The subcommittee met, pursuant to call, at 10:00 a.m., in Room 2123 Rayburn House Office Building, Hon. Fred Upton [chairman of the subcommittee] presiding.

Members present: Representatives Upton, Olson, Barton, Shimkus, Latta, Harper, McKinley, Kinzinger, Griffith, Johnson, Long, Bucshon, Flores, Mullin, Hudson, Cramer, Walberg, Duncan, Walden (ex officio), Rush, McNerney, Peters,
Green, Doyle, Castor, Sarbanes, Tonko, Loebsack, Schrader, Kennedy, Butterfield, and Pallone (ex officio).

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; C.J. Young, Minority Press Secretary; and Catherine Zander, Minority Environment Fellow.
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 on tackling those large and consequential questions.

I look forward to this morning's discussions and would yield for an opening statement to the ranking member of the
Energy Subcommittee, Mr. Rush from Illinois.

[The prepared statement of Mr. Upton follows:]

**********INSERT 1**********
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 and it would take us backwards on critical issues like climate change, while also hampering American innovation and global competitiveness.

Mr. Secretary, again I want to thank you for being here and I look forward to working with you to address these important issues going forward. With that, I yield back the balance of my time.

Mr. Upton. The gentleman yields back. The chair would recognize the chair of the full committee for an opening statement, the gentleman from the good state of Oregon, Mr. Walden, for 5 minutes.

The Chairman. You know, last time it was the great
Mr. Upton. I know.

The Chairman. I don't know how we slid downhill.

Mr. Upton. Michigan is the great state. Oregon is a good state.

The Chairman. Oh, I see.

I want to start of course by welcoming the Secretary and Mr. Vonglis, thank you both for being here. I believe it is the Secretary's second visit before our committee and we appreciate that. We like regular visitors here. We don't give, you know, 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.

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 committee. We will get Yucca legislation to the floor. We 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. 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:]

**********INSERT 2**********
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.
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 I have just outlined. Thank you and it is my privilege again to be in front of you and attempt to answer your questions.
[The prepared statement of Secretary Perry follows:]
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...
1. 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 maturation, if you will, or at least to the point where
they are ready to be commercialized in the private sector.

The Chairman. All right, good. And in conclusion for
my few minutes here, this work on reorganizing and
modernizing the structure of your agency is something that I
take seriously. 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.
So we take it seriously here, we want you to know that. We look forward to a partnership to look at how to reauthorize and modernize the agency. Our committee has a pretty good track record looking at other agencies, and like the FCC we reauthorized for the first time since 1990, your agency is one that goes back before that. And so we look forward to continuing to work with you on that effort and so we want to move forward.

I will thank the chairman for this hearing and return the balance of my time.

Mr. Upton. The gentleman yields back. The chair recognizes the gentleman from New Jersey, Mr. Pallone.

Mr. Pallone. Thank you, Mr. Chairman. Mr. Secretary, how many LNG export applications to Non-Free Trade Agreement countries are currently pending before the DOE, if you will?

Secretary Perry. There is 19, correct? I think there is 19.

Mr. Pallone. Do you believe that --

Secretary Perry. Let me, I will get you the --

Mr. Pallone. Yes. I will accept that. And if you want to get back to me if you think it is slightly wrong, please do. Do you believe that the DOE should continue to have a
Mr. Pallone. And does the EPA, now I am talking about the EPA, does the EPA play any role in DOE's public interest determination process, yes or no?

Secretary Perry. I am sure they do, but I am no expert on how the EPA functions, sir.

Mr. Pallone. Okay. Well, whether or not you agree that the U.S. Government should be promoting exports of American LNG that is an activity that would clearly fall within the mission of your Department or maybe the Department of Commerce. But as you know, I think late last year EPA Administrator Scott Pruitt traveled to Morocco to pitch that country on buying LNG from the U.S. Obviously I am very concerned that that doesn't fall within the EPA's mission. Do you think that this falls within EPA's mission?

Secretary Perry. Mr. Pallone, I am going to leave that up to you. I try to stay in my lane as best I can. So again as 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). And I am supportive of efforts to expand
public participation in government processes, however, I
don't see anything on that web page that indicates that these
comments, whether as-is or redacted, will be posted for the
public to see.

You know, if you want me to repeat this I will, but I am
basically trying to get a commitment from you to posting the
comments you receive on your website or at the very least
providing this committee in real time the comments you
received on this matter for all of us here to review. Is
that something you can commit to?

Secretary Perry. Yes, sir. And I think we have a place
for public comments because this 202(c) is just now being
analyzed and I don't think we even have a process in place
yet for the public --

Mr. Pallone. You do have on the website a page and
email address to accept public comments and requests
regarding the Federal Power Act section 202, but I just want
to make sure that they will be posted for the public to see.
That is what I am asking.

Secretary Perry. Yes, sir. We will.

Mr. Pallone. All right, thank you so much. I yield
Mr. Upton. 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, the vice chair of the full committee.

Mr. Barton. All right. Well, you sometimes are too many Texans, right?

Mr. Upton. Mr. Barton, whose picture is right above you on the right, is recognized for 5 minutes.

Mr. Barton. As Mr. Upton's is right up there.

First of all, welcome, Mr. Secretary.

Secretary Perry. Yes, sir.

Mr. Barton. I think you and I should acknowledge at the beginning that our basketball team got hammered by Mr. Upton's team in the Sweet 16.

Mr. Upton. One point.

Mr. Barton. One, we got beat 27 points. My lord, they put it to us. So I know I can't speak for Secretary Perry, but I wasn't real happy that afternoon.

Mr. Upton. Thinking about Houston that was the three-pointer there.

Mr. Barton. Yes, the game before you barely won, you
put the wood to us. Anyway, we are glad to have you, Mr.
Secretary.

Secretary Perry. Yes, sir.

Mr. Barton. I am tempted to go down the rabbit hole
that Mr. Pallone introduced about your colleague at the EPA,
but I don't think so. I will say on my own behalf that any
Cabinet 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
ty 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? 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?

I will leave that to all of us, collectively, to have
that conversation. But it was put in place after World War
II and 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 its current form? I am not ready to
Mr. Barton. 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.

Mr. Barton. Yes. Do you support us funding Yucca Mountain, 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.

Mr. Barton. Okay, finally, we have a Northeast Home Heating Oil Reserve that I put into a bill with Congressman Markey back in, oh, about 10 years ago. We spend $10 million a year on it. It has never been used. Is that maybe
something we could save a little money on?

Secretary Perry. Well, certainly, you know, when you have dollars sitting in an account that is not being used it is --

Mr. Barton. Something to look at.

Secretary Perry. Yes.

Mr. Barton. Okay. And you have 159 million in your budget for something Called Legacy Management. Do you happen to know what that is?

Secretary Perry. Yes, sir. Those are areas that older facilities that, on the cleanup side that is over in EM.

Mr. Barton. I am very proud that you knew what it was.

Secretary Perry. Yes, sir. The Cold War cost a lot of money as did the Manhattan Project. Still costing us a lot of money but it was worth it, sir.

Mr. Barton. Let's see if we can save some money there.

Thank you, Mr. Chairman. And thank you, Mr. Secretary.

Mr. Upton. The gentleman's time is expired.

The gentleman from California, Mr. McNerney.

Mr. McNerney. I thank the chairman.

Mr. Secretary, I really appreciate your interest in veterans issues and particularly using science and computing
power to make advances in PTSD and traumatic brain injuries
and other veteran-centric issues and I look forward to any
 collaboration --

Secretary Perry. Yes, sir.

Mr. McNerney. -- between us in the future. There is
two issues I want to bring up today. One is resiliency of
the electric grid, especially in the face of the wildfires we
had in California, and other threats that we are seeing and
ARPA-E funding. Regarding resilience, does the DOE have any
tools to help ensure resilience despite some of the gaps we
have in our current law? Are there any tools that we can use
that you can use to help us make our grid more resilient to
these things in California and elsewhere?

Secretary Perry. Obviously the test grid, if you will,
at Idaho National Lab is one of the resources that we have
available where we can literally go in and break that grid
and to see what happens and how to address it.

Mr. McNerney. Well, I think, you know, what I am really
thinking about is federal tools to work between the DOI and
the Forest Service to ensure rights of way so that brush can
be cleared in federal lands, those kind of things.

Secretary Perry. I am sorry. I was going down a
different path here.

Mr. McNerney. Sure.

Secretary Perry. Let me get back to you. I don't off

the top of my head know that we have any resources available

for that specific --

Mr. McNerney. Or authorities.

Secretary Perry. Or authority, yes, sir.

Mr. McNerney. Thank you.

Secretary Perry. But I will get back to you.

Mr. McNerney. Well, the current budget proposal reduces

funding for resilience and reliability from 89 billion in

2017 to 61 billion in 2019. And we have seen an increase in

some of these threats, wildfires, hurricanes, storms and so

on, so that budget direction seems to be going the wrong way.

I mean I think we need increase in that so that is a point of

recommendations.

Secretary Perry. Yes, sir. Mr. McNerney, I don't want

to quibble with you about the issue of is it a reduction of

dollars 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 cybersecurity, and we split that historic line

item up and are creating this new office of cybersecurity
emergency response and that has an 8.3 percent, yes sir, I think that is right. It has a substantial increase over on that side and you may be seeing the EERE budget that is lower.

But the commitment to resiliency and to reliability from my perspective has actually increased. And so let me come over and sit down with you and we can look at this a little closer to make sure that -- I know what you want to do and I want to get to the same place that you are. I think the membership wants to get from the standpoint of making sure that we have the resiliency, the reliability in our grid.

Mr. McNerney. And of course then that applies to the whole country not just to California.

Secretary Perry. Yes, sir.

Mr. McNerney. Regarding ARPA-E, this program is designed to help keep the United States at the forefront of energy innovation. Energy innovation, I think that is a key element in ensuring our strong market position on energy issues. How determined is the administration in eliminating this program?

Secretary Perry. It shows up on the budget. I am a good enough historian that we are going to do what the
Congress wants to do on this. As a former CEO of the State of Texas I put some budgets forward from time to time that actually had zero line items in them. And --

Mr. McNerney. That is kind of the same answer you gave 6 months ago so.

Secretary Perry. Yes, sir. And that was not particularly well received by the appropriators.

Mr. McNerney. Okay. Mr. Secretary, do you support robust funding for fusion energy research and development?

Secretary Perry. Yes, sir.

Mr. McNerney. Thank you. Your predecessor was deeply involved in the negotiations for the Iran nuclear agreement. This administration has considered scrapping that agreement. Are you involved in those deliberations?

Secretary Perry. Well, being on the National Security Council yes, sir, to some degree. I would not put myself as the lead negotiator, but certainly am involved with the conversations generally in rooms that we can't be having conversations with here.

Mr. McNerney. Can you disclose your opinion on that?

Secretary Perry. Well, I think like any of our deals whether it is NAFTA, whether it is JCPOA, whether it is the
negotiations that are ongoing with Saudi Arabia for a civil nuclear agreement, we need to get the best agreement that we can get. I think one of our main responsibilities is to, in the nonproliferation area is to make sure that the fewer individuals who have access to those types of materials that can be made into weapons we need to restrict that so.

Mr. McNerney. I mean the agreement is already in place.

Secretary Perry. I understand that, but so is NAFTA and we are renegotiating NAFTA. So I think the administration's point is can we re-engage and get a better deal. I don't have a problem in the world with that no matter what it might be, whether it is NAFTA, whether it is JCPOA. I mean renegotiating I mean we have people renegotiating LNG deals that they signed 3 years ago.

Mr. McNerney. I think the chairman is going to cut us off here so thank you.

Secretary Perry. I know. Yes, sir. Thank you.

Mr. McNerney. Thank you, Mr. Secretary.

Mr. Upton. The chair recognizes now the vice chair of the powerful Energy Subcommittee, Mr. Olson, from the great state of Texas.

Mr. Olson. I thank the chair.
And, Secretary Perry, a big old Texas howdy.

Secretary Perry. Howdy.

Mr. Olson. It is great to have you back before the panel. As a personal note, I am glad you did not leave DOE for VA as was rumored. Houston Texans are happy to have your hat hang where it is hanging today.

Secretary Perry. Yes, sir.

Mr. Olson. I want to talk about section 202(c) of the Federal Power Act. I was one of the members of last Congress to lead an effort to amend section 202(c). That change was signed into law. The intent was limited. Talking about, quote, 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 satisfy the national security needs of
your people you are going to have to have the distribution
system as well.

So that is another area. U.S. pipeline technology, U.S.
pipeline companies, I think there is a real opportunity in
not just India, but India is obviously a huge market in our
ability to deliver U.S. innovation, U.S. natural resources
into that country are a great opportunity and that is the
real driving factor of why we are headed that way.

Mr. Olson. Namaste. I yield back.

Mr. Upton. The chair recognizes the gentleman from
California, Mr. Peters.

Mr. Peters. Thank you, Mr. Chairman.

And I thank you, Mr. Secretary, for being here. I have
the exact quote I will just read to you. When I asked you
about the budget that was proposed by the President you said
I didn't write this budget, my job is to defend it which from
time to time is counter to what I think is good. So I know
you are here to do a job, but maybe we can --

Secretary Perry. Yes, sir.

Mr. Peters. -- get some of your personal opinions on
this. The budget makes cuts to the Office of Science which includes an important project named the International Thermal Nuclear Experimental Reactor which is sometimes referred to as ITER. Here is a program where the United States is one in an 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 key to that. So I am confident that what is happening in our national labs, the funding of those is appropriate to meet the needs of the battery challenges that face us.

Mr. Peters. Thank you. And just with respect to NAFTA, do you think that the disruption of NAFTA will have a negative impact on energy prices for Americans and supplies for U.S. energy companies who sell to Mexico and Canada, even the way we talk about it right now?

Secretary Perry. Not necessarily. I think generally
speaking people are able to divorce the rhetoric with reality. For instance, Ray Washburne, who is the head of OPIC, he and I have had conversations with my counterpart in Mexico and private sector operators in the U.S. and their Mexican counter partners, if you will, to invest in Mexico's energy infrastructure. So I feel confident. I think there is an extraordinary opportunity there.

Mr. Peters. I am going to run out of time. I appreciate what you say about rhetoric. I have got to tell you that NAFTA is so important --

Secretary Perry. Yes, sir.

Mr. Peters. -- to our country and to my district in particular and I understand the talk about improving it. I think we had more leverage when we were dealing with 11 other countries. 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?
Mr. Latta. Thank you, Mr. Chairman. And, Mr. Secretary, 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 sectors. More recently, we have seen cyber attacks against the electronic communication systems of several American pipeline companies. DHS is still working to determine who is responsible 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 which DOE is trying to improve the
electric grid's capabilities to protect it from these cyber
attacks?

Secretary Perry. Yes, sir. We will work with you in --

Mr. Latta. Well, I really appreciate it. Thank you
very much, Mr. Chairman. I yield back the balance of my
time.

Mr. Upton. The gentleman from Pennsylvania is
recognized.

Mr. Doyle. Thank you, Mr. Chairman.

Mr. Secretary, welcome back.

Secretary Perry. Mr. Doyle.

Mr. Doyle. Like many on this panel, I am greatly
concerned by the premature closures of nuclear plants around
this country. John Hanger who was former Secretary of the
DEP in Pennsylvania and head of the Public Utility Commission
in my state put it succinctly. He said there are now 18
nuclear units that have closed or are scheduled for closure
in the last 5 years. Three are in my state of Pennsylvania,
Beaver Valley I and II, and Three Mile Island. Those three
nuclear units generated 22 terawatt hours of energy in 2017, all the wind and solar in Pennsylvania generated 4 terawatt hours in 2017. This is putting my state at the edge of a clean air climate disaster.

Secretary Perry, I echo his concerns and would add that these nuclear plants not only provide good family supporting jobs, but also affordable, reliable, and greenhouse gas-free electricity. 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
portfolio. 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 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.

Secretary Perry, I would like to run through a few numbers with you quickly, and you probably know some of these and we can just kind of stick to the numbers because I have
another question I want to get to.

Secretary Perry. Yes, sir.

Mr. Shimkus. As of the end of fiscal year 2017, what is the approximate amount rate payers paid into the Nuclear Waste Fund to construct/oversee our nuclear waste management program?

Secretary Perry. It is approaching $40 billion. I think it is about 37, 37.7 billion.

Mr. Shimkus. And those are rate payers, people from states that had nuclear power that have paid in to solve this problem.

Secretary Perry. That is correct.

Mr. Shimkus. How much did the value of the Nuclear Waste Fund increase during fiscal year 2017?

Secretary Perry. Almost 2 billion, I think 1.7 billion is the specific.

Mr. Shimkus. That is the accrued interest on the base of the account.

Secretary Perry. Right.

Mr. Shimkus. As of the end of fiscal year 2017, what is the total cumulative liability cost including future payments because Yucca Mountain is not yet open?
Secretary Perry. Just a touch over $34 billion.

Mr. Shimkus. So that is payments that we are liable for because we are not complying with law.

Secretary Perry. That is correct.

Mr. Shimkus. And you are saying then the 30-plus billion.

Secretary Perry. Yes.

Mr. Shimkus. How much did American taxpayers pay in legal costs during the fiscal year 2017 because Yucca Mountain is not open?

Secretary Perry. $700 million.

Mr. Shimkus. So for my colleagues, we move this bill, this an issue I am fighting with appropriators and budgeteers. This is money that taxpayers are paying that is really not on the books and it accrues to almost $800 million. What was the total increase in fiscal year 2017 in taxpayer liability in both actual payments as well as future projected liabilities?

Secretary Perry. That one grew substantially, $3.3 billion.

Mr. Shimkus. If you break this total cost down to a daily cost to taxpayers that escalated during just last year
how much are taxpayers liable for on a daily basis?

Secretary Perry. $9 million per day.

Mr. Shimkus. That is a day. That is money that we could do, help our national defense, Title I programs, anything. That is just being paid because we are not complying with the law. So when people wonder why I get so focused, these are some of the reasons why. Last question in this area, how much was provided to the Department in fiscal year 2017 -- and I think I can add 2018 now -- from the Nuclear Waste Fund for DOE to move forward with our Nuclear Waste Program and ultimately reduce our taxpayers' legal payments?

That is a zero, I am assuming. Not a one, it is a zero.

Secretary Perry. That is a zero.

Mr. Shimkus. Okay. And that is our liability as authorizers to push our appropriators to do what --

Secretary Perry. And, I think, Mr. Shimkus, that is the reason that we requested, the administration requested $110 million for the legal process to go forward, to be able to get the answer of whether or not this facility is in fact what you all in Congress have said it is.

Mr. Shimkus. Yes. So the appropriation money is really
to do the final adjudication with the Nuclear Regulatory Commission with you as an intervener with the State of Nevada to clarify the science. And that is the last part before we can then really start moving and addressing this.

With my 30 seconds left, I won't read the whole question but you have talked about the DOE and the great work it does. Obviously I am also very much engaged in the renewable fuel debate in this country. DOE has done a lot of good work on a study, I have quoted it before, the Co-Optima study. Are you familiar with it and what is your thoughts on it?

Secretary Perry. Say it again, sir?

Mr. Shimkus. The Co-Optima study?

Secretary Perry. I am not.

Mr. Shimkus. It is the high octane, it basically is addressing the high octane issue. We have a hearing tomorrow.

Secretary Perry. I will get up to speed on it and get back with you and have a conversation.

Mr. Shimkus. Not a problem, I appreciate your time.

Thank you.

Secretary Perry. Yes, sir.

Mr. Upton. The gentlelady from Florida.
Ms. Castor. Thank you, Chairman Upton. Good morning, Secretary Perry. Yesterday in our Oversight Committee we had Bruce Walker, your Assistant Secretary of Electricity Delivery and Energy Reliability who gave us an update on restoration of the grid in Puerto Rico. And I think everyone was very heartened by what he had to say and what the Department is doing to build a more resilient grid, a more modern grid, tapping the expertise of our national laboratories and working with private sector partners and researchers there on the ground.

And now Congress has provided the funds and overridden some of the language in the Stafford Act that says you have to just 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
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 without coal. These are all quotes that are coming from major 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 power plants. And we have four other letters of support from 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 flowing into that part of the world that the national security of this country is jeopardized.

I don't think that is appropriate in any way. Political decisions that put people's lives in jeopardy are inappropriate and I think this President understands that. He has had multiple conversations with me and others in his administration to find a solution to that. That is exactly what we are working on today. There are a number as you said 202(c) is one of those, there may be other options which we need to look at as well.

Mr. McKinley. Are we getting close to a decision?

Secretary Perry. Expedition is of importance.
Mr. McKinley. Thank you. Thank you, Mr. Secretary, and I yield back.

Mr. Upton. The gentleman's time is expired.

The gentleman from Maryland, Mr. Sarbanes.

Mr. Sarbanes. Thank you, Mr. Chairman.

Thank you, Secretary Perry, for being here. Last October when you were here we talked about these ongoing threats to our national security, a little bit different from what you were just speaking about, which is the national security associated with maintaining a kind of diversified portfolio of energy sources. This is more about the cyber attacks that are coming in and we already know that there has been hacking attempts by the Russians 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 can really be a model across the country and we think can lead in terms of what it means to have diversified
financing for low-income solar installation.

So the basic question here is does your Department remain 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 aside. It is hard to keep track of where your commitment is and the Department's commitment is to this solar technology advancement is. And will you maintain the same commitment within the Solar Energy Technologies Office that has been a hallmark up to this point and further commit to making sure that low-income communities are in a position to take advantage of these low-cost energy and skilled job opportunities which are available within the solar technology industry?

Secretary Perry. Yes, sir. Mr. Sarbanes, let me work with you. I am not that knowledgeable with that specific program from a granular standpoint and I want to be able to give you an appropriate answer so I will follow up.

Mr. Sarbanes. I appreciate that. I think if you look inside the Department's data on this it is quite impressive and we can help present some of that back to you as well.

Secretary Perry. Yes, sir.

Mr. Sarbanes. Thank you.
Mr. Upton. Mr. Kinzinger?

Mr. Kinzinger. Thank you, Mr. Chairman. If I can get Mr. 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 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 needs to play in this is to rebalance that obviously previous to this administration coming into place there were some thumbs on the market and at least we should take that pressure off of the direction that those markets were headed. Obviously there were some political considerations in the previous administration that they were not fond of coal, they were not fond of nuclear, and both of those industries paid a price for it. They had their favorites in the arena and they supported those. What we are looking at is to rebalance, if you will, to take the thumb off of the market scale.

But with that in mind, the more important issue is one
of national security. Being able to know without a doubt that the energy supply will be there when we need it whether it is from a cyber attack that stops the gas somewhere, whether it is a hurricane that hits the, you know, God forbid, not again, the northeastern part of this country, the national security side of this is even more important than the economic side of it.

Mr. Kinzinger. Thank you, Mr. Secretary. I appreciate you being here and I yield back.

Mr. Olson. [Presiding.] Time has expired.

Mr. Tonko for 5 minutes of questions.

Mr. Tonko. Thank you, Mr. Chair.

Welcome, Secretary Perry, and thank you for returning before the committee. Over the past year I haven't agreed with all of 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 impoundment of ARPA-E funds or a delay of weatherization funding to states which they are expecting on July 1.

But I want to focus on a different issue. Mr. Secretary, are you familiar with this recent National Energy Technology Laboratory report entitled, "Reliability,
Resilience and the Oncoming Wave of Retiring Baseload Units'? It is dated March 18th, or March 13th, excuse me, 2018 and it was posted on DOE's website on March 27th.

Secretary Perry. I am not an expert at it, but I am certainly familiar with it.

Mr. Tonko. Okay. Are you aware of any DOE political officials that discussed this report as it was being developed by NETL?

Secretary Perry. I am not.

Mr. Tonko. Would you be willing to share any communications between DOE officials and NETL about the report with the committee?

Secretary Perry. I would be happy to.

Mr. Tonko. Thank you. The reason I ask is because this report is cited numerous times in FirstEnergy's section 202(c) request which was submitted just 2 days after the report was published on DOE's website. I want to take issue with how the report represents the data to conclude coal made the grid more 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 New York did make certain that they had their power supplies met and with zero emissions being the guiding force. So I think that is the difference here.

But I yield back, Mr. Chair.

Mr. Olson. Time is expired.

Mr. Griffith, 5 minutes for questions, please.

Mr. Griffith. Thank you, Mr. Secretary. I appreciate you being here. All my questions have gone out the window because of comments that have been made of recent or at least a lot of them have.

You were very kind to the previous administration to say they put their thumbs on the scale when they were looking at various energy sources. In my district which has got natural gas, predominantly coal, we felt like it wasn't a thumb on the scale, we felt like it was a boot on our necks. We had
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thousands of jobs lost, families disrupted, communities losing businesses left and right, hospitals closing down because they no longer had the big employer at the coal mine to pump in the insurance into the hospital and the money coming in there. It was devastating.

And so I was kind of surprised, one, that Mr. McKinley missed the NETL report in his detail. He kept going. I guess he had to have some time for questions and so he left that one out. 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 rest of the country as well.

And with that, I know you agree but I have to yield back.
Secretary Perry. Yes, sir.

Mr. Olson. Time is expired.

Mr. Loebsack, 5 minutes for questions.

Mr. Loebsack. Thank you, Mr. Chair.

Great to see you again, Mr. Secretary.

Secretary Perry. Sure, thank you.

Mr. Loebsack. We don't have a lot in common, Iowa and Texas, but we do have wind energy in common.

Secretary Perry. I have spent a lot of time in your home state, sir.

Mr. Loebsack. I am aware of that too. That is right. Seems like ages ago, but I am aware of that. Thank you. But I am happy about your support for wind energy. As you know that constitutes, it is about 37, 38 percent of the electricity generated in the state of Iowa so it is really a great program. And thank you for coming back to this committee. I do appreciate the accountability that you demonstrate here. I think all of us do on a bipartisan basis.

As you know of course my home state of Iowa does lead the nation in biofuels production. It is an integral part of our economy, the farm economy, and right now the farm economy
is 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 the energy sector. So, but for clarity purposes, EPA is who hands out those.

Mr. Loebsack. Right. But they are required by law to consult with DOE, with the Secretary of Energy, right?

Secretary Perry. But they do consult with us. Yes, sir.

Mr. Loebsack. Does your office recommend that EPA adopt any small refinery waivers this year, and if so what waivers did you recommend?

Secretary Perry. Let me go back and get the details of that for you so that I can give you specific and correct information.

Mr. Loebsack. Yes and I really do appreciate that because what I am going to ask you then, moving forward, just yesterday your counterpart at the USDA, Secretary Sonny Perdue, indicated that he believes the EPA is misusing the hardship waivers. And as you know our governor is in town...
today too and she is trying to get through to the President to talk to him about the RFS.

Secretary Perry. Yes, sir.

Mr. Loebsack. Do you agree with Secretary Perdue that the EPA has misused the hardship waivers?

Secretary Perry. I can't speak to that because I don't know the details of the issue. If I could just add one side of the story, one of the things that we are working on is to find some other, it would be, number one, I know my Iowa corn farmers pretty well and they really don't care where this ethanol goes as long as it gets to go somewhere.

Mr. Loebsack. I just had a meeting with a number of them last weekend.

Secretary Perry. Yes, sir. And I respect that having been a former agricultural commissioner of the state of Texas. We are in conversations with my counterpart in Mexico and we were talking to him as late as this last month about being able to move U.S. ethanol into Mexico into their fuel mix because they are in the process of we understand that they are going to be mandating some ethanol.

Mr. Loebsack. And I really appreciate that. And we have to keep in mind too that we are talking about a lot of
production of corn here in the country and of course around
the world and ethanol is obviously one use of that corn.
There is no question. But we have to make sure in those
NAFTA renegotiations that we don't get our corn market in
Mexico cut off as well.

So I just have some questions. I don't have time to go
through them here, but I do want to submit these questions
for the record having to do with the total number of refinery
waiver applications that the DOE evaluated for the last 5
years. So a number of those and I would like to submit those
for the record, Mr. Chair.

Secretary Perry. So we will have them ready for you.

Mr. Loebsack. And thanks for your time today. I
appreciate it. And we look forward to your answers to our
questions.

Secretary Perry. Yes, sir.

Mr. Loebsack. Thanks, Mr. Secretary. I appreciate it.

I yield back.

Mr. Olson. Thank you.

Mr. Johnson, 5 minutes of questions.

Mr. Johnson. Thank you, Mr. Chairman.

Mr. Secretary, good to see you again.
Secretary Perry. Thank you, sir.

Mr. Johnson. I sure enjoyed our trip down to Piketon a few months ago.

Secretary Perry. Yes, sir.

Mr. Johnson. You know, you and I had extensive discussions when we were there and, like you, I support an all-of-the-above energy policy and I know you believe that as well. My district in Eastern and Southeastern Ohio, and you and I have talked about that a little bit as well, is no stranger to the benefits of a diverse generation with our abundance of both coal and natural gas. Many of the coal plants in the 6th District of Ohio, along the Ohio River are not only a reliable source of power but they are the strong economic drivers for the communities in which they exist. The people rely on them there for good paying jobs.

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

Secretary Perry. Yes, sir. As the Governor of Texas I used to fret greatly in August and September about a Category 5 hurricane coming up the Houston Ship Channel, Mr. Olson, and 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.

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. As you might
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 to sell power at market rates. Mr. Chairman, I guess I would 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.

Mr. Olson. Without objection, so ordered.

(The information follows:)

**********INSERT 4**********
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 meet their obligations to the Treasury, actually costing taxpayer money, strand the federal government with a very expensive, nonfunctioning asset and put federal taxpayers on the hook for the fish mitigation costs which come to the tune of almost a billion, or I think a little over a billion dollars a year.

There has been overwhelming bipartisan, bicameral opposition as the chairman of the full committee testified to, opposition to the administration's proposal. Eight members of this committee including my fellow Northwest colleagues, Ms. McMorris Rodgers and Chairman Walden, sent a letter to our budget committee this year that I referenced asking them to reject the proposal, yet once again it seems like we are here.

So our region already produces some of the cleanest power that we have talked about, very affordable. We repay the Treasury with interest. So if you can explain to me what problem the administration is actually trying to solve with this proposal.
Secretary Perry. Mr. Schrader, let me just remark that maybe it is my best addition here would be I am reminded of a Kenny Rogers song where he talked about you need to know when to hold 'em and know when to fold 'em.

Mr. Schrader. I understand and appreciate that response and appreciate your --

Secretary Perry. Congress has been very clear about this issue. I will be more than happy to carry the message back.

Mr. Schrader. Thank you very much, Mr. Secretary.

Thank you for being here.

Secretary Perry. Yes, sir.

Mr. Olson. The gentleman yields back.

Dr. Bucshon, 5 minutes of questions.

Mr. Bucshon. Welcome, Secretary Perry, from Southwest Indiana.

Secretary Perry. Yes, sir.

Mr. Bucshon. This committee has spent most of this Congress examining the country's electrical grid and throughout our hearings experts have stressed to us the importance of a reliable and resilient electrical grid.

There are many sources of energy that can power the grid.
However, coal-fired electricity is one of the most reliable fuel secure and affordable energy sources. This was evident during the 2014 polar vortex and again most recently with the bomb cyclone. It was the reliable baseload power plants such as coal and nuclear that prevented blackouts in many regions of the country.

Even with its reliability, coal-fired plants continue to retire at alarming numbers, and I know Mr. Johnson just mentioned this. Since 2010 more than one-third of the nation's coal-fired power plants have shut down or announced plans to close. That is the equivalent of shutting down the entire electricity supply 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 important that we put into place some processes that assure this country has a reliable and resilient grid and coal is going to be a part of that and coal is going to be a part of the future energy supply of the world. By 2040, the estimate is at 77 percent of the energy produced in the world will still be fossil fuel, coal will be playing a major part of that.
Our goal and our part to play in this is that U.S. coal is, you know, coal imports are up 61 percent from a year ago, we are going to continue. When I go to India we are not just going to be talking about LNG. We are going to be talking about coal and clean coal technology that is developed in this country. We want them, they are going to burn coal and we want them to use our technology to be able to remove the emissions that are harming the environment in that part of the world and globally as well.

So any reasonable approach to making sure that we have a reliable energy source in this country we are going to be working with and we certainly think your legislation is reasonable and heads in that direction.

Mr. Bucshon. Thank you very much for being here, Secretary.

Secretary Perry. Yes, sir.

Mr. Bucshon. Thanks for your work.

Mr. Chairman, I yield back.

Mr. Olson. The gentleman yields back.

The chairman calls upon the gentleman from Texas, Mr. Flores, 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-à-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 on some of DOE's university engineering university programs. I understand that the administration is conducting a wide range in review of nuclear policy, but while we await the outcome of that broader review what are the most important policies that Congress can advance now in the short term, in the near term?

Secretary Perry. I am sorry?

Mr. Bucshon. What are the most important policies that Congress can advance in the near term while we wait for the administration to finish its overall nuclear review policy?

Secretary Perry. Well, certainly I think that making sure that the resources are appropriate on this national nuclear policy review, and we have for too long, I guess, Mr. Flores, this country has kind of put nuclear, our arsenal on the back burner, if you will.

Mr. Bucshon. Right.

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 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.

Mr. Bucshon. Okay. Well, thank you, Mr. Secretary. I
have reached the end of my time. I do have additional
questions that we will submit supplementally and I look
forward --

Secretary Perry. Yes, sir.

Mr. Bucshon. -- to working with you as we address our
nation's energy policy. I yield back.

Mr. Olson. Time has expired.

Mr. Cramer, 5 minutes for questions.

Mr. Cramer. Thank you, Mr. Chairman.

Thank you, Mr. Secretary, for being with us again.

Thank you for your excellent leadership at the very important
agency. Before I drill down into what is most important to
me today is specifically the fossil energy research and
development budget, I want to associate myself with Mr.
Peters' comments about ITER. Even though San Diego is a long ways from North Dakota, his point about leveraging that resource, I think was made well. And I also want to associate myself with the fact that I do feel like there is a greater confidence given recent changes in leadership.

Secretary Perry. Yes, sir.

Mr. Cramer. And I appreciate your attention to that and your vast knowledge of it, so thank you for that. With that, I do want to get to the more concerning topic for me and that 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 warms up and thaws out to come and see the work at the University of North Dakota.

Secretary Perry. Yes, sir.
Mr. Cramer. Secondly, I want to ask for your assistance in advocating with us for a 45Q, you know, the 45Q tax credit which was slightly, you know, improved in the most recent bill but not very useful until we reconcile IRS and EPA rules so that it is more useful for these types of projects. It is essential. And then there is another credit, the refined coal credit that I think just has to be extended so we can build this bridge again between basic research and commercialization. We are at the cusp and we, you know, run the risk of losing all those opportunities. As you said, innovation not regulation is our motto. I like it. Let's live with it. Thank you.

Thank you, Mr. Chairman.

Mr. Olson. Time is expired.

Mr. Green from Texas, 5 minutes for questions. Are you ready, Mr. Green?

Mr. Green. Yes, Mr. Chairman.

I want to welcome the Secretary. My other job is I am the ranking member on the Health Subcommittee and we just finished a hearing upstairs, Mr. Secretary. And you and I have known each other since we could actually play basketball in the state capital. I want to thank Chairman Upton and
Ranking Member Rush 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. I am 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 in 2003. The mechanism has historically been used on a short-term 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 directed to FERC in the section 202 filing, I do think it is important we look at planned retirements across the country. While not rising to the level of immediate emergency, this is an issue both DOE and Congress should address putting forward. Obviously in Texas we get, we have two nuclear power plants. Now we have an abundance of natural gas, and of course producing more wind power that was created during
your administration when you were governor than any other state in the Union. So, and hopefully we will do some solar. But in the Northeast they don't have the ability to that oftentimes with wind or solar so it is basically older production whether it be coal or nuclear power. And that is why we need to see how we can do it because those folks, we don't want those folks freezing in the dark. But anyway I want to follow what the Department of Energy does and hopefully our committee will work with you on making sure that reliability is important, but we also need to see as best we can how we get it done.

Secretary Perry. Yes, sir.

Mr. Olson. My friend's time is expired.

I will call upon the gentleman from Oklahoma for 5 minutes for questions.

Mr. Mullin. Man, Texans do stick together. No, I am kidding. Anyways, hey, thank you, Mr. Chairman.

Mr. Green. Well, Mr. Chairman, Oklahoma also steals football players from A&M and University of Texas and my alma mater University of Houston.

Mr. Mullin. No, we don't steal. We recruit better. I mean obviously they want to go to, you know, a climate that
they can live in. Anyway, hey, thank you.

And, Secretary Perry, I want to remind you of a time you met my son in Leader McCarthy's office. My boy wasn't very big at the time and he was talking to you. He was kind of like most little boys, he was looking around and you grabbed him by the shoulders and you set him on the chair and you said, young man, look at me in the eyes when you talk to me. And I had told my son that since the day he was born, and I really appreciate that. That meant a lot.

Secretary Perry. I hope I did it in a very respectful way.

Mr. Mullin. Oh, you did a hundred percent, but that is how we raise our kids. We are in Oklahoma too, and you look him in the eye and if he is not looking you in the eye I had probably thumped him in the head. It is just, that is called respect. So I appreciate that. That meant a lot to me.

I want to talk to you obviously about Yucca Mountain and DOE's requirements. Can you summarize DOE's legal requirements pertaining to Yucca Mountain's licensing application?

Secretary Perry. Yes, sir. This body as authorizers and the appropriations process has, and I think the
President's budget, $110 million for the licensing to go forward. And I look at that as a way to get, you know, following the law. The law says that we will do this. There is an additional $10 million in that appropriation request for temporary storage as well.

Mr. Mullin. Is DOE required to create the Office of Civil Radioactive Waste Management to manage all these activities?

Secretary Perry. Yes, by law.

Mr. Mullin. In your last organizational chart for DOE was this office included in it?

Secretary Perry. I can't answer that. You may know the answer to that.

Mr. Mullin. Yes, I do, obviously. The answer to that is no. And as you alluded to a while ago, you are required by law to have that. Can you explain maybe why it was left out?

Secretary Perry. Well, here would be my stab at that is that just because it is not named and doesn't have a line item does not mean that its duties are not covered in the agency.

Mr. Mullin. Do you know who is covering that then? And
I say that because we really aren't seeing any --
Secretary Perry. Can I get back with you and answer these questions after I have had some time to dig down into it and get you the proper answers?
Mr. Mullin. Yes, absolutely.
Secretary Perry. Yes.
Mr. Mullin. Because what I am trying to fish for here is if it is from the appropriation process, is if that is why the office isn't manned, if that is why the duties of that office isn't being done, then for the committee's purpose we need to know and we need to know what is keeping it from happening. And like I said, if it is from the appropriation perspective we also need to know what it is going to take to do that.
I think Mr. Shimkus alluded to how much it was costing the taxpayers right now just from the lawsuits that are taking place from the storage that we are supposed to taking care of as the United States Government and so I want to be able to help you. I want to work with you on it. So if you could please get back to my office.
Secretary Perry. Yes, sir.
Mr. Mullin. Let us know how we can help you because
that was really the line of the questions what I was going
to, and I will actually yield back the remainder of my time.
Mr. Olson. Thank you to my friend from Oklahoma.
Mr. Walberg, 5 minutes for questions, sir.
Mr. Walberg. Thank you, Mr. Chairman.
And thank you, Mr. Secretary, for always being open to
be here and answer the questions. Thank you for the energy
you put into being the Secretary of Energy as well. It is
encouraging 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. Will you work with us to ensure that we can elevate that, Secretary, to law?

Secretary Perry. Yes, sir.

Mr. Walberg. I appreciate that. Over the past 7 months you have had a lot of experience in dealing with emergency action in your Department. During appearances before the committee in January, your Deputy Secretary and Undersecretary for Energy said that expectations for DOE's emergency response exceeded its authorities, if I recollect
correctly. From your experience to date, do you think there may be some additional tools or authorities DOE could use to help improve the ability of the agency's deployment of resources in an emergency?

Secretary Perry. Yes, sir. I think it is always a thoughtful conversation to have to discuss with Congress and other agencies to make sure, you know, we complement when we need to complement. But if there is a direct line of authority that it is very clear, very precise so that no one gets confused about particularly during an emergency situation who is in charge.

Mr. Walberg. I appreciate that and we would definitely want to work together with you on that. We want to examine things like surge funding or some other mechanism to enable DOE to have access to resources so the Department can respond more rapidly. So we hope that you can work with us on that.

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
we 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 come back and sit down at the table.

So the way I look at that is they have walked away and we have to look at our options. This is a facility that is obscenely over budget. And again I don't want to rehash and relitigate all these numbers, but the fact is there is an alternative and the alternative is dilute and dispose which we are using now as a matter of fact shipping plutonium out of South Carolina to WIPP at this particular point in time. We think that is --

Mr. Duncan. The EPA has said that WIPP is not an acceptable site. Yucca might be. The thing is, Russia has walked away but the facts of the matter are we have plutonium
sitting in South Carolina that has come out of that nonproliferation agreement. WIPP is not going to be ready. Yucca, we are struggling around here to fund that. MOX is absolutely the right facility and I would love to sit down with you and talk with you about that at some point.

Mr. Chairman, thanks for the leniency and I yield back.

Secretary Perry. You are on.

Mr. Olson. The time is expired.

Mr. Long, 5 minutes for questions.

Mr. Long. Thank you, Mr. Chairman.

And thank you, Secretary Perry, for being here today.

Secretary Perry. Yes, sir.

Mr. Long. Texas A&M University, where is that located?

Secretary Perry. Where is it located?

Mr. Long. Yes.

Mr. Olson. College Station, Texas.

Secretary Perry. It is, some would say that --

Mr. Long. I don't believe I yielded to you, did I?

Secretary Perry. Some would say it is of the epicenter of the world, but we will just leave it at it is in Brazos County, Texas.

Mr. Long. College Station, Texas?
Mr. Long. And that is the only campus?

Secretary Perry. No, sir. It is the main campus.

There are --

Mr. Long. I didn't ask you about the main campus. I said where is it located?

Secretary Perry. Oh, it is in College Station, Texas on Highway 6 and it goes both ways.

Mr. Long. That is the only campus?

Secretary Perry. It is the only main campus.

Mr. Long. Where are the other campuses?

Secretary Perry. The other campuses are --

Mr. Long. Outside of this country, I will cut to the chase.

Secretary Perry. They are in a lot of different places.

John Dalton --

Mr. Long. Like Qatar?

Secretary Perry. And there is one in the country of Qatar right out of Doha.

Mr. Long. I was in Qatar 10 days ago.

Secretary Perry. Yes, sir.

Mr. Long. And walked in and they are all Aggie there,
trust me.

Secretary Perry. Sure.

Mr. Long. They are very, very happy with their affiliation and the students are doing great. Your picture was right there on the wall as I walked in and they are Aggie through and through. So I was pleased to see your picture on the wall when we went in and toured Texas A&M in Qatar just the other day.

Speaking of universities, I would like to speak about another university. In recent hearings with your senior Department of Energy leadership I asked about the Department of Energy's support of the University of Missouri's MURR Nuclear Reactor. The MURR reactor trains nuclear engineers, some of who are funded through Department of Energy's Nuclear Energy University Program.

Private companies in coordination with the University are seeking approval to produce lifesaving medical isotopes in partnership with the National Nuclear Security Administration, NNSA. And the University is currently studying a partnership with the NNSA to convert the reactor to use low-enriched uranium instead of highly enriched uranium or HEU. I have got to tell you I was disappointed to
see that the Integrated University Programs were defunded in your fiscal year 2019 budget, but I hope you see the value in these activities as we do at the University of Missouri.

Will you please talk about the importance of our nuclear research infrastructure and how the Department of Energy supports this critical work particularly in its university programs?

Secretary Perry. Yes, sir. I think you are making reference to the research reactor there at the University of Missouri and it is in medical isotopes and the manufacture of medical isotopes and there are a number of places across the country that we are partnering with that. It is for precision medicine for some of the things that we talked about with Mr. McNerney. On our ability to practice precision medicine these facilities are really going to be important.

Mr. Long. They are very important.

Secretary Perry. We want to work with you and --

Mr. Long. All right, thank you. With the ever-increasing cyber threats to the grid, I am pleased that the steps have been taken to create CESER, the Office of Cyber-nergy Security, and Emergency Response and I look forward to
that office getting up and running. In your opinion, since
your confirmation has the electric grid become more or less
responsive to cybersecurity threats?

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 conversations about, you know, what can we expect with the Syrian issue. Should we be on more heightened alert? And I would suggest to you yes.

So the issue is this Office of Cybersecurity, our national labs working with the private sector, working with universities, I don't think it has ever been more important for us to be able to maintain the national security of this country relative to our grid, both as we have talked about at length here today about the resources to be able to keep the power to that grid, but also to protect that grid from cyber attacks is as important as it has ever been in our country's history.

Mr. Long. Thank you. And thanks for being here today. It has been a long hearing and I am sure you are kind of tired. And I yield back.

Mr. Olson. Time is expired.

The gentleman from Massachusetts has 5 minutes for
questions, Mr. Kennedy.

Mr. Kennedy. One more to go, Mr. Secretary. Thank you. Thank you for your patience. Thank you for spending so much time with us and I will echo the comments of our colleagues, thank you for being so accessible, grateful that you are here.

As our nation makes the transition from a 20th to 21st century 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.

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 future. So I am a big believer in wind and I hope that 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 seen and as we saw under your
stewardship in Texas to see the growth of wind industry there.  Just to finish this to make sure that the point is clear and I think it is, in 2017 the Clean Energy States Alliance, a coalition of state energy agencies, released three reports on the future of offshore wind in the Northeast, the reports which were actually partially funded by DOE that projected that offshore wind projects in the Northeast have the potential to add more than 35,000 jobs in the region.

My colleagues, Niki Tsongas and Bill Keating, just introduced a bill that would create a grant program to support offshore wind job training including partnerships with colleges and universities and nonprofits and unions and local governments.  Investment in that wind energy is more than just a clean energy future especially in my district, sir.  It represents jobs, economic development, opportunity, education, and a whole new industry base and expertise that is homegrown.  I know the DOE mission is to, quote, ensure America’s energy security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technological solutions.  So I would hope that you would continue to focus on how we can
partner with you, understanding there has got to be a private sector component to this and a state component to this.

Secretary Perry. Yes, sir.

Mr. Kennedy. But I think we have seen there is a willingness to do so and we are going to need your help.

Secretary Perry. And, Mr. Kennedy, one of the things that I will offer you and to make the introduction, the university in Texas that probably has as good of wind energy history and experience and expertise is Texas Tech in Lubbock, Texas. And, you know, getting the states to work with each other that may be a great opportunity. There used to be a real good Boston to Austin connectivity so Boston to Lubbock might be okay too.

Mr. Kennedy. I appreciate that, sir. As long as we aren't talking football we are in good shape.

Secretary Perry. Yes, sir.

Mr. Kennedy. Thank you, sir.

Mr. Olson. Time has expired.

Seeing that no further members wishing to ask questions, I would like to thank Secretary Perry for coming this afternoon. And I trust, sir, that the proceedings you talked with before did not happen here today. You know what I am
talking about, correct?

Secretary Perry. That is correct.

Mr. Olson. And you are cleared now to depart the pattern with a proud, loud Aggie whoo.

And before we conclude I would like to ask unanimous consent to submit the following documents for the record:

Letters from the Utilities Technology Council; a statement from the R Street Institute; three letters to the President from Members of Congress; a letter to the President from the International Brotherhood of Teamsters; a letter to the President from United Mine Workers of America; a letter to the President from the International Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, and Forgers and Helpers; a letter to the President from the Utility Workers Union of America; a letter to Secretary Perry from the Energy Industry Trade Association; a letter to Secretary Perry from the Pennsylvania Public Utility Commission; a letter to Secretary Perry from the FirstEnergy; a response letter from PJM to Secretary Perry; a letter from NEI to Chairman Walden.

Without objection, so ordered.

[The information follows:]
This is a preliminary, unedited transcript. The statements within may be inaccurate, incomplete, or misattributed to the speaker. A link to the final, official transcript will be posted on the Committee’s website as soon as it is available.
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.]