partnerships with colleges 3120 and universities and nonprofits and unions and local governments. 3121 Investment in that wind energy is more than just a clean energy 3122 future especially in my district, sir. It represents jobs, 3123 economic development, opportunity, education, and a whole new 3124 industry base and expertise that is homegrown. I know the DOE mission is to, quote, ensure America's energy security and 3125 3126 prosperity by addressing its energy, environmental, and nuclear 3127 challenges through transformative science and technological 3128 So I would hope that you would continue to focus on 3129 how we can partner with you, understanding there has got to be 3130 a private sector component to this and a state component to this. 3131 Secretary Perry. Yes, sir.

Mr. Kennedy. But I think we have seen there is a willingness

3133 to do so and we are going to need your help. 3134 Secretary Perry. And, Mr. Kennedy, one of the things that 3135 I will offer you and to make the introduction, the university 3136 in Texas that probably has as good of wind energy history and experience and expertise is Texas Tech in Lubbock, Texas. 3137 3138 you know, getting the states to work with each other that may 3139 be a great opportunity. There used to be a real good Boston to 3140 Austin connectivity so Boston to Lubbock might be okay too. 3141 Mr. Kennedy. I appreciate that, sir. As long as we aren't 3142 talking football we are in good shape. 3143 Secretary Perry. Yes, sir. 3144 Mr. Kennedy. Thank you, sir. 3145 Mr. Olson. Time has expired. 3146 Seeing that no further members wishing to ask questions, 3147 I would like to thank Secretary Perry for coming this afternoon. 3148 And I trust, sir, that the proceedings you talked with before 3149 did not happen here today. You know what I am talking about, 3150 correct? 3151 Secretary Perry. That is correct. 3152 And you are cleared now to depart the pattern Mr. Olson. 3153 with a proud, loud Aggie whoo. And before we conclude I would like to ask unanimous consent 3154 3155 to submit the following documents for the record: Letters from 3156 the Utilities Technology Council; a statement from the R Street

Institute; three letters to the President from Members of 3157 3158 Congress; a letter to the President from the International Brotherhood of Teamsters; a letter to the President from United 3159 3160 Mine Workers of America; a letter to the President from the 3161 International Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, and Forgers and Helpers; a letter to the President 3162 3163 from the Utility Workers Union of America; a letter to Secretary 3164 Perry from the Energy Industry Trade Association; a letter to Secretary Perry from the Pennsylvania Public Utility Commission; 3165 3166 a letter to Secretary Perry from the FirstEnergy; a response 3167 letter from PJM to Secretary Perry; a letter from NEI to Chairman 3168 Walden. 3169 Without objection, so ordered. [The information follows:] 3170

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Mr. Olson. Pursuant to committee rules, I remind members
that they have 10 business days to submit additional questions
for the record and ask that the witnesses submit their response
within 10 business days upon receipt of the questions. Without
objection, the subcommittee is adjourned.

[Whereupon, at 1:21 p.m., the subcommittee was adjourned.]