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

23	Green, Doyle, Castor, Sarbanes, Tonko, Loebsack, Schrader,
24	Kennedy, Butterfield, and Pallone (ex officio).
25	
26	Staff present: Mike Bloomquist, Deputy Staff Director;
27	Samantha Bopp, Staff Assistant; Daniel Butler, Staff
28	Assistant; Kelly Collins, Legislative Clerk,
29	Energy/Environment; Wyatt Ellertson, Professional Staff,
30	Energy/Environment; Adam Fromm, Director of Outreach and
31	Coalitions; Jordan Haverly, Policy Coordinator, Environment;
32	Ben Lieberman, Senior Counsel, Energy; Mary Martin, Chief
33	Counsel, Energy/Environment; Drew McDowell, Executive
34	Assistant; Brandon Mooney, Deputy Chief Counsel, Energy; Mark
35	Ratner, Policy Coordinator; Annelise Rickert, Counsel,
36	Energy; Dan Schneider, Press Secretary; Peter Spencer,
37	Professional Staff Member, Energy; Jason Stanek, Senior
38	Counsel, Energy; Austin Stonebraker, Press Assistant; Hamlin
39	Wade, Special Advisor, External Affairs; Everett Winnick,
40	Director of Information Technology; Andy Zach, Senior
41	Professional Staff Member, Environment; Priscilla Barbour,
42	Minority Energy Fellow; Jeff Carroll, Minority Staff
43	Director; Jean Fruci, Minority Energy and Environment Policy
44	Advisor; Tiffany Guarascio, Minority Deputy Staff Director

45	and Chief Health Advisor; Zach Kahan, Minority Outreach and
46	Member Service Coordinator; Rick Kessler, Minority Senior
47	Advisor and Staff Director, Energy and Environment; Jourdan
48	Lewis, Minority Staff Assistant; John Marshall, Minority
49	Policy Coordinator; Alexander Ratner, Minority Policy
50	Analyst; Tim Robinson, Minority Chief Counsel; Tuley Wright,
51	Minority Energy and Environment Policy Advisor; C.J. Young,
52	Minority Press Secretary; and Catherine Zander, Minority
53	Environment Fellow.
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77	Mr. Upton. Good morning, everyone. So it has been 6
78	weeks to the day, Mr. Secretary, since you last appeared here
79	and I certainly welcome you back. We all do. And at that
80	October 12th hearing we talked about your efforts to refocus
81	the Department's limited budget resources to address what you
82	see as the most pressing challenges.
83	You outlined a number of priorities which included
84	promoting the nation's energy security, strengthening the
85	nation's national security and nuclear deterrent, spurring
86	innovation, and yes, cleaning up the legacy Cold War sites.
87	The proposed \$36.6 billion budget that we are discussing
88	today reflects those priorities.

89 There is \$15 billion for the National Nuclear Security 90 Administration which would continue critical spending for DOE's defense and national security programs at a level some 91 92 \$200 billion higher than the previous administration spending. The budget maintains about five and a half billion 93 dollars for the Office of Science and its fundamental and 94 95 basic research programs which is the seed bed for innovation. 96 That is up somewhat from the previous administration spending. And there is \$6.6 billion for the Office of 97 98 Environmental Management, the highest level in some 15 years. 99 Concerning the various energy programs, the budget 100 provides two and a half billion which represents a substantial cut, overall, from the previous spending across 101 102 these programs. And I would encourage you to continue 103 working with the committee to identify additional authorities 104 that you need to be more effective and I know that you will 105 do that. 106 We also need to recognize that as our energy systems, 107 market mechanisms, and federal and state environmental 108 policies become more entangled, existing and emerging hazards 109 to energy systems may have far more reaching consequences 110 than we may be accustomed to. For example, a successful

cyber attack on certain business systems would certainly

112 undermine confidence in energy trading systems even if it 113 doesn't pose a threat to physical operations. 114 A major cold event like January's bomb cyclone can lead 115 to severe shortages in power or energy when people need it 116 most or, as testimony at our second modernization hearing 117 this year noted, factors that lead to the decline in our 118 nation's nuclear infrastructure can undermine long-term national security and the national leadership on 119 120 nonproliferation and safety. 121 So these energy policies and energy securities present 122 serious challenges, no question, challenges that transcend our current market setup. It is essential for you as 123 124 Secretary of Energy to survey energy and national security 125 risks, to identify the implication of our existing energy policy and energy infrastructure, recommend appropriate 126 127 action, and help us make more informed policy decisions. 128 Your budget should provide the resources for you to do that 129 work and your leadership should focus on tackling those large

I look forward to this morning's discussions and would yield for an opening statement to the ranking member of the

and consequential questions.

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133	Energy Subcommittee, Mr. Rush from Illinois.
134	[The prepared statement of Mr. Upton follows:]
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136	*********INSERT 1******

137 Mr. Rush. Good morning. I want to thank you, Mr. Chairman, and I want to welcome you, Mr. Secretary. And, Mr. 138 139 Secretary, I really like how you entered into the room. 140 came over and shook hands on the side of the aisle, here, and 141 your personal touch means a lot. And in this era of 142 extremism on both sides, really, the human touch you 143 exhibited means a lot to me and I want to thank you for it. 144 Mr. Secretary, I look forward to working with your office to ensure that the Department moves the nation's 145 146 energy policies forward in a way that benefits all Americans 147 and, indeed, benefits all communities. History has shown all of us the importance of having people with different 148 perspectives and different life experiences at the proverbial 149 150 table when important and consequential decisions are 151 initially being considered. 152 So when I talk about having diversity in leadership 153 positions at DOE, it is just not for the sake of having 154 diversity. But rather, it helps to ensure that specific 155 groups or communities aren't being excluded whether it is 156 intentional or not. When decisions are being made regarding 157 which universities are awarded research grants, or which 158 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

181	the STAR ENERGY program. Additionally, the proposal would
182	increase funding of the Office of Science, which funds the 17
183	national laboratories, by \$869 million from fiscal year 2018
184	levels, eliminating the Advanced Research Program Agency,
185	slash, Energy, or ARPA-E.
186	The budget proposal would also get rid of all DOE loan
187	programs including the Title XVII innovative clean energy
188	projects loan program and the Advanced Technology Vehicles
189	Manufacturing loan program. Mr. Secretary, this fiscal year
190	2019 budget proposal reflects exactly the wrong vision for
191	the nation and it would take us backwards on critical issues
192	like climate change, while also hampering American innovation
193	and global competitiveness.
194	Mr. Secretary, again I want to thank you for being here
195	and I look forward to working with you to address these
196	important issues going forward. With that, I yield back the
197	balance of my time.
198	Mr. Upton. The gentleman yields back. The chair would
199	recognize the chair of the full committee for an opening
200	statement, the gentleman from the good state of Oregon, Mr.
201	Walden, for 5 minutes.
202	The Chairman. You know, last time it was the great

203	state of Oregon.
204	Mr. Upton. I know.
205	The Chairman. I don't know how we slid downhill.
206	Mr. Upton. Michigan is the great state. Oregon is a
207	good state.
208	The Chairman. Oh, I see.
209	I want to start of course by welcoming the Secretary and
210	Mr. Vonglis, thank you both for being here. I believe it is
211	the Secretary's second visit before our committee and we
212	appreciate that. We like regular visitors here. We don't
213	give, you know, Hilton Honor points or anything for your
214	stays, but we do appreciate your being here and especially to
215	discuss the fiscal year 2019 budget request from the
216	President.
217	As we have explored through the DOE modernization
218	hearings, lots has changed at the Department of Energy over
219	the 40 years since it was first created especially on the
220	national security and energy front. And I know that is a
221	passion of yours on cybersecurity, Mr. Secretary, and
222	protecting our energy grid, our gas pipeline system and all
223	from attack. Under your leadership, Mr. Secretary, the
224	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

247 will continue to pay off as we dig deeper to address DOE's 248 core missions of nuclear energy, environmental cleanup, and 249 mission-enabling science. 250 The President's fiscal year 2019 budget requests \$30.9 251 billion for the Department to deliver on its commitments to 252 the American people. Almost half that budget would go toward 253 the Department's nuclear security mission, roughly a quarter 254 would be spent on environmental management, the remaining 255 amount would go toward DOE's energy and science programs. 256 am pleased to see that the budget also includes funding to 257 fulfill the Department of Energy's legacy cleanup 258 responsibilities including at the Hanford Site. 259 Now it is located along the Columbia River, you and I 260 both went there last August and I appreciated your doing that 261 and touring McNary Dam as well. The cleanup work at Hanford 262 requires deliberate, careful, and very clear oversight by the 263 Department of Energy and we will continue to monitor the 264 projects, particularly involving worker safety. 265 As we talked before the hearing, Mr. Secretary, I would 266 love to explore your views on what has happened recently 267 there with some potential radiation emissions from dust and 268 the effect on workers and the overall cleanup. While many

269 technical and logistical challenges remain, we are beginning 270 to see some progress and I trust your renewed focus on 271 Hanford will accelerate the results of cleaning up that mess. 272 I am pleased the budget includes funding to restart 273 Yucca Mountain project -- Mr. Shimkus also probably shares 274 some happiness with that move -- so the waste currently sited 275 at Hanford and around the country will be permanently 276 disposed of. That remains a big priority for this committee. We will get Yucca legislation to the floor. We passed out it 2.77 278 here on a big bipartisan vote, we want to get it down to the 279 President's desk. 280 This year's budget request is notable in its emphasis on energy security, in particular in combating physical and 281 282 cyber attacks to our nation's energy infrastructure. As the 283 sector-specific agency for cybersecurity for the energy sector, the Department of Energy must ensure unity of effort 284 285 and serve as the day-to-day referral interface for the prioritization and coordination of activities across the 286 287 government. 288 As I said, I got a firsthand look at some of DOE's 289 testing capabilities and unique facilities and advanced tools 290 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

313	we will overcome that.
314	So thank you, Mr. Secretary, delighted to have you here,
315	and I yield back the balance of my time.
316	[The prepared statement of The Chairman follows:]
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319	Mr. Upton. The gentleman yields back. The chair would
320	recognize the ranking member of the full committee, the
321	gentleman from New Jersey, Mr. Pallone, for 5 minutes.
322	Mr. Pallone. Thank you, Mr. Chairman.
323	Secretary Perry, welcome back. I hope you feel welcome,
324	because judging by President Trump's fiscal year 2019 budget,
325	I think here in Congress we have more confidence in you and
326	your Department than in the President. I say that because we
327	recently passed a bipartisan omnibus appropriations bill that
328	not only increased funding for many DOE programs above the
329	President's budget request, but also increased funding above
330	2017 enacted levels.
331	And I am glad that Congress is going on record that it
332	will not accept these severe cuts being proposed by the
333	President. I don't envy the position you are in today,
334	having to defend a Department of Energy budget that slashes
335	funding for clean energy research, walks away from popular
336	efficiency programs that save consumers money, eliminates
337	programs that fund cutting-edge energy research, and helps
338	low-income families weatherize their homes.
339	And this budget also slashes federal investments in DOE
340	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

385	with you, Mr. Secretary, to perfect and move that
386	legislation, but I certainly will fight any attempt to
387	eliminate the reserve.
388	And, finally, I must address the recent request the
389	Department received from FirstEnergy and Murray Energy to use
390	section 202(c) of the Federal Power Act to keep the
391	companies' cash-strapped coal and nuclear plants operational.
392	Mr. Secretary, judging by your recent statements and those of
393	Assistant Secretary Walker, it sounds like you appreciate
394	that section 202(c) is for serious grid emergencies as
395	explicitly designed in the statute and not designed to bail
396	out power plants that are using money.
396 397	out power plants that are using money.  So this request by FirstEnergy, in my opinion, is like
397	So this request by FirstEnergy, in my opinion, is like
397 398	So this request by FirstEnergy, in my opinion, is like calling 911 because your credit card got declined. It has
<ul><li>397</li><li>398</li><li>399</li></ul>	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
<ul><li>397</li><li>398</li><li>399</li><li>400</li></ul>	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
<ul><li>397</li><li>398</li><li>399</li><li>400</li><li>401</li></ul>	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,
<ul><li>397</li><li>398</li><li>399</li><li>400</li><li>401</li><li>402</li></ul>	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.
<ul><li>397</li><li>398</li><li>399</li><li>400</li><li>401</li><li>402</li><li>403</li></ul>	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

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

414	STATEMENT OF THE HONORABLE RICK PERRY, SECRETARY, U.S.
415	DEPARTMENT OF ENERGY
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417	STATEMENT OF SECRETARY PERRY
418	Secretary Perry. Thank you, Mr. Chairman. And Chairman
419	Walden, thank you for your comments. And Ranking Member Rush
420	and along to each of you, it is my privilege to be back in
421	front of you again. And, Mr. Rush, just as a side comment, I
422	hope that we all can reflect a real civility and, frankly,
423	brotherly and sisterly love as we go forward in this process.
424	And it is my honor to get to serve this country once again in
425	this role that I have today and it is a great privilege to be
426	interacting with each of you as public servants. You all
427	sacrifice to serve this country and I am greatly appreciative
428	of that.
429	This budget represents a request to the American people
430	through their representatives in Congress to fund the
431	priorities of this Department. It underscores DOE's
432	commitment to stewardship, accountability, service; I hope
433	that our interactions with you and other committees of
434	Congress over the past year have underscored that commitment.
435	Our DOE leadership team has appeared before congressional

436 committees 23 times in 2017 and we are proud of the strong relationship that we have built on the Hill. 437 438 When I first appeared before this committee last year, I 439 committed DOE to advancing several key objectives. I noted 440 that we needed to accelerate our exascale computing capability; to modernize our nuclear arsenal; to continue to 441 442 address the environmental legacy of the Cold War; advance 443 domestic energy production; better protect our energy This fiscal year 2019 30.6 billion budget 444 infrastructure. 445 request for the Department seeks to advance these and other 446 goals. 447 Mr. Chairman, DOE's supercomputing and other advanced technology capabilities play a crucial role in combating 448 449 threats to our energy and national security infrastructure. 450 As this committee knows from its strong bipartisan support of 451 the 21st Century Cures legislation, these supercomputing 452 assets are also critical to finding cures for cancer, 453 cardiovascular disease, and other health challenges. 454 In the Precision Medicine Initiative section of the Cures Act, section 2011, you encouraged the Secretary of 455 Health and Human Services to coordinate with the Secretary of 456 457 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 Thanks to ingenuity innovation, we are on the independence. 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

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

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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.

546	[The prepar	red statement	of	Secretary	Perry	follows:]
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548	*********INSERI	r 3*******				

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

571 I know that they are looking at a number of different options, and particularly with the events of the last 2 weeks 572 573 it prompts us to try and expedite that process even faster. 574 A couple questions I have as I work with the governor's office and others, can you help us in looking at a 575 replacement for this line as it relates to the permitting 576 577 that would be required and other efforts within the 578 administration to replace that Line 5 with a safer option than we have today? 579 580 Secretary Perry. Yes. Well, the short answer is yes. 581 But if I could just expand a moment, I think it is really 582 important for us to recognize that our infrastructure not only in some cases as this one, I would suggest, is aging, 583 584 but also the expansion of that infrastructure to be able to 585 take advantage of this new energy resource, if you will. 12 years ago there was a fellow traveling around the country 586 587 making a pretty good living giving a speech about peak oil, 588 and the world has so changed and America is in such a 589 different position and being able to move those resources 590 safely and efficiently is really important to the economy and to the national security of this country. 591 592 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.

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615 Chairman. Your common, or let me put it this way, I think our common sense, collectively, tells us that if we lose a 616 major line to a refinery like that, that it is going to have 617 618 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 619 very wise to ask us to take a look at this, on the national 620 621 security side of it. 622 I don't know where that fuel goes in its final stages, 62.3 but you all have major military bases in that part of the 624 country and it could have a negative impact on their ability 625 to have fuel available for the security of this nation. 626 The last question I have is while we are Mr. Upton. talking about pipeline safety I want to turn to the recent 627 628 news regarding cyber attacks on pipelines and as you know 629 that there was a published report just in the last week or 2 as to a cyber attack on one of our pipelines here. 630 631 that that is almost a daily occurrence. 632 Why is it so important that DOE take a strong role in 633 coordinating the federal response? You may know that I have 634 a bill, H.R. 5175, the Pipeline and LNG Facility 635 Cybersecurity Preparedness Act, which would enhance DOE's 636 ability to coordinate pipeline security and emergency

637	response. Can you work with us as we move that bill forward?					
638	Secretary Perry. Yes, sir. Obviously, the world has					
639	really changed from the standpoint of, and it is not just a					
640	few times. It is thousands of times a day that there are bad					
641	actors out there whether they are nation states or whether					
642	they are just a single individual with ill intent in mind					
643	that are trying to penetrate into systems all across this					
644	country, some of them that could have catastrophic impact on					
645	our ability to deliver energy.					
646	It is the reason that we have asked for these additional					
647	funds to stand up this office that we refer to as CESER or					
648	Cybersecurity. I want to thank Joe Barton for the work that					
649	he has done on reorg to help us from the standpoint of					
650	modernizing the agency to look at the changes that have just					
651	happened, let's say, in the last decade in this country					
652	relative to the new energy resources we have available, the					
653	infrastructure that we are going to need, and the security					
654	and resiliency of that infrastructure, obviously including					
655	the grid that is out there.					
656	Mr. Upton. Thank you much. I would yield to the					
657	ranking member, Mr. Rush.					
658	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

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

725	the governor, I really respect the authorizers, the
726	appropriators, and the administrative or the executive side
727	of this. I know what my job is, and my job is to work with
728	you, which I will do on a daily basis to find that
729	appropriate ground. But I will promise you this that where
730	you appropriate and where you authorize we will work to make
731	you very proud that we manage it absolutely the most
732	efficient way that it can be.
733	Mr. Rush. I yield back, Mr. Chair.
734	Mr. Upton. The chair would recognize the gentleman from
735	Oregon, a good state, Mr. Walden.
736	The Chairman. We are now a good state now, thanks.
737	Thank you, Mr. Chairman. And, Mr. Secretary, again thank you
738	for being here. Before I say anything we should also draw
739	attention to the fact it is Mr. Walberg's birthday today so
740	happy birthday from Michigan, the great state of Michigan.
741	Mr. Secretary, I want to start by talking about
742	Bonneville Power Administration. I appreciate your just most
743	recent comments about respecting the will of the authorizers,
744	which is what we are. So along those lines, this idea of
745	selling off the electric transmission assets and abandoning
746	cost-based rates proposal has been roundly rejected by

747	virtually every member of the Pacific Northwest congressional
748	delegation. It is the one idea bad idea that unites
749	all of us in the Northwest. I am afraid this move could do
750	nothing but harm my constituents, drive up electricity costs,
751	hurt consumers across the region; so can you assure me the
752	DOE will leave Bonneville alone unless Congress provides
753	explicit authorization that authorization word again
754	there, Mr. Secretary.
755	Secretary Perry. Yes, sir.
756	The Chairman. Thank you. Now moving along, as you know
757	the Hanford Site is just across the river from many of my
758	constituents. And not only are safe and secure operations a
759	concern, and I appreciate your commitment not only to that
760	and the lab nearby but also the help to do the cleanup here,
761	the committee right now is working with the GAO to identify
762	some options for improving operational performance. Will you
763	work with us on this as we develop findings?
764	Secretary Perry. Yes, sir.
765	The Chairman. Thank you. Let me ask a broader
766	question. As we look at modernizing the Department we are
767	focusing on emergency and security issues, but also how the
768	Department can better expend its limited resources. We are

769 also cognizant of the Department's vast technological 770 capabilities which can help accelerate innovation across national security, energy, manufacturing, even medicine as 771 772 you have referenced in your testimony, but we also have to 773 watch our taxpayers' wallets. Can you speak to your support of DOE's science, technology, computing facilities and how 774 775 best to enable innovation in the private sector while 776 tentatively managing limited taxpayer resources? 777 How are you going to balance all that because your labs 778 are doing amazing work. It is phenomenal. And for our committee members, if you haven't interacted with these labs 779 we should figure out a way to do that and get some briefings. 780 It is really terrific, the work that is being done there. 781 782 So, Mr. Secretary, what can you tell us about how to balance 783 all that and where you are headed in terms of the direction 784 of the labs and, yes. 785 Secretary Perry. Technology transfer is, I think, one 786 of the real goals of this agency from the standpoint of 787 working with the labs and we are consolidating the EERE's tech-to-market functions over in the office of Technology 788 789 Transfer. And just as a bit of a background I have a fairly 790 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.

813	So we take it seriously here, we want you to know that.
814	We look forward to a partnership to look at how to
815	reauthorize and modernize the agency. Our committee has a
816	pretty good track record looking at other agencies, and like
817	the FCC we reauthorized for the first time since 1990, your
818	agency is one that goes back before that. And so we look
819	forward to continuing to work with you on that effort and so
820	we want to move forward.
821	I will thank the chairman for this hearing and return
822	the balance of my time.
823	Mr. Upton. The gentleman yields back. The chair
824	recognizes the gentleman from New Jersey, Mr. Pallone.
825	Mr. Pallone. Thank you, Mr. Chairman. Mr. Secretary,
826	how many LNG export applications to Non-Free Trade Agreement
827	countries are currently pending before the DOE, if you will?
828	Secretary Perry. There is 19, correct? I think there
829	is 19.
830	Mr. Pallone. Do you believe that
831	Secretary Perry. Let me, I will get you the
832	Mr. Pallone. Yes. I will accept that. And if you want
833	to get back to me if you think it is slightly wrong, please
834	do. Do you believe that the DOE should continue to have a

835	role in approving the LNG export applications, yes or no?
836	Secretary Perry. Yes, sir.
837	Mr. Pallone. And does the EPA, now I am talking about
838	the EPA, does the EPA play any role in DOE's public interest
839	determination process, yes or no?
840	Secretary Perry. I am sure they do, but I am no expert
841	on how the EPA functions, sir.
842	Mr. Pallone. Okay. Well, whether or not you agree that
843	the U.S. Government should be promoting exports of American
844	LNG that is an activity that would clearly fall within the
845	mission of your Department or maybe the Department of
846	Commerce. But as you know, I think late last year EPA
847	Administrator Scott Pruitt traveled to Morocco to pitch that
848	country on buying LNG from the U.S. Obviously I am very
849	concerned that that doesn't fall within the EPA's mission.
850	Do you think that this falls within EPA's mission?
851	Secretary Perry. Mr. Pallone, I am going to leave that
852	up to you. I try to stay in my lane as best I can. So again
853	as I shared with you, I don't know what EPA's statutory
854	responsibility and authorizations are relative to promoting
855	energy sales and/or what else might have been going on that I
856	don't know about on that trip. So I think it would be a

857	little inappropriate for me to be making a, you know, public
858	or private observation about that.
859	Mr. Pallone. All right. Well, let me just ask. I
860	think I know your answer, but did you or your Department have
861	any role in Mr. Pruitt's Morocco trip?
862	Secretary Perry. Again there may have been some staff-
863	to-staff level conversations that I am not privy to, but from
864	the standpoint of Secretary-to-Secretary I don't recall any
865	conversations relative to an EPA trip to Morocco.
866	Mr. Pallone. All right, thank you. I just wanted to
867	point out that when Administrator Pruitt testified before
868	this committee late last year he used the phrase "core
869	mission" many times and argued that he was working to take
870	EPA back to focusing on its basic responsibilities. And I
871	found it strange that Administrator Pruitt thinks that
872	visiting foreign countries to promote the sale of fossil
873	fuels from private companies falls within the EPA's core
874	mission. I don't think it does.
875	But let me ask you a second question, Mr. Secretary. I
876	note that the Department has established a web page and email
877	address to accept public comments and requests regarding
878	emergency must-run orders under the Federal Power Act,

879	section 202(c). And I am supportive of efforts to expand
880	public participation in government processes, however, I
881	don't see anything on that web page that indicates that these
882	comments, whether as-is or redacted, will be posted for the
883	public to see.
884	You know, if you want me to repeat this I will, but I am
885	basically trying to get a commitment from you to posting the
886	comments you receive on your website or at the very least
887	providing this committee in real time the comments you
888	received on this matter for all of us here to review. Is
889	that something you can commit to?
890	Secretary Perry. Yes, sir. And I think we have a place
891	for public comments because this 202(c) is just now being
892	analyzed and I don't think we even have a process in place
893	yet for the public
894	Mr. Pallone. You do have on the website a page and
895	email address to accept public comments and requests
895	email address to accept public comments and requests regarding the Federal Power Act section 202, but I just want
896	regarding the Federal Power Act section 202, but I just want
896 897	regarding the Federal Power Act section 202, but I just want to make sure that they will be posted for the public to see.

901	back.
902	Mr. Upton. The chair recognizes the vice chair of the
903	Energy Subcommittee, the gentleman from Texas, the good state
904	of Texas. Oh, Mr. Barton, I am sorry. Mr. Barton, I
905	recognize Mr. Barton, the vice chair of the full committee.
906	Mr. Barton. All right. Well, you sometimes are too
907	many Texans, right?
908	Mr. Upton. Mr. Barton, whose picture is right above you
909	on the right, is recognized for 5 minutes.
910	Mr. Barton. As Mr. Upton's is right up there.
911	First of all, welcome, Mr. Secretary.
912	Secretary Perry. Yes, sir.
913	Mr. Barton. I think you and I should acknowledge at the
914	beginning that our basketball team got hammered by Mr.
915	Upton's team in the Sweet 16.
916	Mr. Upton. One point.
917	Mr. Barton. One, we got beat 27 points. My lord, they
918	put it to us. So I know I can't speak for Secretary Perry,
919	but I wasn't real happy that afternoon.
920	Mr. Upton. Thinking about Houston that was the three-
921	pointer there.
922	Mr. Barton. Yes, the game before you barely won, you

923	put the wood to us. Anyway, we are glad to have you, Mr.
924	Secretary.
925	Secretary Perry. Yes, sir.
926	Mr. Barton. I am tempted to go down the rabbit hole
927	that Mr. Pallone introduced about your colleague at the EPA,
928	but I don't think so. I will say on my own behalf that any
929	Cabinet Secretary that encourages things that are of
930	strategic interest to the United States of America in his
931	overseas travels is not necessarily a bad thing. And I am
932	glad to learn that Mr. Pallone agrees that there are limits
933	to what EPA should be involved with. So in that sense it was
934	a good exchange.
935	I want to ask a few budget questions, but I am going to
936	ask one policy question. You probably can't read this. This
937	is today's business section of the Wall Street Journal. It
938	says oil hits highest price since 2014. I am sure you read
939	that before you came up here. And inside it has another
940	article about Treasury bonds are beginning to inch up and
941	tension in the marketplace over that.
942	What, if anything, should the Department of Energy under
943	your stewardship do with the Strategic Petroleum Reserve to
944	try to, I am not going to say manage the market, but make

sure oil prices don't go too high in the near term, if anything?

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

967	sit here and tell you I know the answer to that, but I think
968	it is important the issue that you brought up that we need to
969	have that conversation.
970	Mr. Barton. The GAO has done a study of the Strategic
971	Petroleum Reserve and it basically says we need to do more
972	study. You and I are going to meet next week and I think we
973	are also going to have the staff begin to meet also with our
974	friends on the minority side and that will be something that
975	we bring up.
976	I have a few quick just dollar questions since this is -
977	_
978	Secretary Perry. I will try to give you yes or no
979	answers, sir.
980	Mr. Barton. Yes. Do you support us funding Yucca
981	Mountain, us, the government, funding Yucca Mountain? I hope
982	you say yes.
983	Secretary Perry. The dollars that you all are going to
984	appropriate we will spend efficiently and appropriately, yes.
985	Mr. Barton. Okay, finally, we have a Northeast Home
986	Heating Oil Reserve that I put into a bill with Congressman
987	Markey back in, oh, about 10 years ago. We spend \$10 million
988	a year on it. It has never been used. Is that maybe

989	something we could save a little money on?
990	Secretary Perry. Well, certainly, you know, when you
991	have dollars sitting in an account that is not being used it
992	is
993	Mr. Barton. Something to look at.
994	Secretary Perry. Yes.
995	Mr. Barton. Okay. And you have 159 million in your
996	budget for something Called Legacy Management. Do you happen
997	to know what that is?
998	Secretary Perry. Yes, sir. Those are areas that older
999	facilities that, on the cleanup side that is over in EM.
1000	Mr. Barton. I am very proud that you knew what it was.
1001	Secretary Perry. Yes, sir. The Cold War cost a lot of
1002	money as did the Manhattan Project. Still costing us a lot
1003	of money but it was worth it, sir.
1004	Mr. Barton. Let's see if we can save some money there.
1005	Thank you, Mr. Chairman. And thank you, Mr. Secretary.
1006	Mr. Upton. The gentleman's time is expired.
1007	The gentleman from California, Mr. McNerney.
1008	Mr. McNerney. I thank the chairman.
1009	Mr. Secretary, I really appreciate your interest in
1010	veterans issues and particularly using science and computing

1011	power to make advances in PTSD and traumatic brain injuries
1012	and other veteran-centric issues and I look forward to any
1013	collaboration
1014	Secretary Perry. Yes, sir.
1015	Mr. McNerney between us in the future. There is
1016	two issues I want to bring up today. One is resiliency of
1017	the electric grid, especially in the face of the wildfires we
1018	had in California, and other threats that we are seeing and
1019	ARPA-E funding. Regarding resilience, does the DOE have any
1020	tools to help ensure resilience despite some of the gaps we
1021	have in our current law? Are there any tools that we can use
1022	that you can use to help us make our grid more resilient to
1023	these things in California and elsewhere?
1024	Secretary Perry. Obviously the test grid, if you will,
1025	at Idaho National Lab is one of the resources that we have
1026	available where we can literally go in and break that grid
1027	and to see what happens and how to address it.
1028	Mr. McNerney. Well, I think, you know, what I am really
1029	thinking about is federal tools to work between the DOI and
1030	the Forest Service to ensure rights of way so that brush can
1031	be cleared in federal lands, those kind of things.
1032	Secretary Perry. I am sorry. I was going down a

1033	different path here.
1034	Mr. McNerney. Sure.
1035	Secretary Perry. Let me get back to you. I don't off
1036	the top of my head know that we have any resources available
1037	for that specific
1038	Mr. McNerney. Or authorities.
1039	Secretary Perry. Or authority, yes, sir.
1040	Mr. McNerney. Thank you.
1041	Secretary Perry. But I will get back to you.
1042	Mr. McNerney. Well, the current budget proposal reduces
1043	funding for resilience and reliability from 89 billion in
1044	2017 to 61 billion in 2019. And we have seen an increase in
1045	some of these threats, wildfires, hurricanes, storms and so
1046	on, so that budget direction seems to be going the wrong way.
1047	I mean I think we need increase in that so that is a point of
1048	recommendations.
1049	Secretary Perry. Yes, sir. Mr. McNerney, I don't want
1050	to quibble with you about the issue of is it a reduction of
1051	dollars or, one of the things that we have done, I believe,
1052	in that particular line item is that we bifurcated it. And
1053	that is where cybersecurity, and we split that historic line
1054	item up and are creating this new office of cybersecurity

1055	emergency response and that has an 8.3 percent, yes sir, I
1056	think that is right. It has a substantial increase over on
1057	that side and you may be seeing the EERE budget that is
1058	lower.
1059	But the commitment to resiliency and to reliability from
1060	my perspective has actually increased. And so let me come
1061	over and sit down with you and we can look at this a little
1062	closer to make sure that I know what you want to do and I
1063	want to get to the same place that you are. I think the
1064	membership wants to get from the standpoint of making sure
1065	that we have the resiliency, the reliability in our grid.
1066	Mr. McNerney. And of course then that applies to the
1067	whole country not just to California.
1068	Secretary Perry. Yes, sir.
1069	Mr. McNerney. Regarding ARPA-E, this program is
1070	designed to help keep the United States at the forefront of
1071	energy innovation. Energy innovation, I think that is a key
1072	element in ensuring our strong market position on energy
1073	issues. How determined is the administration in eliminating
1074	this program?
1075	Secretary Perry. It shows up on the budget. I am a
1076	good enough historian that we are going to do what the

1077	Congress wants to do on this. As a former CEO of the State
1078	of Texas I put some budgets forward from time to time that
1079	actually had zero line items in them. And
1080	Mr. McNerney. That is kind of the same answer you gave
1081	6 months ago so.
1082	Secretary Perry. Yes, sir. And that was not
1083	particularly well received by the appropriators.
1084	Mr. McNerney. Okay. Mr. Secretary, do you support
1085	robust funding for fusion energy research and development?
1086	Secretary Perry. Yes, sir.
1087	Mr. McNerney. Thank you. Your predecessor was deeply
1088	involved in the negotiations for the Iran nuclear agreement.
1089	This administration has considered scrapping that agreement.
1090	Are you involved in those deliberations?
1091	Secretary Perry. Well, being on the National Security
1092	Council yes, sir, to some degree. I would not put myself as
1093	the lead negotiator, but certainly am involved with the
1094	conversations generally in rooms that we can't be having
1095	conversations with here.
1096	Mr. McNerney. Can you disclose your opinion on that?
1097	Secretary Perry. Well, I think like any of our deals
1098	whether it is NAFTA, whether it is JCPOA, whether it is the

1099	negotiations that are ongoing with Saudi Arabia for a civil
1100	nuclear agreement, we need to get the best agreement that we
1101	can get. I think one of our main responsibilities is to, in
1102	the nonproliferation area is to make sure that the fewer
1103	individuals who have access to those types of materials that
1104	can be made into weapons we need to restrict that so.
1105	Mr. McNerney. I mean the agreement is already in place.
1106	Secretary Perry. I understand that, but so is NAFTA and
1107	we are renegotiating NAFTA. So I think the administration's
1108	point is can we re-engage and get a better deal. I don't
1109	have a problem in the world with that no matter what it might
1110	be, whether it is NAFTA, whether it is JCPOA. I mean
1111	renegotiating I mean we have people renegotiating LNG deals
1112	that they signed 3 years ago.
1113	Mr. McNerney. I think the chairman is going to cut us
1114	off here so thank you.
1115	Secretary Perry. I know. Yes, sir. Thank you.
1116	Mr. McNerney. Thank you, Mr. Secretary.
1117	Mr. Upton. The chair recognizes now the vice chair of
1118	the powerful Energy Subcommittee, Mr. Olson, from the great
1119	state of Texas.
1120	Mr. Olson. I thank the chair.

1121	And, Secretary Perry, a big old Texas howdy.
1122	Secretary Perry. Howdy.
1123	Mr. Olson. It is great to have you back before the
1124	panel. As a personal note, I am glad you did not leave DOE
1125	for VA as was rumored. Houston Texans are happy to have your
1126	hat hang where it is hanging today.
1127	Secretary Perry. Yes, sir.
1128	Mr. Olson. I want to talk about section 202(c) of the
1129	Federal Power Act. I was one of the members of last Congress
1130	to lead an effort to amend section 202(c). That change was
1131	signed into law. The intent was limited. Talking about,
1132	quote, continuance of war, end quote, or a, quote, sudden
1133	increase in demand for electric energy, or a shortage of
1134	electric energy, end quote, there have been proposals to help
1135	failing coal and nuclear plants through section 202(c). I
1136	support coal and nuclear power and I believe we have to have
1137	a diverse grid. Hurricane Harvey showed that dramatically.
1138	In my district, as you know, NRG's Parish power plant
1139	has four coal generators and four natural gas generators.
1140	Fifty inches of rain or more wiped out that coal, made it
1141	wet. They ramped up natural gas production at that facility.
1142	Forty miles south is the South Texas Nuclear power plant in

1143 Bay City. That never had a flicker despite having the brunt of Harvey's force. Could you please talk about your view of 1144 section 202(c) and the powers it gives you? 1145 1146 Secretary Perry. Yes, sir. And if I may, I would like 1147 to go back and just if I could very quickly clarify a conversation with Mr. Pallone where we talked about the email 1148 1149 address on the 202(c) comments. And we have an address that 1150 is on our website that is the destination for correspondence for this and future applications. So it is not a formal 1151 1152 comment period because there has been no formal comment 1153 opened up so I just wanted to clarify that. 1154 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 1155 1156 used in this case. When we look at national security in 1157 particular, if you are in New York City and Wall Street were 1158 to lose power, I think anyone would say that puts our 1159 national security in jeopardy. We have military bases in a 1160 lot of different places around the country that rely upon 1161 their energy from the grid. Losing power to that grid would 1162 put our national security at risk. 1163 So this administration looks at the national grid and 1164 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,

1187 quess who is coming this week or the next couple days, 1188 Secretary Rick Perry. You get there and find out that Prime 1189 Minister Modi has a very aggressive plan to clean up their 1190 extremely dirty air and that is with renewables, mostly wind 1191 and solar. 1192 But the energy minister and their foreign secretary 1193 stated over and over that LNG natural gas is the economy of 1194 The future is renewables. As you know, we have had the now. 1195 a private contract between Cheniere and a company, a group 1196 called GAIL, there in India to export approximately seven 1197 metric tons of liquefied natural gas over the next 20 years. We agree that to make this viable and to make that transition 1198 1199 they want to make they have to have better battery power, 1200 better storage and better power lines, and also make wind 1201 So I want you to take that technology message to 1202 them. We are going to help you. And so any comments about 1203 your trip to India? 1204 Secretary Perry. Yes, sir. 2 weeks ago, the first 1205 molecules of U.S. natural gas arrived at GAIL. I think the issue for them is to build out their infrastructure to be 1206 1207 able to move that gas around. Not unlike, Mr. Chairman, what 1208 we have in this country. Yes, we are way ahead of them, but

1209	the point is if you are really going to be able to satisfy
1210	the economic needs and satisfy the national security needs of
1211	your people you are going to have to have the distribution
1212	system as well.
1213	So that is another area. U.S. pipeline technology, U.S.
1214	pipeline companies, I think there is a real opportunity in
1215	not just India, but India is obviously a huge market in our
1216	ability to deliver U.S. innovation, U.S. natural resources
1217	into that country are a great opportunity and that is the
1218	real driving factor of why we are headed that way.
1219	Mr. Olson. Namaste. I yield back.
1220	Mr. Upton. The chair recognizes the gentleman from
1221	California, Mr. Peters.
1222	Mr. Peters. Thank you, Mr. Chairman.
1223	And I thank you, Mr. Secretary, for being here. I have
1224	the exact quote I will just read to you. When I asked you
1225	about the budget that was proposed by the President you said
1226	I didn't write this budget, my job is to defend it which from
1227	time to time is counter to what I think is good. So I know
1228	you are here to do a job, but maybe we can
1229	Secretary Perry. Yes, sir.
1230	Mr. Peters get some of your personal opinions on

1231 The budget makes cuts to the Office of Science which this. 1232 includes an important project named the International Thermal Nuclear Experimental Reactor which is sometimes referred to 1233 1234 as ITER. Here is a program where the United States is one in 1235 an international partnership developing energy of the future 1236 by proving we can make fusion work. The U.S. contributes 9 1237 percent of the project funding, but 80 percent of it is spent 1238 in the United States and we have access to a hundred percent 1239 of the intellectual property. And perhaps most important, 1240 when the technology is proven we can be part of the group 1241 that has ownership with monetizing capabilities instead of 1242 being a country that has to buy into the group. 1243 So with all these benefits, why does the budget cut contributions to ITER? 1244 1245 Secretary Perry. Mr. Peters, I think the basic 1246 messaging here on the reduction in that line item was, this 1247 is my observation just being a manager and having been in 1248 negotiations before, it was really poorly managed. And I 1249 think you know that. You all have been briefed on it. 1250 previous management of ITER was very, very poor. They wasted 1251 a lot of money. 1252 And they have new management in there. Mr. Bigot came

1253	over and we sat down and discussed this. I was impressed
1254	with his focus, his understanding, his recognition of the
1255	poor management before. We have as a matter of fact out of
1256	your district a couple of projects that are being funded, the
1257	Solenoid, \$75 million, and I think another aspect of the
1258	project that is ongoing that General Atomics is the
1259	deliverer, the manufacturer of and we certainly support that
1260	and are funding that.
1261	But with that said, if this committee and if Congress in
1262	a whole get comfortable along with obviously the
1263	administration, that it is headed in the right direction, we
1264	will make sure that the U.S. dollars that are expended there
1265	are expended properly and that there is good oversight and
1266	that we have the proper outcomes that we would be looking
1267	for.
1268	Mr. Peters. I appreciate the comment about the
1269	management. That is fair. Now that we have improved that, I
1270	certainly hope we appreciate the leverage that we get out of
1271	this potential.
1272	Secretary Perry. Yes, sir. Thank you.
1273	Mr. Peters. And so just outside my district, San Diego
1274	Gas & Electric built and it runs the largest lithium ion

1275	battery in the world as part of its grid operations. It is
1276	proving that projects like this can be a valuable part of the
1277	grid particularly for resiliency and safety. How does the
1278	DOE budget ensure new technologies for grid resiliency can be
1279	implemented and tested properly?
1280	Secretary Perry. And that goes right to the heart of
1281	our both Office of Science, Paul Dabbar, who is now the
1282	assistant secretary there I have great faith in his focus,
1283	and particularly we are supporters of, I have said before,
1284	the battery storage, the holy grail of electric power. I
1285	believe that. DOE and DOE labs working with private sector
1286	organizations like your constituents or right outside of your
1287	district are going to be key to that. So I am confident that
1288	what is happening in our national labs, the funding of those
1289	is appropriate to meet the needs of the battery challenges
1290	that face us.
1291	Mr. Peters. Thank you. And just with respect to NAFTA,
1292	do you think that the disruption of NAFTA will have a
1293	negative impact on energy prices for Americans and supplies
1294	for U.S. energy companies who sell to Mexico and Canada, even
1295	the way we talk about it right now?
1296	Secretary Perry. Not necessarily. I think generally

1297	speaking people are able to divorce the rhetoric with
1298	reality. For instance, Ray Washburne, who is the head of
1299	OPIC, he and I have had conversations with my counterpart in
1300	Mexico and private sector operators in the U.S. and their
1301	Mexican counter partners, if you will, to invest in Mexico's
1302	energy infrastructure. So I feel confident. I think there
1303	is an extraordinary opportunity there.
1304	Mr. Peters. I am going to run out of time. I
1305	appreciate what you say about rhetoric. I have got to tell
1306	you that NAFTA is so important
1307	Secretary Perry. Yes, sir.
1308	Mr. Peters to our country and to my district in
1309	particular and I understand the talk about improving it. I
1310	think we had more leverage when we were dealing with 11 other
1311	countries. We could offer more to Mexico. But I certainly
1312	don't want to go backwards and some of the talk is, it looks
1313	like rhetoric is turning into policy and it concerns me. I
1314	just want to express that to you.
1315	Secretary Perry. Mr. Peters, just as an aside, every
1316	time I see Ambassador Lighthizer I tell him we have got to
1317	get a deal. Get a good deal, but we have got to get a deal.
1318	Mr. Upton. Mr. Latta?

1319 Mr. Latta. Thank you, Mr. Chairman. And, Mr. 1320 Secretary, thanks very much for being with us again today. really appreciate seeing you. And I think it is really 1321 1322 important, because also in reading your testimony about 1323 cybersecurity it is a big issue and in recent weeks we have 1324 read news stories about malicious agents working to undermine 1325 the safety and security of our nation's energy 1326 infrastructure. According to the Department of Homeland Security, this includes Russian cyber attacks that have 1327 1328 remotely targeted the power grid, energy, nuclear, and commercial facilities in critical manufacturing sectors. 1329 More recently, we have seen cyber attacks against the 1330 1331 electronic communication systems of several American pipeline 1332 companies. DHS is still working to determine who is 1333 responsible for these specific attacks. 1334 And I believe from your response from the chairman of the subcommittee, the gentleman from Michigan, that you would 1335 1336 agree that more needs to be done to address these attacks on 1337 our energy infrastructure. Is DOE working with DHS to 1338 identify the vulnerabilities that were exploited through 1339 these attacks and rectifying them and, if so, can you tell us 1340 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.

Thank you. Given the nature of these

Mr. Latta.

1363	threats, I believe it is more important than ever that
1364	Congress acts. That is why I have worked with my colleague,
1365	Representative McNerney, to introduce two bipartisan pieces
1366	of legislation to address the threat of cyber attacks. These
1367	two bills, H.R. 5239, the Cyber Sense Act, and H.R. 5240, the
1368	Enhancing Grid Security Through Public-Private Partnerships
1369	Act, was the subject of a legislative hearing held in this
1370	subcommittee last month.
1371	Under H.R. 5239, the Secretary of Energy would be
1372	directed to establish a voluntary cyber sense program to
1373	identify and promote cyber secure products intended for these
1374	in the bulk power system. And do you believe that this
1375	policy would help improve the safety and security of our
1376	energy infrastructure and address these threats?
1377	Secretary Perry. It certainly on its face sounds like
1378	it. We will work with you in any way that we can to flesh
1379	out any details and information that we have privy to.
1380	Mr. Latta. I really appreciate that. Thank you. And
1381	along with Representative McNerney, I am also the co-chair of
1382	the Grid Innovation Caucus here in the House. The purpose of
1383	this caucus is to discuss the challenges facing the electric
1384	grid and to come up with ways that we can enhance its

1385	capabilities and securities. In addition to guarding against
1386	the threat of cyber attacks, will you go into more detail
1387	about other ways in which DOE is trying to improve the
1388	electric grid's capabilities to protect it from these cyber
1389	attacks?
1390	Secretary Perry. Yes, sir. We will work with you in
1391	Mr. Latta. Well, I really appreciate it. Thank you
1392	very much, Mr. Chairman. I yield back the balance of my
1393	time.
1394	Mr. Upton. The gentleman from Pennsylvania is
1395	recognized.
1396	Mr. Doyle. Thank you, Mr. Chairman.
1397	Mr. Secretary, welcome back.
1398	Secretary Perry. Mr. Doyle.
1399	Mr. Doyle. Like many on this panel, I am greatly
1400	concerned by the premature closures of nuclear plants around
1401	this country. John Hanger who was former Secretary of the
1402	DEP in Pennsylvania and head of the Public Utility Commission
1403	in my state put it succinctly. He said there are now 18
1404	nuclear units that have closed or are scheduled for closure
1405	in the last 5 years. Three are in my state of Pennsylvania,
1406	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

1429 your caution on the 202(c) request, I am curious what other 1430 options you think are on the table. Is this something that 1431 can be settled at DOE or in Congress or at FERC? 1432 the other ways that this might be dealt with? 1433 Secretary Perry. Mr. Doyle, let me just say you are 1434 absolutely correct, very prescient in your observation about 1435 this country and the ability to deliver the energy needs with 1436 the premature in particular taking offline of coal and nuclear plants. I, like you, share a great concern about our 1437 1438 ability to stay economically viable, but more importantly 1439 from a national security standpoint of taking care --Mr. Doyle. And an environmental standpoint if we are 1440 1441 ever going to meet our goals for climate change. Secretary Perry. Absolutely. So to address the 1442 1443 specific question, if you will recall, I want to say 6, 7 1444 months ago, we put a 403 request in to the Federal Energy 1445 Regulatory Commission, to FERC, which we thought was an 1446 appropriate way to address this. They obviously did not. 1447 202(c) is an option. You know, I would like to work with you 1448 and members of Congress on any other options that are out 1449 there that are reasonable that get the result of which we 1450 need in the result from my perspective is a diverse

1451 portfolio. And let me just add, I think it is really 1452 important for this country to have a nuclear, civil nuclear 1453 program in place. Too many previous administrations made 1454 some decisions that from my perspective put particularly the 1455 nuclear energy industry in jeopardy and we now see the 1456 results of that whether it was regulations, whether it was, 1457 you know, not supporting them in various --1458 Mr. Doyle. Mr. Secretary, I would be happy to work with you on ideas to ensure that we keep our nation's leading 1459 1460 source of carbon-free power online. 1461 Let me ask you another question. Existing energy 1462 markets they don't seem to consider the environmental 1463 attributes of nuclear power, but there are some states like 1464 New York and Illinois that have implemented strategies 1465 focused on ensuring that the environmental benefits of 1466 nuclear are recognized. Other states, including mine in 1467 Pennsylvania, are considering similar strategies, but I 1468 understand that some parties are proposing rule changes at 1469 PJM that could punish these states by making it more 1470 difficult for certain plants or units to participate in the 1471 markets. Do you think that is good policy? 1472 Secretary Perry. I think any policy that restricts your

1473	diversity of your energy portfolio is not necessarily good
1474	policy. I think it is shortsighted.
1475	Mr. Doyle. I see my time is up. Thank you, Mr.
1476	Chairman.
1477	Mr. Upton. Mr. Shimkus?
1478	Mr. Shimkus. Thank you. Mr. Secretary, welcome. Since
1479	you appeared before us, our nation's nuclear waste management
1480	has passed a few notable anniversaries. December marked the
1481	35th anniversary of passage of the Nuclear Waste Policy Act
1482	of 1982 which formalized the federal government's nuclear
1483	waste management program, as well as the 30th anniversary
1484	when Congress designated Yucca Mountain in Nevada the site as
1485	the location of our nation's first repository. Of greater
1486	consequence, January 31st marked the 20th anniversary from
1487	the year in which DOE was legally required to take title to
1488	spent nuclear fuel for disposal at Yucca Mountain. Since
1489	then American taxpayers have been paying billions of dollars
1490	to manage spent nuclear fuel in 121 communities around the
1491	country.
1492	Secretary Perry, I would like to run through a few
1493	numbers with you quickly, and you probably know some of these
1494	and we can just kind of stick to the numbers because I have

1495	another question I want to get to.
1496	Secretary Perry. Yes, sir.
1497	Mr. Shimkus. As of the end of fiscal year 2017, what is
1498	the approximate amount rate payers paid into the Nuclear
1499	Waste Fund to construct/oversee our nuclear waste management
1500	program?
1501	Secretary Perry. It is approaching \$40 billion. I
1502	think it is about 37, 37.7 billion.
1503	Mr. Shimkus. And those are rate payers, people from
1504	states that had nuclear power that have paid in to solve this
1505	problem.
1506	Secretary Perry. That is correct.
1507	Mr. Shimkus. How much did the value of the Nuclear
1508	Waste Fund increase during fiscal year 2017?
1509	Secretary Perry. Almost 2 billion, I think 1.7 billion
1510	is the specific.
1511	Mr. Shimkus. That is the accrued interest on the base
1512	of the account.
1513	Secretary Perry. Right.
1514	Mr. Shimkus. As of the end of fiscal year 2017, what is
1515	the total cumulative liability cost including future payments
1516	because Yucca Mountain is not yet open?

1517	Secretary Perry. Just a touch over \$34 billion.
1518	Mr. Shimkus. So that is payments that we are liable for
1519	because we are not complying with law.
1520	Secretary Perry. That is correct.
1521	Mr. Shimkus. And you are saying then the 30-plus
1522	billion.
1523	Secretary Perry. Yes.
1524	Mr. Shimkus. How much did American taxpayers pay in
1525	legal costs during the fiscal year 2017 because Yucca
1526	Mountain is not open?
1527	Secretary Perry. \$700 million.
1528	Mr. Shimkus. So for my colleagues, we move this bill,
1529	this an issue I am fighting with appropriators and
1530	budgeteers. This is money that taxpayers are paying that is
1531	really not on the books and it accrues to almost \$800
1532	million. What was the total increase in fiscal year 2017 in
1533	taxpayer liability in both actual payments as well as future
1534	projected liabilities?
1535	Secretary Perry. That one grew substantially, \$3.3
1536	billion.
1537	Mr. Shimkus. If you break this total cost down to a
1538	daily cost to taxpayers that escalated during just last year

1539	how much are taxpayers liable for on a daily basis?
1540	Secretary Perry. \$9 million per day.
1541	Mr. Shimkus. That is a day. That is money that we
1542	could do, help our national defense, Title I programs,
1543	anything. That is just being paid because we are not
1544	complying with the law. So when people wonder why I get so
1545	focused, these are some of the reasons why. Last question in
1546	this area, how much was provided to the Department in fiscal
1547	year 2017 and I think I can add 2018 now from the
1548	Nuclear Waste Fund for DOE to move forward with our Nuclear
1549	Waste Program and ultimately reduce our taxpayers' legal
1550	payments?
1551	That is a zero, I am assuming. Not a one, it is a zero.
1552	Secretary Perry. That is a zero.
1553	Mr. Shimkus. Okay. And that is our liability as
1554	authorizers to push our appropriators to do what
1555	Secretary Perry. And, I think, Mr. Shimkus, that is the
1556	reason that we requested, the administration requested \$110
1557	million for the legal process to go forward, to be able to
1558	get the answer of whether or not this facility is in fact
1559	what you all in Congress have said it is.
1560	Mr. Shimkus. Yes. So the appropriation money is really

1561	to do the final adjudication with the Nuclear Regulatory
1562	Commission with you as an intervener with the State of Nevada
1563	to clarify the science. And that is the last part before we
1564	can then really start moving and addressing this.
1565	With my 30 seconds left, I won't read the whole question
1566	but you have talked about the DOE and the great work it does.
1567	Obviously I am also very much engaged in the renewable fuel
1568	debate in this country. DOE has done a lot of good work on a
1569	study, I have quoted it before, the Co-Optima study. Are you
1570	familiar with it and what is your thoughts on it?
1571	Secretary Perry. Say it again, sir?
1572	Mr. Shimkus. The Co-Optima study?
1573	Secretary Perry. I am not.
1574	Mr. Shimkus. It is the high octane, it basically is
1575	addressing the high octane issue. We have a hearing
1576	tomorrow.
1577	Secretary Perry. I will get up to speed on it and get
1578	back with you and have a conversation.
1579	Mr. Shimkus. Not a problem, I appreciate your time.
1580	Thank you.
1581	Secretary Perry. Yes, sir.
1582	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.

1627	And let me read to you directly from your budget
1628	request, so folks, get a handle on this. You want to
1629	discontinue support for engagements with states, utilities,
1630	and storage providers for conducting grid-scale field tests
1631	and trials. Discontinue support for engagement with state
1632	and federal regulatory officials on efforts to understand
1633	regional market barriers to energy storage deployment.
1634	Discontinue support to states and regional entities on
1635	procurement, commissioning, and techno-economic analysis of
1636	deployed systems. Eliminate support for new collaborative
1637	test bed and field trials. Discontinue support for
1638	development of enhanced tools and data to U.S. industry for
1639	development and use of grid-scale batteries. I mean and this
1640	goes on.
1641	But why, I mean you talk about energy dominance, but
1642	this is like waving white flags. Why would you propose such
1643	devastating cuts for a technology that would only increase
1644	the use of clean energy especially when our U.S. industries
1645	are in the fight of their life with China? So how do you
1646	explain that?
1647	Secretary Perry. Ms. Castor, thank you for recognizing
1648	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

1671	balance.
1672	I not only recognize but respect your position here and
1673	you are absolutely correct. We have a huge challenge with
1674	China not just in this area but in a host of other ones.
1675	Supercomputing is one of them that I will suggest to you is
1676	at the top of that list. If we don't get that one right we
1677	are in trouble.
1678	Mr. Upton. Thank you.
1679	The gentleman from West Virginia, Mr. McKinley.
1680	Mr. McKinley. Thank you, Mr. Chairman. And thank you,
1681	Mr. Secretary, for particularly for your interest in
1682	preventing the premature closing of our country's coal and
1683	nuclear power plants.
1684	But let me speak to a broader audience. This committee
1685	has held numerous hearings on this topic of grid reliability
1686	over the past few years. During that time, your last 10
1687	years, 531 coal-fired units and 11 nuclear plants have been
1688	closed. Their output has been replaced with gas plants, but
1689	unfortunately only half of those plants have a firm supply
1690	for gas, meaning without a supply contract in a cold spell
1691	gas is understandably diverted from creating electricity for
1692	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

1715 conversations about it and this committee has been saying all 1716 along that our fuel security is a national security issue. So, Mr. Chairman, I would like to submit for the record 1717 1718 a series of documents, a letter that we have from 23 1719 bipartisan members of Congress asking you to invoke 202(c). I have another letter that is written to the President, 1720 1721 bipartisan support for some kind of implementation to save 1722 our aging coal and nuclear power plants. And we have four other letters of support from labor unions across the country 1723 1724 and interest in saving and implementing 202(c). 1725 Quite frankly, Mr. Secretary, I believe it is time. Some form of 202(c) or some other emergency 1726 tried the 403. 1727 act is necessary if we are going to have national security. 1728 So I am calling on you to use whatever legal power you have 1729 so that we can meet the challenges that our manufacturers 1730 need and our communities need all across America with having 1731 a reliable grid system. 1732 So I would like to have your thoughts. Last Thursday I 1733 was with the President and he specifically said, I think in a 1734 crowd in West Virginia, I think we can work something out on 1735 I know he has had conversations with you about that. 1736 Can you share the extent of not your private conversations,

1737	where do you think we are going with 202(c) or some component
1738	of that? Thank you.
1739	Secretary Perry. Mr. McKinley, I hope that your remarks
1740	have been televised and we can put them up because you have
1741	succinctly made the point for exactly what has to happen in
1742	this country from the standpoint of being able to protect the
1743	resiliency and the reliability of our electrical grid. And
1744	if you do not have sufficient coal and nuclear plants, the
1745	day is coming when particularly in the Northeastern part of
1746	the United States because of other restrictions that they
1747	have on energy flowing into that part of the world that the
1748	national security of this country is jeopardized.
1749	I don't think that is appropriate in any way. Political
1750	decisions that put people's lives in jeopardy are
1751	inappropriate and I think this President understands that.
1752	He has had multiple conversations with me and others in his
1753	administration to find a solution to that. That is exactly
1754	what we are working on today. There are a number as you said
1755	202(c) is one of those, there may be other options which we
1756	need to look at as well.
1757	Mr. McKinley. Are we getting close to a decision?
1758	Secretary Perry. Expedition is of importance.

1759	Mr. McKinley. Thank you. Thank you, Mr. Secretary, and
1760	I yield back.
1761	Mr. Upton. The gentleman's time is expired.
1762	The gentleman from Maryland, Mr. Sarbanes.
1763	Mr. Sarbanes. Thank you, Mr. Chairman.
1764	Thank you, Secretary Perry, for being here. Last
1765	October when you were here we talked about these ongoing
1766	threats to our national security, a little bit different from
1767	what you were just speaking about, which is the national
1768	security associated with maintaining a kind of diversified
1769	portfolio of energy sources. This is more about the cyber
1770	attacks that are coming in and we already know that there has
1771	been hacking attempts by the Russians against our elections
1772	last year.
1773	But we now know last month the Department of Homeland
1774	Security, FBI, publicly accused the Russian Government cyber
1775	actors of a multi-stage intrusion campaign that is going
1776	after the energy infrastructure. And I assume, I know that
1777	you view that as intolerable those kinds of attacks on our
1778	energy security framework, presumably.
1779	Secretary Perry. Oh, absolutely. Yes, sir.
1780	Mr. Sarbanes. And in the budget for fiscal year 2019

1781	there is \$96 million proposed for a new office to address
1782	cyber threats coming in against the energy sector and I
1783	appreciate that attention being given. I think we need a
1784	little bit more knowledge here in Congress to be able to
1785	respond appropriately to the proposal with respect to
1786	cybersecurity in combating these cyber threats. And last
1787	October you may recall I asked whether you would be willing
1788	to come and do a briefing on that specific topic. We haven't
1789	had that yet so I would like to reiterate that request for a
1790	briefing.
1791	We can try to work with the committee. Obviously
1792	Congressman Latta, McNerney, and others have a real interest
1793	in this. I am sure the chairman does as well. So I just
1794	wanted to ask if you would be willing to work with the
1795	committee and our office to try to get that kind of a
1796	briefing together.
1797	Secretary Perry. Yes, sir. We will work with the
1798	committee.
1799	Mr. Sarbanes. Thank you very much. I want to talk now
1800	about a proposed cut in the budget. It is a 70 percent cut
1801	to the Office of Energy Efficiency and Renewable Energy for
1802	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

1825	financing for low-income solar installation.
1826	So the basic question here is does your Department
1827	remain committed to the goals of the SunShot Initiative which
1828	seems to be like the terminology of it or the name of it is
1829	being pushed aside. It is hard to keep track of where your
1830	commitment is and the Department's commitment is to this
1831	solar technology advancement is. And will you maintain the
1832	same commitment within the Solar Energy Technologies Office
1833	that has been a hallmark up to this point and further commit
1834	to making sure that low-income communities are in a position
1835	to take advantage of these low-cost energy and skilled job
1836	opportunities which are available within the solar technology
1837	industry?
1838	Secretary Perry. Yes, sir. Mr. Sarbanes, let me work
1839	with you. I am not that knowledgeable with that specific
1840	program from a granular standpoint and I want to be able to
1841	give you an appropriate answer so I will follow up.
1842	Mr. Sarbanes. I appreciate that. I think if you look
1843	inside the Department's data on this it is quite impressive
1844	and we can help present some of that back to you as well.
1845	Secretary Perry. Yes, sir.
1846	Mr. Sarbanes. Thank you.

1847	Mr. Upton. Mr. Kinzinger?
1848	Mr. Kinzinger. Thank you, Mr. Chairman. If I can get
1849	Mr. Flores' attention for a second, yes, there you go.
1850	Thanks.
1851	Mr. Secretary, thank you for being here. As you may or
1852	may not know I have four nuclear power plants in my district
1853	which is the most of any in the country. It is eight
1854	reactors. Obviously that is many locations for spent fuel
1855	storage and so nuclear is extremely important not just for
1856	our domestic energy production, but one of the things last
1857	time you were here you and I talked a little about was energy
1858	as a tool of national security and the importance of that and
1859	the role that that plays.
1860	Just this week you made the point that every molecule of
1861	American gas that goes into Europe is a molecule that they
1862	don't have to get from Russia and be held hostage. I know
1863	you are aware the Russians are building or considering about
1864	55 nuclear projects around the globe and for China that
1865	number is closer to 200 projects. Does your sentiment about
1866	Russian natural gas apply to nuclear power as well, sir?
1867	Secretary Perry. Yes, sir. It does. And I think it
1868	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

1891 DOE currently doing or planning to do to support our domestic industry and reaffirm our global leadership? 1892 1893 Secretary Perry. Well, obviously the administration is 1894 the message is clear not just on the nuclear side but coal as 1895 well and it is not just those two. This administration is 1896 committed to a broad portfolio of renewables of gas, of 1897 hydro, coal, and nuclear. 1898 Mr. Kinzinger. And while I believe that H.R. 1320 is part of the solution, there are several options to put the 1899 1900 domestic nuclear industry on steadier ground and increase our 1901 global competitiveness. Can you elaborate as much as you can on DOE's Light Water Reactor Sustainability Program which is 1902 1903 looking at extending existing licenses from 60 to 80 years? 1904 Secretary Perry. Yes, sir. We will continue to promote 1905 those technologies as best we can. We think that again this 1906 plays into the diverse portfolio and new technologies whether it is clean coal technologies, whether it is -- I was on the 1907 1908 West Coast at Livermore Lab 2 weeks ago looking at 1909 technologies that are making our wind turbines more efficient. So there is a host of innovation rather than 1910 1911 regulation is the real motto here from our perspective. 1912 And whether it is in the nuclear side of things, whether

it is in the fossil fuels, whether it is in the renewables,

1914 the national labs and the dollars that you all are 1915 authorizing for these national labs will go a long way 1916 towards making America more competitive in the global energy 1917 marketplace. 1918 Mr. Kinzinger. Thank you. And, lastly, do you believe 1919 that wholesale energy markets can do a better job at valuing 1920 the unique resource attributes of nuclear power, and if so 1921 how can DOE and Congress help to reform these energy markets? 1922 What role can we play in doing so? 1923 Secretary Perry. Well, I think one of the roles that 1924 DOE needs to play in this is to rebalance that obviously 1925 previous to this administration coming into place there were 1926 some thumbs on the market and at least we should take that 1927 pressure off of the direction that those markets were headed. 1928 Obviously there were some political considerations in the 1929 previous administration that they were not fond of coal, they 1930 were not fond of nuclear, and both of those industries paid a 1931 They had their favorites in the arena and they price for it. 1932 supported those. What we are looking at is to rebalance, if 1933 you will, to take the thumb off of the market scale. 1934 But with that in mind, the more important issue is one

1935	of national security. Being able to know without a doubt
1936	that the energy supply will be there when we need it whether
1937	it is from a cyber attack that stops the gas somewhere,
1938	whether it is a hurricane that hits the, you know, God
1939	forbid, not again, the northeastern part of this country, the
1940	national security side of this is even more important than
1941	the economic side of it.
1942	Mr. Kinzinger. Thank you, Mr. Secretary. I appreciate
1943	you being here and I yield back.
1944	Mr. Olson. [Presiding.] Time has expired.
1945	Mr. Tonko for 5 minutes of questions.
1946	Mr. Tonko. Thank you, Mr. Chair.
1947	Welcome, Secretary Perry, and thank you for returning
1948	before the committee. Over the past year I haven't agreed
1949	with all of your decisions or priorities. I thought the
1950	notice of proposed rulemaking was incredibly misguided, but
1951	overall, and it might surprise you to hear me say this, I
1952	think you have done a fine job as Secretary.
1953	Secretary Perry. Yes, sir.
1954	Mr. Tonko. As far as I am aware there have been no
1955	major scandals or extravagant waste of taxpayer dollars. You
1956	have visited many national labs and it seems like you believe

1957 in the mission of the agency, all of which is more than I can say for some of your cabinet counterparts. 1958 1959 With that said, I am concerned by a number of the 1960 proposed cuts in fiscal year 2019's requests. Many of them 1961 have been mentioned already, EERE, the Office of Science, grid modernization programs, and the elimination of ARPA-E. 1962 1963 In the past you have stated support for ARPA-E and DOE's 1964 innovation budget. Last year you testified that energy innovation is a part of DOE's core mission and I think you 1965 1966 might agree that cuts of the magnitude that have been 1967 proposed are not good for the future of America's global energy leadership. 1968 1969 So I would encourage you to push back on OMB to ensure 1970 innovation continues to be a top priority of the agency. 1971 Specifically, now that Congress has appropriated fiscal year 1972 2018 funding for programs that the previous request proposed eliminating, I expect we won't see a repeat of last year's 1973 1974 impoundment of ARPA-E funds or a delay of weatherization 1975 funding to states which they are expecting on July 1. But I want to focus on a different issue. 1976 1977 Secretary, are you familiar with this recent National Energy 1978 Technology Laboratory report entitled, "Reliability,

1979	Resilience and the Oncoming Wave of Retiring Baseload Units"?
1980	It is dated March 18th, or March 13th, excuse me, 2018 and it
1981	was posted on DOE's website on March 27th.
1982	Secretary Perry. I am not an expert at it, but I am
1983	certainly familiar with it.
1984	Mr. Tonko. Okay. Are you aware of any DOE political
1985	officials that discussed this report as it was being
1986	developed by NETL?
1987	Secretary Perry. I am not.
1988	Mr. Tonko. Would you be willing to share any
1989	communications between DOE officials and NETL about the
1990	report with the committee?
1991	Secretary Perry. I would be happy to.
1992	Mr. Tonko. Thank you. The reason I ask is because this
1993	report is cited numerous times in FirstEnergy's section
1994	202(c) request which was submitted just 2 days after the
1995	report was published on DOE's website. I want to take issue
1996	with how the report represents the data to conclude coal made
1997	the grid more resilient during the bomb cyclone.
1998	I think most economists and grid operators agree on what
1999	happened. There was greater electricity demand, prices
2000	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

2023	Congress. Acting under the pretense of an emergency to
2024	justify unilateral agency action is not good for consumers or
2025	the people responsible for operating our grid.
2026	So, Secretary Perry, do you have any thoughts on the
2027	role or appropriateness of states taking action to support
2028	zero emission generators through clean energy standards or
2029	similar programs?
2030	Secretary Perry. No, sir. I encourage states to get
2031	involved with making their states more competitive. I
2032	certainly did that when I was the Governor of Texas and we
2033	saw a reduction, almost 20 percent of total carbon footprint,
2034	over 60 percent of both NOx and SOx during that period of
2035	time. So the point is, states can have a real role in this.
2036	With that said, from my perspective this issue that we
2037	are facing and I recognize and by the way thank you for
2038	your kind remarks. My wife doesn't even agree with me all
2039	the time, so
2040	Mr. Tonko. Okay. Well, I need to meet her then.
2041	Secretary Perry. Yes, sir. I am going to show her
2042	this, if you don't mind. But the point is that there are
2043	real national security implications here. And I will finish
2044	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

2067	Upstate New York because the power has gone out because we
2068	didn't have the political courage to put into place a
2069	strategy that made sure that a citizen of New York is never
2070	going to have to make the decision of whether or not we are
2071	going to turn the lights on or are we going to keep our
2072	family warm.
2073	Mr. Tonko. I have exhausted my time. I would just say
2074	that New York did make certain that they had their power
2075	supplies met and with zero emissions being the guiding force.
2076	So I think that is the difference here.
2077	But I yield back, Mr. Chair.
2078	Mr. Olson. Time is expired.
2079	Mr. Griffith, 5 minutes for questions, please.
2080	Mr. Griffith. Thank you, Mr. Secretary. I appreciate
2081	you being here. All my questions have gone out the window
2082	because of comments that have been made of recent or at least
2083	a lot of them have.
2084	You were very kind to the previous administration to say
2085	they put their thumbs on the scale when they were looking at
2086	various energy sources. In my district which has got natural
2087	gas, predominantly coal, we felt like it wasn't a thumb on
2088	the scale, we felt like it was a boot on our necks. We had

2089 thousands of jobs lost, families disrupted, communities losing businesses left and right, hospitals closing down 2090 because they no longer had the big employer at the coal mine 2091 2092 to pump in the insurance into the hospital and the money 2093 coming in there. It was devastating. 2094 And so I was kind of surprised, one, that Mr. McKinley 2095 missed the NETL report in his detail. He kept going. 2096 quess he had to have some time for questions and so he left that one out. But further that Mr. Tonko doesn't understand. 2097 2098 And he is a good man, but he doesn't understand. It would be 2099 easy for people who were that desperate like a thirsty man in 2100 the desert who finally discovers an oasis to consume that 2101 NETL report and put out the request for 202(c) relief within 2102 2 days because the coal community has been desperate until 2103 you all have come along and not wanting to put your finger on 2104 the scale at all but wanting to make sure that there is an 2105 all-of-the-above strategy for the United States, and I thank 2106 you. Would you like to make any comment before I go on? 2107 Secretary Perry. Go right ahead, sir. 2108 Mr. Guthrie. All right. So I appreciate that and I do 2109 have this to say although it is not your Department. 2110 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

2155 we talk about whether it is a 202 or whether it is some other 2156 avenue towards making sure we have a reliable portfolio, but the regulatory environment in this country has to be 2157 2158 addressed. 2159 Mr. Griffith. And I could not agree more. 2160 appreciate all the work that you all are doing in the 2161 administration to get this straightened out because it really 2162 has, I think, hurt our country. 2163 That being said, let me switch to more positive things. 2164 Ms. Castor complimented you on the testimony of one of your 2165 folks at the O&I subcommittee yesterday related to Puerto 2166 I think that they are doing great work down there and 2167 we appreciate it, but I think we can also use that as a test 2168 bed for other areas that might get isolated in a disaster and 2169 look at doing microgrids and other things that we can move 2170 this country forward to make sure that we have our grid 2171 resilient. We have a perfect example. We are going to spend 2172 a lot of money there anyway. Let's spend it doing 2173 experiments to see how we can build the system for the rest 2174 of the country as well. 2175 And with that, I know you agree but I have to yield 2176 back.

2177	Secretary Perry. Yes, sir.
2178	Mr. Olson. Time is expired.
2179	Mr. Loebsack, 5 minutes for questions.
2180	Mr. Loebsack. Thank you, Mr. Chair.
2181	Great to see you again, Mr. Secretary.
2182	Secretary Perry. Sure, thank you.
2183	Mr. Loebsack. We don't have a lot in common, Iowa and
2184	Texas, but we do have wind energy in common.
2185	Secretary Perry. I have spent a lot of time in your
2186	home state, sir.
2187	Mr. Loebsack. I am aware of that too. That is right.
2188	Seems like ages ago, but I am aware of that. Thank you. But
2189	I am happy about your support for wind energy. As you know
2190	that constitutes, it is about 37, 38 percent of the
2191	electricity generated in the state of Iowa so it is really a
2192	great program. And thank you for coming back to this
2193	committee. I do appreciate the accountability that you
2194	demonstrate here. I think all of us do on a bipartisan
2195	basis.
2196	As you know of course my home state of Iowa does lead
2197	the nation in biofuels production. It is an integral part of
2198	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

2221	DOE on their issuance of these waivers as required by law?
2222	Secretary Perry. Yes, sir. I would suggest to you they
2223	have. I don't know the intensity and that may be the wrong
2224	word, but the depth of those negotiations and what I know
2225	that they use us as the agency to advise them about how this
2226	would impact the energy sector. So, but for clarity
2227	purposes, EPA is who hands out those.
2228	Mr. Loebsack. Right. But they are required by law to
2229	consult with DOE, with the Secretary of Energy, right?
2230	Secretary Perry. But they do consult with us. Yes,
2231	sir.
2232	Mr. Loebsack. Does your office recommend that EPA adopt
2233	any small refinery waivers this year, and if so what waivers
2234	did you recommend?
2235	Secretary Perry. Let me go back and get the details of
2236	that for you so that I can give you specific and correct
2237	information.
2238	Mr. Loebsack. Yes and I really do appreciate that
2239	because what I am going to ask you then, moving forward, just
2240	yesterday your counterpart at the USDA, Secretary Sonny
2241	Perdue, indicated that he believes the EPA is misusing the
2242	hardship waivers. And as you know our governor is in town

2243	today too and she is trying to get through to the President
2244	to talk to him about the RFS.
2245	Secretary Perry. Yes, sir.
2246	Mr. Loebsack. Do you agree with Secretary Perdue that
2247	the EPA has misused the hardship waivers?
2248	Secretary Perry. I can't speak to that because I don't
2249	know the details of the issue. If I could just add one side
2250	of the story, one of the things that we are working on is to
2251	find some other, it would be, number one, I know my Iowa corn
2252	farmers pretty well and they really don't care where this
2253	ethanol goes as long as it gets to go somewhere.
2254	Mr. Loebsack. I just had a meeting with a number of
2255	them last weekend.
2256	Secretary Perry. Yes, sir. And I respect that having
2257	been a former agricultural commissioner of the state of
2258	Texas. We are in conversations with my counterpart in Mexico
2259	and we were talking to him as late as this last month about
2260	being able to move U.S. ethanol into Mexico into their fuel
2261	mix because they are in the process of we understand that
2262	they are going to be mandating some ethanol.
2263	Mr. Loebsack. And I really appreciate that. And we
2264	have to keep in mind too that we are talking about a lot of

2265	production of corn here in the country and of course around
2266	the world and ethanol is obviously one use of that corn.
2267	There is no question. But we have to make sure in those
2268	NAFTA renegotiations that we don't get our corn market in
2269	Mexico cut off as well.
2270	So I just have some questions. I don't have time to go
2271	through them here, but I do want to submit these questions
2272	for the record having to do with the total number of refinery
2273	waiver applications that the DOE evaluated for the last 5
2274	years. So a number of those and I would like to submit those
2275	for the record, Mr. Chair.
2276	Secretary Perry. So we will have them ready for you.
2277	Mr. Loebsack. And thanks for your time today. I
2278	appreciate it. And we look forward to your answers to our
2279	questions.
2280	Secretary Perry. Yes, sir.
2281	Mr. Loebsack. Thanks, Mr. Secretary. I appreciate it.
2282	I yield back.
2283	Mr. Olson. Thank you.
2284	Mr. Johnson, 5 minutes of questions.
2285	Mr. Johnson. Thank you, Mr. Chairman.
2286	Mr. Secretary, good to see you again.

2287	Secretary Perry. Thank you, sir.
2288	Mr. Johnson. I sure enjoyed our trip down to Piketon a
2289	few months ago.
2290	Secretary Perry. Yes, sir.
2291	Mr. Johnson. You know, you and I had extensive
2292	discussions when we were there and, like you, I support an
2293	all-of-the-above energy policy and I know you believe that as
2294	well. My district in Eastern and Southeastern Ohio, and you
2295	and I have talked about that a little bit as well, is no
2296	stranger to the benefits of a diverse generation with our
2297	abundance of both coal and natural gas. Many of the coal
2298	plants in the 6th District of Ohio, along the Ohio River are
2299	not only a reliable source of power but they are the strong
2300	economic drivers for the communities in which they exist.
2301	The people rely on them there for good paying jobs.
2302	So I worry about the recent retirements and announced
2303	retirements of coal plants especially as federal and state
2304	laws and regulations have played a major role in affecting
2305	these plants over the years. I know you have repeatedly
2306	expressed similar concerns and have pushed FERC on these
2307	issues. So my first question, are you satisfied with FERC's
2308	work to date on this issue and do you believe FERC and the

2309	RTOs and the ISOs are taking the right approach to these
2310	issues?
2311	Secretary Perry. Well, relative to the 403 that we sent
2312	up, I would have to be on the opposing side of, I wouldn't
2313	have sent them our recommendations if we didn't think they
2314	were correct. So, you know, I am not going to that is the
2315	only dealings that I have had with them to date.
2316	Mr. Johnson. Sure.
2317	Secretary Perry. So my first experience of picking up
2318	that potato was it was pretty hot.
2319	Mr. Johnson. Yes, yes. Well, second question, you
2320	state that the fiscal year 2019 DOE budget will help improve
2321	grid resilience and support generation diversity. Can you
2322	provide examples on how DOE will work towards these
2323	objectives?
2324	Secretary Perry. Well, obviously having grid diversity
2325	has to do with having resource diversity. One of our
2326	challenges is that in the course of the last decade the
2327	resources have changed drastically. You think back to 2005,
2328	just as Hurricane Katrina was coming into the Gulf Coast
2329	there was a fellow giving a speech about peak oil. Fast
2330	forward 10 years and the United States is in the process of

2331	becoming the number one oil and gas producing country in the
2332	world. I mean that literally happened in a decade, the
2333	explosion of renewables and the grid being able to manage all
2334	of that and so the technology to manage the grid. And I put
2335	that into the resiliency side and the reliability side.
2336	So the challenges that are out in the world today and
2337	how quickly they came is a great testament to our national
2338	labs and the innovation that comes out of those national labs
2339	and our private sector working together in many cases. So
2340	the way we look at this is we have been blessed with a lot of
2341	resources. How you manage those resources both with
2342	innovation and with common sense, common sense part of this
2343	from my perspective is don't restrict resources getting into
2344	your grid that could put your national security in jeopardy,
2345	for instance.
2346	So all of this is, it is quite a challenge, Mr. Johnson,
2347	as you know, but I am quite confident we are up to it and we
2348	will find the solutions that challenge us as a country.
2349	Mr. Johnson. Yes. Well, thank you, Mr. Secretary.
2350	You know, shifting gears just a little bit, when we were
2351	at Piketon, you and I, and I appreciate your support of all
2352	the stuff that is going on down at Piketon as well. I

2353	appreciate that very much. You have made reference to an
2354	Appalachian plan which relates to infrastructure to take
2355	advantage of our natural gas resources and other industrial
2356	resources in West Virginia and Ohio. Can you elaborate
2357	quickly what that vision looks like?
2358	Secretary Perry. Yes, sir. As the Governor of Texas I
2359	used to fret greatly in August and September about a Category
2360	5 hurricane coming up the Houston Ship Channel, Mr. Olson,
2361	and creating havoc in the petrochemical footprint in the
2362	state of Texas which would have negative effect all over this
2363	country. Having a duplication of that somewhere made a lot
2364	of sense to me and why not put it where the resource is which
2365	is in the Appalachian region. You are sitting on top of the
2366	Marcellus, the Utica.
2367	So if government will not be an impediment from a
2368	regulatory standpoint in particular, the private sector will
2369	come and fund that. This isn't a matter of, you know, coming
2370	to Congress and saying hey, will you put millions of dollars
2371	into this. Just don't get in the way.
2372	Mr. Johnson. There you go.
2373	Secretary Perry. And help those states, West Virginia,
2374	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

2376	conversation coordinating with those states, coordinating
2377	with other agencies to be able to lay out a plan hopefully
2378	before this year is out so that there is a clear opportunity
2379	for this country to have a duplication of that petrochemical
2380	footprint in the Gulf Coast of Texas in the Appalachian
2381	region. The economic impact would be stunning. More
2382	importantly, the national security side of it would be far-
2383	reaching.
2384	Mr. Johnson. Makes perfect sense.
2385	Thank you, Mr. Chairman. I yield back.
2386	Mr. Olson. The gentleman yields back.
2387	Mr. Schrader, 5 minutes for questions.
2388	Mr. Schrader. Thank you, Mr. Chairman. And thank you,
2389	Mr. Secretary, for being here. It is nice to have a normal
2390	and competent member of the administration before the
2391	committee here.
2392	I would like to go back to Chairman Walden's comments
2393	regarding the Power Marketing Administrations. As you might
2394	imagine that is a bipartisan issue in my part of the country.
2395	On page 14 of your testimony you state budget proposes a sale
2396	of transmission assets of the Western Area Power

2397	Administration, Bonneville Power Administration, and
2398	Southwestern Power Administration and to reform the laws
2399	governing how the PMAs establish power rates, et cetera.
2400	Frankly, as a member of Congress in the Pacific
2401	Northwest, very concerned about the administration's
2402	continued insistence we sell off transmission assets at the
2403	Bonneville Power Administration and require them to sell
2404	power at market rates. Mr. Chairman, I guess I would like to
2405	enter into the record the bipartisan letter the Pacific
2406	Northwest delegation sent to OMB Director Mr. Mulvaney
2407	opposing this proposal in the 2019 budget.
2408	Mr. Olson. Without objection, so ordered.
2409	{The information follows:]
2410	
2411	*********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.

2456	Secretary Perry. Mr. Schrader, let me just remark that
2457	maybe it is my best addition here would be I am reminded of a
2458	Kenny Rogers song where he talked about you need to know when
2459	to hold 'em and know when to fold 'em.
2460	Mr. Schrader. I understand and appreciate that response
2461	and appreciate your
2462	Secretary Perry. Congress has been very clear about
2463	this issue. I will be more than happy to carry the message
2464	back.
2465	Mr. Schrader. Thank you very much, Mr. Secretary.
2466	Thank you for being here.
2467	Secretary Perry. Yes, sir.
2468	Mr. Olson. The gentleman yields back.
2469	Dr. Bucshon, 5 minutes of questions.
2470	Mr. Bucshon. Welcome, Secretary Perry, from Southwest
2471	Indiana.
2472	Secretary Perry. Yes, sir.
2473	Mr. Bucshon. This committee has spent most of this
2474	Congress examining the country's electrical grid and
2475	throughout our hearings experts have stressed to us the
2476	importance of a reliable and resilient electrical grid.
2477	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.

2522	Our goal and our part to play in this is that U.S. coal
2523	is, you know, coal imports are up 61 percent from a year ago,
2524	we are going to continue. When I go to India we are not just
2525	going to be talking about LNG. We are going to be talking
2526	about coal and clean coal technology that is developed in
2527	this country. We want them, they are going to burn coal and
2528	we want them to use our technology to be able to remove the
2529	emissions that are harming the environment in that part of
2530	the world and globally as well.
2531	So any reasonable approach to making sure that we have a
2532	reliable energy source in this country we are going to be
2533	working with and we certainly think your legislation is
2534	reasonable and heads in that direction.
2535	Mr. Bucshon. Thank you very much for being here,
2536	Secretary.
2537	Secretary Perry. Yes, sir.
2538	Mr. Bucshon. Thanks for your work.
2539	Mr. Chairman, I yield back.
2540	Mr. Olson. The gentleman yields back.
2541	The chairman calls upon the gentleman from Texas, Mr.
2542	Flores, for 5 minutes of questions.
2543	Mr. Flores. Thank you, Mr. Chairman. Mr. Secretary, I

2544 think you and I are equally supportive of LNG and we recognize the incredible importance of LNG exports not only 2545 2546 in terms of our balance of trade and economy opportunity, but 2547 also the geopolitical position that it places us in vis-a-vis some of the threats that we face around the world. 2548 2549 I know that you have taken some good steps to improve 2550 DOE's permitting process when it comes to LNG to clear the 2551 backlog of the applications that were pending that you 2552 inherited from the last administration, but I also understand 2553 that FERC is understaffed and that they are overwhelmed with 2554 their own backlog. Is there anything that you as the Secretary of DOE can do to help FERC with their backlog? 2555 2556 Secretary Perry. I would be more than happy to, you 2557 know, have this conversation with the chairman and we are 2558 more than happy to assist them in any way we can. 2559 Mr. Bucshon. Okay. It was my understanding you might 2560 be in a position to move some folks from Sandia temporarily 2561 to FERC to help with that. Anyway if you can answer that 2562 supplementally for us that would be great. So, now with LNG 2563 out of the way, the next area that I am particularly focused 2564 on today is nuclear, particularly advanced nuclear 2565 technologies. The alma mater that you and I share, which I

2566	am pleased to represent, is a partner on some of DOE's
2567	university engineering university programs. I understand
2568	that the administration is conducting a wide range in review
2569	of nuclear policy, but while we await the outcome of that
2570	broader review what are the most important policies that
2571	Congress can advance now in the short term, in the near term?
2572	Secretary Perry. I am sorry?
2573	Mr. Bucshon. What are the most important policies that
2574	Congress can advance in the near term while we wait for the
2575	administration to finish its overall nuclear review policy?
2576	Secretary Perry. Well, certainly I think that making
2577	sure that the resources are appropriate on this national
2578	nuclear policy review, and we have for too long, I guess, Mr.
2579	Flores, this country has kind of put nuclear, our arsenal on
2580	the back burner, if you will.
2581	Mr. Bucshon. Right.
2582	Secretary Perry. The mid '90s and the Peace dividend
2583	and the world was going to live happily ever after and that
2584	is not the case. And we came to our senses, if you will, or
2585	the world became a little clearer in view and we saw that
2586	maybe we need to make sure that we have a nuclear arsenal
2587	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

Secretary Perry. Yes, sir. We think SMRs are

to be able to address those challenges.

2610	incredibly important going into the future, the application
2611	that they can play particularly in for our national security.
2612	If the concern is about keeping these devices secure,
2613	obviously being on a United States military base is as secure
2614	a site as you can have. So, you know, SMRs are going to play
2615	a very, very important role in the diversity of our portfolio
2616	energy production-wise going forward.
2617	Mr. Bucshon. Okay. Well, thank you, Mr. Secretary. I
2618	have reached the end of my time. I do have additional
2619	questions that we will submit supplementally and I look
2620	forward
2621	Secretary Perry. Yes, sir.
2622	Mr. Bucshon to working with you as we address our
2623	nation's energy policy. I yield back.
2624	Mr. Olson. Time has expired.
2625	Mr. Cramer, 5 minutes for questions.
2626	Mr. Cramer. Thank you, Mr. Chairman.
2627	Thank you, Mr. Secretary, for being with us again.
2628	Thank you for your excellent leadership at the very important
2629	agency. Before I drill down into what is most important to
2630	me today is specifically the fossil energy research and
2631	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.

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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.

2654	without the gap being filled or at least supplemented by the
2655	taxpayers, I don't know that we can get there, quite
2656	honestly, and yet we need it so badly. Specifically,
2657	the administration's fiscal year 2019 budget proposal moves
2658	away from the research and development of carbon capture in
2659	reducing its R&D roughly 75 percent relative to fiscal year
2660	2018. And of course both in '17 and '18, the Congress itself
2661	has had to sort of step it up. So given the fossil energy
2662	R&D request as a whole was increased relative to the
2663	President's request of fiscal year 2018, can you explain why
2664	the Department shifted so dramatically from carbon capture
2665	R&D?
2666	Secretary Perry. Yes, sir. Here is my observation is
2667	that the fiscal year 2019 budget will not impact the current
2668	activities that the Department has funded up in your part of
2669	the world. Plain CO2 reduction, Regional Carbon
2670	Sequestration Partnership, that is going to continue on; a
2671	feasibility study on the Tundra project, that one is in that
2672	money stream for fiscal year 2019. The CarbonSAFE, S-A-F-E,
2673	activities, those are funded as well.
2674	Additionally, on the carbon capture issue, last year in
2675	about May, I was in China for the Clean Energy Ministerial

2676	and we were able to get CCUS placed into that. Now obviously
2677	these are not dollars that are going to be spent in North
2678	Dakota and I understand that. But I think from the
2679	standpoint of the commitment of the agency to the carbon
2680	capture, utilization, sequestration and actually yesterday
2681	Chairman Alexander in the Senate was talking about being able
2682	to find obviously using our national labs, using our
2683	universities that we have relationships with a use for carbon
2684	dioxide.
2685	And again there is no eureka moment here, but, you know,
2686	those are the exciting technologies and opportunities that we
2687	think are out there in the future that we are going to be
2688	looking at funding and, you know, I hope you know that our
2689	commitment is very strong to that. Senator Hoeven, my former
2690	governor colleague, he and I talked at some length yesterday
2691	about the opportunities that we can work on together with
2692	North Dakota and DOE.
2693	Mr. Cramer. In my remaining seconds let me, first of
2694	all, strongly encourage you and invite you to North Dakota as
2695	it now warms up and thaws out to come and see the work at the
2696	University of North Dakota.
2697	Secretary Perry. Yes, sir.

Mr. Cramer. Secondly, I want to ask for your assistance

2000	MI. Clamel. Secondly, I want to ask for your assistance
2699	in advocating with us for a 45Q, you know, the 45Q tax credit
2700	which was slightly, you know, improved in the most recent
2701	bill but not very useful until we reconcile IRS and EPA rules
2702	so that it is more useful for these types of projects. It is
2703	essential. And then there is another credit, the refined
2704	coal credit that I think just has to be extended so we can
2705	build this bridge again between basic research and
2706	commercialization. We are at the cusp and we, you know, run
2707	the risk of losing all those opportunities. As you said,
2708	innovation not regulation is our motto. I like it. Let's
2709	live with it. Thank you.
2710	Thank you, Mr. Chairman.
2711	Mr. Olson. Time is expired.
2712	Mr. Green from Texas, 5 minutes for questions. Are you
2713	ready, Mr. Green?
2714	Mr. Green. Yes, Mr. Chairman.
2715	I want to welcome the Secretary. My other job is I am
2716	the ranking member on the Health Subcommittee and we just
2717	finished a hearing upstairs, Mr. Secretary. And you and I
2718	have known each other since we could actually play basketball
2719	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 allelectric 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

2764 and the resiliency issue of this grid. And being able to quarantee to the American people that that will be there is 2765 one of our roles, you as a United States Congressman and me 2766 2767 as the Secretary of Energy. 2768 So from my perspective, having a diverse portfolio it is one of the things that we did in your home state over the 2769 2770 course of the, particularly in the 2000s when they 2771 deregulated the energy market and we had this diverse, we developed more wind energy than any other state in the 2.772 nation, the gas that came online, the other incentives that 2773 2774 the state, and I think Mr. Tonko was talking about giving states some of this responsibility and I totally agree with 2775 2776 that. 2777 But my point is the time for study is over again from my 2778 perspective. We have got to act on this because I don't want 2779 to wake up next winter with a polar vortex that is bigger 2780 than the one that we had before and having taken some nuclear 2781 plants and some coal plants offline and not having that 2782 resource, not having that energy available to protect the 2783 citizens' safety and/or their security. 2784 Mr. Green. Can you elaborate on the potential tools at 2785 DOE you feel could be better suited to securing a valuable

2786 emissions-free nuclear plants, for example? 2787 Secretary Perry. Yes, sir. Well, this one is going to 2788 be a bit of a bank shot, but I think it makes the point, 2789 Gene, that we are in the process of, previous 2790 administrations, not just the last administration but if you 2791 go all the way back probably 20-25 years, previous 2792 administrations have not put into place, didn't respect the 2793 nuclear power industry. I think they overregulated them. 2794 They put a lot of cost on them through regulations. 2795 administration took away our ability to process high-assay 2796 uranium for the purposes of civil nuclear. That was started by the administration before the Obama administration but 2797 2798 they shut that down and then the private sector has no place 2799 for that fuel. 2800 My point with all of this is we are at a critical place 2801 here today that if we don't send some messages whether it is 2802 making a good agreement with the Saudi Arabians to help them 2803 develop their civil nuclear program so that American 2804 contractors are going to have the supply chain to do that, 2805 that our universities don't have the incentives to put young 2806 men and women into the nuclear engineering field, all of that 2807 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

2830	your administration when you were governor than any other
2831	state in the Union. So, and hopefully we will do some solar.
2832	But in the Northeast they don't have the ability to that
2833	oftentimes with wind or solar so it is basically older
2834	production whether it be coal or nuclear power. And that is
2835	why we need to see how we can do it because those folks, we
2836	don't want those folks freezing in the dark. But anyway I
2837	want to follow what the Department of Energy does and
2838	hopefully our committee will work with you on making sure
2839	that reliability is important, but we also need to see as
2840	best we can how we get it done.
2841	Secretary Perry. Yes, sir.
2842	Mr. Olson. My friend's time is expired.
2843	I will call upon the gentleman from Oklahoma for 5
2844	minutes for questions.
2845	Mr. Mullin. Man, Texans do stick together. No, I am
2846	kidding. Anyways, hey, thank you, Mr. Chairman.
2847	Mr. Green. Well, Mr. Chairman, Oklahoma also steals
2848	football players from A&M and University of Texas and my alma
2849	mater University of Houston.
2850	Mr. Mullin. No, we don't steal. We recruit better. I
2851	mean obviously they want to go to, you know, a climate that

2852	they can live in. Anyway, hey, thank you.
2853	And, Secretary Perry, I want to remind you of a time you
2854	met my son in Leader McCarthy's office. My boy wasn't very
2855	big at the time and he was talking to you. He was kind of
2856	like most little boys, he was looking around and you grabbed
2857	him by the shoulders and you set him on the chair and you
2858	said, young man, look at me in the eyes when you talk to me.
2859	And I had told my son that since the day he was born, and I
2860	really appreciate that. That meant a lot.
2861	Secretary Perry. I hope I did it in a very respectful
2862	way.
2863	Mr. Mullin. Oh, you did a hundred percent, but that is
2864	how we raise our kids. We are in Oklahoma too, and you look
2865	him in the eye and if he is not looking you in the eye I had
2866	probably thumped him in the head. It is just, that is called
2867	respect. So I appreciate that. That meant a lot to me.
2868	I want to talk to you obviously about Yucca Mountain and
2869	DOE's requirements. Can you summarize DOE's legal
2870	requirements pertaining to Yucca Mountain's licensing
2871	application?
2872	Secretary Perry. Yes, sir. This body as authorizers
2873	and the appropriations process has, and I think the

2874	President's budget, \$110 million for the licensing to go
2875	forward. And I look at that as a way to get, you know,
2876	following the law. The law says that we will do this. There
2877	is an additional \$10 million in that appropriation request
2878	for temporary storage as well.
2879	Mr. Mullin. Is DOE required to create the Office of
2880	Civil Radioactive Waste Management to manage all these
2881	activities?
2882	Secretary Perry. Yes, by law.
2883	Mr. Mullin. In your last organizational chart for DOE
2884	was this office included in it?
2885	Secretary Perry. I can't answer that. You may know the
2886	answer to that.
2887	Mr. Mullin. Yes, I do, obviously. The answer to that
2888	is no. And as you alluded to a while ago, you are required
2889	by law to have that. Can you explain maybe why it was left
2890	out?
2891	Secretary Perry. Well, here would be my stab at that is
2892	that just because it is not named and doesn't have a line
2893	item does not mean that its duties are not covered in the
2894	agency.
2895	Mr. Mullin. Do you know who is covering that then? And

2896	I say that because we really aren't seeing any
2897	Secretary Perry. Can I get back with you and answer
2898	these questions after I have had some time to dig down into
2899	it and get you the proper answers?
2900	Mr. Mullin. Yes, absolutely.
2901	Secretary Perry. Yes.
2902	Mr. Mullin. Because what I am trying to fish for here
2903	is if it is from the appropriation process, is if that is why
2904	the office isn't manned, if that is why the duties of that
2905	office isn't being done, then for the committee's purpose we
2906	need to know and we need to know what is keeping it from
2907	happening. And like I said, if it is from the appropriation
2908	perspective we also need to know what it is going to take to
2909	do that.
2910	I think Mr. Shimkus alluded to how much it was costing
2911	the taxpayers right now just from the lawsuits that are
2912	taking place from the storage that we are supposed to taking
2913	care of as the United States Government and so I want to be
2914	able to help you. I want to work with you on it. So if you
2915	could please get back to my office.
2916	Secretary Perry. Yes, sir.
2917	Mr. Mullin. Let us know how we can help you because

2918	that was really the line of the questions what I was going
2919	to, and I will actually yield back the remainder of my time.
2920	Mr. Olson. Thank you to my friend from Oklahoma.
2921	Mr. Walberg, 5 minutes for questions, sir.
2922	Mr. Walberg. Thank you, Mr. Chairman.
2923	And thank you, Mr. Secretary, for always being open to
2924	be here and answer the questions. Thank you for the energy
2925	you put into being the Secretary of Energy as well. It is
2926	encouraging for those of us in the northern climes to know
2927	that that is actually happening.
2928	I have the privilege of representing the energy district
2929	of the state of Michigan. Over 30 percent of all energy
2930	produced in Michigan is produced in my district. It is a
2931	fleet of all-of-the-above and some of that fleet sits right
2932	on one of the Great Lakes, Lake Erie, and so we are
2933	definitely concerned with cybersecurity. The challenge is
2934	not only that we are able to turn the lights on at any time
2935	but the environmental issues that go on thinking of the
2936	proximity there in the Great Lakes.
2937	You recently formed the new Cybersecurity, Energy
2938	Security, and Emergency Response office. I think that
2939	certainly shows, I believe, that you believe that elevating

2940	cybersecurity functions to a Senate-confirmed assistant
2941	secretary level will help intergovernmental and interagency
2942	communications and multidirectional information sharing with
2943	the Department of Energy's ability to appropriately and
2944	quickly address cyber related emergencies, and I thank you
2945	for that.
2946	My concern is the sustainability of the Department of
2947	Energy's leadership on this important issue. Cybersecurity
2948	was not a surpassing concern back in 1977 when the Department
2949	was organized. It certainly is today. In my bill with my
2950	colleague and Ranking Member Rush, H.R. 5174, we specify
2951	functions related to cybersecurity and emergency response
2952	that we believe should be specifically led by a Senate-
2953	confirmed assistant secretary. Will you work with us to
2954	ensure that we can elevate that, Secretary, to law?
2955	Secretary Perry. Yes, sir.
2956	Mr. Walberg. I appreciate that. Over the past 7 months
2957	you have had a lot of experience in dealing with emergency
2958	action in your Department. During appearances before the
2959	committee in January, your Deputy Secretary and
2960	Undersecretary for Energy said that expectations for DOE's
2961	emergency response exceeded its authorities, if I recollect

2962	correctly. From your experience to date, do you think there
2963	may be some additional tools or authorities DOE could use to
2964	help improve the ability of the agency's deployment of
2965	resources in an emergency?
2966	Secretary Perry. Yes, sir. I think it is always a
2967	thoughtful conversation to have to discuss with Congress and
2968	other agencies to make sure, you know, we complement when we
2969	need to complement. But if there is a direct line of
2970	authority that it is very clear, very precise so that no one
2971	gets confused about particularly during an emergency
2972	situation who is in charge.
2973	Mr. Walberg. I appreciate that and we would definitely
2974	want to work together with you on that. We want to examine
2975	things like surge funding or some other mechanism to enable
2976	DOE to have access to resources so the Department can respond
2977	more rapidly. So we hope that you can work with us on that.
2978	Secretary Perry. Yes, sir. Thank you.
2979	Mr. Walberg. Thank you, Mr. Chairman. I yield back.
2980	Mr. Olson. The gentleman yields back.
2981	The gentleman from South Carolina, Mr. Duncan, for 5
2982	minutes.
2983	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

3006 greatest environmental risk in South Carolina. There are more than 30 years of nuclear weapons material that has been 3007 produced in South Carolina sitting in those tank farms and 3008 3009 the ongoing environmental management efforts are there. 3010 We also have the ability through the Defense Waste 3011 Processing Facility at SRS to vitrify that high level nuclear 3012 waste, turn it to glass so that it no longer poses a threat 3013 to leakage through those tanks and into the ground and aquifers. So the DOE's fiscal year 2019 budget requests an 3014 3015 additional 74 million for SRS cleanup programs from the 2016 3016 levels, emphasis on the liquid tank waste cleanup project. What are DOE's top cleanup priorities for the site and 3017 3018 how is your particular attention as Secretary going to facilitate tangible cleanup progress in South Carolina? 3019 3020 Secretary Perry. Obviously we have a court-mandated 3021 requirement that we are very sensitive to in making sure that 3022 we have the resources to be able to do that. You know, we 3023 have had the discussion substantially over the last year 3024 since I have been at DOE over the issue of how to deal with 3025 the plutonium and clean that up. 3026 While I was out there I saw some good progress that is 3027 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

3030	do with that platoniam. Callently, we are committeed to rid
3051	the world of about, I think, enough plutonium to make 17,000
3052	nuclear weapons.
3053	So I would love to see the continuation of construction
3054	at the MOX program and eventually completion. We have
3055	already spent a ton of money down there and I truly believe
3056	we can bring more efficiency to the project and it can be
3057	completed in a third of time and for almost half the
3058	additional cost than what the NNSA predicts. You indicated
3059	in your testimony that the 2019 budget continues termination
3060	activities for the MOX but provides 220 million for use
3061	toward orderly, safe closure for the project. What do you
3062	envision for the future of this site, the MOX facility, and
3063	if not MOX, what do you determine to be the most efficient
3064	and effective way to remove the plutonium from South
3065	Carolina?
3066	We didn't ask for the plutonium to come there. It is
3067	stored on site. It is not a long-term storage facility. It
3068	was brought there in order to be turned into mixed oxide fuel
3069	to be used in nuclear reactors around the country. That is
3070	what the purpose was.
3071	Secretary Perry. Yes, sir.

3072	Mr. Duncan. We spent a lot of money. Where are we
3073	going from here?
3074	Secretary Perry. Yes, sir. And I will try to be as
3075	brief as I can. The issue on the reason that got started was
3076	an agreement with the Russians. The Russians have
3077	unilaterally walked away from that agreement. They said they
3078	would come back to the table if we met certain requirements
3079	and you know what those are, you know, and they are
3080	unacceptable. I mean they are asking us to do things that
3081	this country is not going to do to come back and sit down at
3082	the table.
3083	So the way I look at that is they have walked away and
3084	we have to look at our options. This is a facility that is
3085	obscenely over budget. And again I don't want to rehash and
3086	relitigate all these numbers, but the fact is there is an
3087	alternative and the alternative is dilute and dispose which
3088	we are using now as a matter of fact shipping plutonium out
3089	of South Carolina to WIPP at this particular point in time.
3090	We think that is
3091	Mr. Duncan. The EPA has said that WIPP is not an
3092	acceptable site. Yucca might be. The thing is, Russia has
3093	walked away but the facts of the matter are we have plutonium

3094	sitting in South Carolina that has come out of that
3095	nonproliferation agreement. WIPP is not going to be ready.
3096	Yucca, we are struggling around here to fund that. MOX is
3097	absolutely the right facility and I would love to sit down
3098	with you and talk with you about that at some point.
3099	Mr. Chairman, thanks for the leniency and I yield back.
3100	Secretary Perry. You are on.
3101	Mr. Olson. The time is expired.
3102	Mr. Long, 5 minutes for questions.
3103	Mr. Long. Thank you, Mr. Chairman.
3104	And thank you, Secretary Perry, for being here today.
3105	Secretary Perry. Yes, sir.
3106	Mr. Long. Texas A&M University, where is that located?
3107	Secretary Perry. Where is it located?
3108	Mr. Long. Yes.
3109	Mr. Olson. College Station, Texas.
3110	Secretary Perry. It is, some would say that
3111	Mr. Long. I don't believe I yielded to you, did I?
3112	Secretary Perry. Some would say it is of the epicenter
3113	of the world, but we will just leave it at it is in Brazos
3114	County, Texas.
3115	Mr. Long. College Station, Texas?

3116	Secretary Perry. In the city of College Station.
3117	Mr. Long. And that is the only campus?
3118	Secretary Perry. No, sir. It is the main campus.
3119	There are
3120	Mr. Long. I didn't ask you about the main campus. I
3121	said where is it located?
3122	Secretary Perry. Oh, it is in College Station, Texas on
3123	Highway 6 and it goes both ways.
3124	Mr. Long. That is the only campus?
3125	Secretary Perry. It is the only main campus.
3126	Mr. Long. Where are the other campuses?
3127	Secretary Perry. The other campuses are
3128	Mr. Long. Outside of this country, I will cut to the
3129	chase.
3130	Secretary Perry. They are in a lot of different places.
3131	John Dalton
3132	Mr. Long. Like Qatar?
3133	Secretary Perry. And there is one in the country of
3134	Qatar right out of Doha.
3135	Mr. Long. I was in Qatar 10 days ago.
3136	Secretary Perry. Yes, sir.
3137	Mr. Long. And walked in and they are all Aggie there,

3138	trust me.
3139	Secretary Perry. Sure.
3140	Mr. Long. They are very, very happy with their
3141	affiliation and the students are doing great. Your picture
3142	was right there on the wall as I walked in and they are Aggie
3143	through and through. So I was pleased to see your picture on
3144	the wall when we went in and toured Texas A&M in Qatar just
3145	the other day.
3146	Speaking of universities, I would like to speak about
3147	another university. In recent hearings with your senior
3148	Department of Energy leadership I asked about the Department
3149	of Energy's support of the University of Missouri's MURR
3150	Nuclear Reactor. The MURR reactor trains nuclear engineers,
3151	some of who are funded through Department of Energy's Nuclear
3152	Energy University Program.
3153	Private companies in coordination with the University
3154	are seeking approval to produce lifesaving medical isotopes
3155	in partnership with the National Nuclear Security
3156	Administration, NNSA. And the University is currently
3157	studying a partnership with the NNSA to convert the reactor
3158	to use low-enriched uranium instead of highly enriched
3159	uranium or HEU. I have got to tell you I was disappointed to

3160	see that the Integrated University Programs were defunded in
3161	your fiscal year 2019 budget, but I hope you see the value in
3162	these activities as we do at the University of Missouri.
3163	Will you please talk about the importance of our nuclear
3164	research infrastructure and how the Department of Energy
3165	supports this critical work particularly in its university
3166	programs?
3167	Secretary Perry. Yes, sir. I think you are making
3168	reference to the research reactor there at the University of
3169	Missouri and it is in medical isotopes and the manufacture of
3170	medical isotopes and there are a number of places across the
3171	country that we are partnering with that. It is for
3172	precision medicine for some of the things that we talked
3173	about with Mr. McNerney. On our ability to practice
3174	precision medicine these facilities are really going to be
3175	important.
3176	Mr. Long. They are very important.
3177	Secretary Perry. We want to work with you and
3178	Mr. Long. All right, thank you. With the ever-
3179	increasing cyber threats to the grid, I am pleased that the
3180	steps have been taken to create CESER, the Office of Cyber-,
3181	Energy Security, and Emergency Response and I look forward to

3182	that office getting up and running. In your opinion, since
3183	your confirmation has the electric grid become more or less
3184	responsive to cybersecurity threats?
3185	Secretary Perry. Well, I think the threat has increased
3186	but that shouldn't shock anyone. I think the threat
3187	potential is greater today than it was a year ago. Are we
3188	more resilient? I can't answer that with great definition.
3189	What I think is that we are exposed in certain areas. We
3190	need to be all hands on deck. That is the reason we are
3191	asking for the cyber office to be stood up.
3192	With that said, our national labs are making some, I
3193	think, good inroads in both the defensive and offensive ways
3194	to deal with those that would attack our electrical grid.
3195	Mr. Long. Let me ask you one more question and I will
3196	be about out of time at the end of this probably, but the
3197	fiscal year 2019 budget calls for 96 million in funding for
3198	the CESER, or for CESER. Can you explain a little bit about
3199	the program and how this money will be used to ensure we are
3200	securing our grid from the continuous cyber threats that we
3201	face?
3202	Secretary Perry. Well, the focus is on the cyber
3203	threats from both state actors, you know, and we are talking

3204	about a year ago, Russia with Petya. We saw the impact on
3205	that. We have seen what has happened in Ukraine with two
3206	attacks on their power grid. The Iranians are who attacked
3207	the Aramco Electrical or their control panels. So nation
3208	state attacks are very real. You know, they are not going to
3209	as late as this last week we had conversations about, you
3210	know, what can we expect with the Syrian issue. Should we be
3211	on more heightened alert? And I would suggest to you yes.
3212	So the issue is this Office of Cybersecurity, our
3213	national labs working with the private sector, working with
3214	universities, I don't think it has ever been more important
3215	for us to be able to maintain the national security of this
3216	country relative to our grid, both as we have talked about at
3217	length here today about the resources to be able to keep the
3218	power to that grid, but also to protect that grid from cyber
3219	attacks is as important as it has ever been in our country's
3220	history.
3221	Mr. Long. Thank you. And thanks for being here today.
3222	It has been a long hearing and I am sure you are kind of
3223	tired. And I yield back.
3224	Mr. Olson. Time is expired.
3225	The gentleman from Massachusetts has 5 minutes for

3226	questions, Mr. Kennedy.
3227	Mr. Kennedy. One more to go, Mr. Secretary. Thank you.
3228	Thank you for your patience. Thank you for spending so much
3229	time with us and I will echo the comments of our colleagues,
3230	thank you for being so accessible, grateful that you are
3231	here.
3232	As our nation makes the transition from a 20th to 21st
3233	century energy economy we know that innovative sources of
3234	power will be an important part of that generation mix. Wind
3235	power is a steadily growing portion of the energy sector that
3236	provides clean power to millions of Americans and creates
3237	thousands of jobs across our country. Your home state of
3238	Texas, Mr. Secretary, during your tenure as governor wind
3239	power resources and energy grew by leaps and bounds. It is
3240	my understanding that according to ERCOT, wind made up 17
3241	percent of the fuel mix in 2017.
3242	So I wanted to ask you, I think, a pretty general
3243	question to start. Do you agree, Mr. Secretary, that wind
3244	energy is an important part of our nation's power sector?
3245	Secretary Perry. Yes, sir.
3246	Mr. Kennedy. So despite this growth, and I appreciate
3247	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

3270	wind.
3271	Secretary Perry. Mr. Kennedy, we discussed, you know,
3272	this is an industry that is becoming mature. And so the
3273	private sector, the states, if, you know, in my home state
3274	one of the reasons we had that big wind energy growth was
3275	that the state invested in the CREZ lines. You know, we
3276	didn't subsidize the specific projects, but we basically said
3277	we are going to build these lines if you all will commit to
3278	building all these farms out. They did and you know what the
3279	results are. So I think not only the state but the private
3280	sector has the place to play this.
3281	Here is what I will tell you that the DOE is going to
3282	continue to play a role in this, this is important. And
3283	again we were in Livermore this last week and the technology
3284	that is coming out of there, and this is on again rotor
3285	technology that makes these turbines substantially more
3286	efficient so that, you know, then that gets commercialized
3287	and goes into the private sector where it makes it even more
3288	of a commercialized product in the market and more
3289	competitive.
3290	Mr. Kennedy. More viable.
3291	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. Ι 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

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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

3336	partner with you, understanding there has got to be a private
3337	sector component to this and a state component to this.
3338	Secretary Perry. Yes, sir.
3339	Mr. Kennedy. But I think we have seen there is a
3340	willingness to do so and we are going to need your help.
3341	Secretary Perry. And, Mr. Kennedy, one of the things
3342	that I will offer you and to make the introduction, the
3343	university in Texas that probably has as good of wind energy
3344	history and experience and expertise is Texas Tech in
3345	Lubbock, Texas. And, you know, getting the states to work
3346	with each other that may be a great opportunity. There used
3347	to be a real good Boston to Austin connectivity so Boston to
3348	Lubbock might be okay too.
3349	Mr. Kennedy. I appreciate that, sir. As long as we
3350	aren't talking football we are in good shape.
3351	Secretary Perry. Yes, sir.
3352	Mr. Kennedy. Thank you, sir.
3353	Mr. Olson. Time has expired.
3354	Seeing that no further members wishing to ask questions,
3355	I would like to thank Secretary Perry for coming this
3356	afternoon. And I trust, sir, that the proceedings you talked
3357	with before did not happen here today. You know what I am

3358	talking about, correct?
3359	Secretary Perry. That is correct.
3360	Mr. Olson. And you are cleared now to depart the
3361	pattern with a proud, loud Aggie whoo.
3362	And before we conclude I would like to ask unanimous
3363	consent to submit the following documents for the record:
3364	Letters from the Utilities Technology Council; a statement
3365	from the R Street Institute; three letters to the President
3366	from Members of Congress; a letter to the President from the
3367	International Brotherhood of Teamsters; a letter to the
3368	President from United Mine Workers of America; a letter to
3369	the President from the International Brotherhood of
3370	Boilermakers, Iron Shipbuilders, Blacksmiths, and Forgers and
3371	Helpers; a letter to the President from the Utility Workers
3372	Union of America; a letter to Secretary Perry from the Energy
3373	Industry Trade Association; a letter to Secretary Perry from
3374	the Pennsylvania Public Utility Commission; a letter to
3375	Secretary Perry from the FirstEnergy; a response letter from
3376	PJM to Secretary Perry; a letter from NEI to Chairman Walden.
3377	Without objection, so ordered.
3378	[The information follows:]
3379	

3380 \*\*\*\*\*\*\*\*\*INSERT 5\*\*\*\*\*\*\*

3381	Mr. Olson. Pursuant to committee rules, I remind
3382	members that they have 10 business days to submit additional
3383	questions for the record and ask that the witnesses submit
3384	their response within 10 business days upon receipt of the
3385	questions. Without objection, the subcommittee is adjourned.
3386	[Whereupon, at 1:21 p.m., the subcommittee was
3387	adjourned.]