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6 THE FISCAL YEAR 2020 DOE BUDGET

7 THURSDAY, MAY 9, 2019

8 House of Representatives,

9 Subcommittee on Energy,

10 Committee on Energy and Commerce,

11 Washington, D.C.

12

13

14

15 The subcommittee met, pursuant to call, at 10:18 a.m., in  
16 Room 2322, Rayburn House Office Building, Hon. Bobby L. Rush  
17 [chairman of the subcommittee] presiding.

18 Members present: Representatives Rush, Peters, Doyle,  
19 Sarbanes, McNerney, Tonko, Loeb sack, Butterfield, Welch,  
20 Schrader, Kennedy, Veasey, Kuster, Barragan, McEachin,  
21 O'Halleran, Blunt Rochester, Pallone (ex officio), Upton, Latta,  
22 Rodgers, McKinley, Kinzinger, Johnson, Bucshon, Flores, Walberg,

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23 Duncan, and Walden (ex officio).

24 Staff present: Jeff Carroll, Staff Director; Jean Fruci,  
25 Energy and Environment Policy Advisor; Tiffany Guarascio, Deputy  
26 Staff Director; Omar Guzman-Toro, Policy Analyst; Zach Kahan,  
27 Outreach and Member Service Coordinator; Rick Kessler, Senior  
28 Advisor and Staff Directory, Energy and Environment; Brendan  
29 Larkin, Policy Coordinator; John Marshall, Policy Coordinator;  
30 Lisa Olson, FERC Detailee; Tuley Wright, Energy and Environment  
31 Policy Advisor; Mike Bloomquist, Minority Staff Director; Jordan  
32 Davis, Minority Senior Advisor; Ryan Long, Minority Deputy Staff  
33 Director; Mary Martin, Minority Chief Counsel, Energy and  
34 Environment and Climate Change; Brannon Rains, Minority Staff  
35 Assistant; Zach Roday, Minority Communications Director; and  
36 Peter Spencer, Minority Senior Professional Staff Member,  
37 Environment and Climate Change.

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38           Mr. Rush. [Presiding] The committee hearing is called to  
39 order.

40           I want to thank everyone for today's attendance on the  
41 oversight of DOE's FY20 budget proposal, and I want to welcome  
42 the Secretary of DOE, Secretary Perry, back to this subcommittee.

43           Mr. Secretary, DOE's FY 2020 budget requests \$31.7 billion,  
44 a \$4 billion decrease from FY 2019 that was enacted, the number  
45 in 2019, and it includes extreme reductions to some critical  
46 programs. Federal investments in clean energy programs, power  
47 grid operations, next generation energy technologies, and  
48 economic development for tribal communities are drastically  
49 decreased in your proposal. Important departments such as the  
50 Office of Energy Efficiency and Renewable Energy is reduced by  
51 86 percent from FY 2019 levels, with the vast majority of these  
52 cuts, more than \$700 million, coming from energy efficiency  
53 programs. Additionally, the budget proposal would slash the  
54 Office of Science, which funds the 17 national laboratories by  
55 \$1 million from the FY 2019 enacted level, while also eliminating  
56 the Advanced Research Programs Agency-Energy, ARPA-E, in FY 2020.

57           Mr. Secretary, as you can imagine, many of these proposed  
58 cuts are nonstarters, as far as I am concerned, as these reductions  
59 would severely impact federally-funded investments in clean

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60 energy research and development, harming our economy and global  
61 status, as leadership warrants in these particular areas.

62           However, another issue, Mr. Secretary, that I want to discuss  
63 with you today is the dire need for federal investment in workforce  
64 training to help put thousands of Americans to work in good-paying  
65 jobs and careers. Mr. Secretary, just last month, Brookings  
66 released a groundbreaking and eye-opening study entitled,  
67 "Advancing Inclusion Through Clean Energy Jobs". Some of these  
68 key findings in this report found that employees in clean energy  
69 jobs earn higher and more equitable wages than all workers  
70 nationally with mean hourly wages topping the national average  
71 by 8 to 19 percent. The study found that clean energy jobs provide  
72 tremendous opportunities for low-income workers to increase their  
73 salaries by earning up to \$5 to \$10 more per hour compared to  
74 other jobs. Despite higher wages, the study found that many clean  
75 energy jobs actually have lower educational requirements, with  
76 close to 50 percent of these workers holding only a high school  
77 diploma, but earning higher wages than comparable peers in other  
78 industries.

79           Mr. Secretary, I look forward to hearing from you today as  
80 we discuss these and other important issues.

81           And with that, I yield back and I recognize the ranking member

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82 of the subcommittee, my friend from Michigan, Mr. Upton, for 5  
83 minutes.

84 Mr. Upton. Thank you, my friend and Chairman.

85 Secretary Perry, welcome. There is something about the  
86 Department of Energy that brings out enthusiasm about our nation's  
87 energy and environmental future, and I think you demonstrate that  
88 enthusiasm better than just about anyone who has ever led that  
89 Department. And I welcome that enthusiasm and look forward to  
90 your testimony, obviously, this morning.

91 Over the last decade, we have emerged as the world's leading  
92 producer of oil and natural gas, and at the same time we lead  
93 the world in CO2 emission reductions, a fact that proves that  
94 energy production and environmental protection are not  
95 mutually-exclusive goals. So, today we are more energy secure  
96 than at any point in our nation's history. Fifteen years ago,  
97 we thought that we were running out, and I believe that we owe  
98 this dramatic turnaround to free market competition, American  
99 ingenuity, and certainly technological innovations that were  
100 driven, in part, through research conducted by the DOE.

101 Our energy abundance is supporting millions of American jobs  
102 and strengthening our economy, while at the same time providing  
103 our allies with a stable and secure new supplier. U.S. energy

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104 exports, especially LNG, also have the potential to help drive  
105 down emissions, which gives our trading partners another reason  
106 to do business with us.

107 The shifting patterns of energy supply and use, both here  
108 in the U.S. and around the world, present both challenges and  
109 opportunities. I bring this up because the energy revolution  
110 represents a new economic fact of life for us. More communities  
111 are reliant on the supply of natural gas, for example, as more  
112 utilities use this energy for electric power. This raises  
113 another important issue for the Department, which is the core  
114 mission to ensure the reliable supply of energy to the public.

115 In recent years, we have worked with you to address electric  
116 critical infrastructure security, including cyber, to make sure  
117 that DOE has the statutory authorities to protect and respond  
118 to risks in bulk power systems. And I commend your continuing  
119 focus on that mission which you demonstrated in your formation  
120 of the Cybersecurity, Energy Security, and Emergency Response  
121 Office, CESER.

122 One area that is particularly of concern to most of us is  
123 the nexus between natural gas pipelines and electric-generating  
124 units. So, I would like to understand this morning what DOE is  
125 doing to assess risks in energy systems, particularly security

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126 and cybersecurity risks that threaten the supply of energy to  
127 our electricity systems. And while pipeline safety and security  
128 certainly falls under the jurisdiction of other agencies, DOE  
129 maintains the prime responsibility for ensuring the supply of  
130 energy. So, it is important to understand how you address these  
131 risks.

132 This work on energy security also involves what happens in  
133 an emergency. What happens when there is a major disruption at  
134 a major event that impedes the supply of energy? The CESER office  
135 addresses this, but you also have offices under other Department  
136 components that assist state energy offices. I would like to  
137 get a sense of your priorities for working with states and  
138 territories to ensure that they have the information and tools  
139 to respond in emergencies.

140 In the last Congress, committee members moved several bills  
141 that would have helped strengthen your authorities to coordinate  
142 and provide technical assistance to other federal agencies,  
143 states, utilities, to help strengthen our defense against attack.

144 This is an area that this committee will continue to press.

145 In Michigan, the electric power system is moving to more  
146 renewable energy. In fact, we will be at 40 percent by 2040.

147 For this to work economically in the long term, technology is

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148 necessary to continue to drive down costs and to enable the  
149 reliable supply during peak electric demand. And I would like  
150 to understand how your budget aligns DOE research priorities to  
151 address the needs for a cleaner electricity system.

152 Finally, Mr. Secretary, there are other important priorities  
153 that are going to help our country develop and deploy the new  
154 clean technologies. As you know, one area of interest for this  
155 committee concerns nuclear energy, which provides one of the best  
156 paths to reducing greenhouse gas emissions. We have done a lot  
157 of work in this Congress. We intend to do a lot more. And on  
158 this point, I would much appreciate your proposal to include some  
159 funding to restart the defense of the Yucca Mountain license  
160 before the NRC.

161 I would also like to note that we have competing subcommittee  
162 meetings this morning, but we are missing our good Texas  
163 colleague, Mr. Olson, who went back yesterday to look at some  
164 of the storm and flood damage in your great State.

165 Again, Mr. Secretary, welcome. We look forward to working  
166 with you.

167 I yield back.

168 Mr. Rush. The chair now recognizes the chairman of the full  
169 committee, Mr. Pallone, for 5 minutes for his opening statement.

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170           The Chairman. Thank you, Chairman Rush.

171           Let me thank the Secretary for appearing here this morning.

172           I do really appreciate your being here, but I am still frustrated  
173 and disappointed about the fiscal year 2020 Department of Energy  
174 budget because it is largely the same, what I call, out-of-touch  
175 document that we saw last year. The drastic cuts contained in  
176 President Trump's budget last year were rejected by Congress,  
177 and I expect that to be the case again this year. So, rather  
178 than talking about a budget that is essentially dead on arrival,  
179 I would like to discuss several energy policy issues, including  
180 energy efficiency, legacy site cleanup, nuclear waste, and  
181 cybersecurity.

182           Unfortunately, the Department's track record on efficiency  
183 standards for consumer products is not good. Since the beginning  
184 of the Trump administration, the Department has ignored 17  
185 legally-mandated deadlines to finalize efficiency standards for  
186 common consumer appliances. And rather than updating those  
187 standards, DOE has spent its time working to discard lightbulb  
188 efficiency standards. And this rollback will lead to years of  
189 unnecessary electricity generation and carbon emissions just to  
190 power inefficient and outdated lightbulbs. It is unclear who  
191 benefits from this, absent a handful of lightbulb manufacturers.

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192           In fact, the electricity generators support the lightbulb  
193 efficiency, and 37 electric utilities sent a letter to DOE last  
194 week opposing the lightbulb rollback. They know that efficiency  
195 improvements reduce the need for new infrastructure and improve  
196 the reliability of the existing electricity supply.

197           I am also concerned about the Department's environmental  
198 management program which is tasked with cleaning up the legacy  
199 wastesites where nuclear weapons were developed and built. The  
200 Oversight and Investigations Subcommittee held a hearing on DOE's  
201 growing environmental liability just last week, which, as of this  
202 year, has climbed to a staggering \$377 billion. The GAO  
203 highlighted serious mismanagement at these sites and included  
204 the Department's mounting environmental liabilities on its high  
205 risk list.

206           Now I recognize that this is a problem you did not create,  
207 Mr. Secretary. Unfortunately, the President's budget makes your  
208 job more daunting by cutting the environmental management program  
209 by over \$700 million from last year's level. And this is  
210 concerning, and I hope we see better management of this program  
211 moving forward. We want to work with you to accomplish that goal.

212           We must also find a solution to the storage and disposition  
213 of commercial spent nuclear fuel that currently resides at our

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214 nation's nuclear power plants. Each year more nuclear power  
215 plants are ceasing operation. Until we come up with a federal  
216 solution to this issue, that spent fuel will be stored onsite  
217 at those plants which no longer generate power. And this  
218 effectively freezes any efforts to redevelop those sites. So,  
219 we need interim storage solutions to bridge the gap until a  
220 permanent repository is licensed and constructed.

221 Mr. Secretary, I hope to work with you and my colleagues  
222 on both sides of the aisle to give the Department the authority  
223 it needs to store this spent fuel at interim storage sites until  
224 we can permanently dispose of it. I know that both Mr. Upton  
225 and Mr. Rush are similarly concerned.

226 Another area where I know we can work together is  
227 cybersecurity. I am troubled by the report last week that earlier  
228 this year there was, for the first time, the successful  
229 cyberattack on our electricity system. It was not a  
230 sophisticated attack and, thankfully, no consumer outages  
231 occurred, but that might not be the case next time. Our country's  
232 energy infrastructure is critical. We must ensure our nation's  
233 electric system as well as the associated dams, railways, and  
234 pipelines are all protected from an attack.

235 So, I am concerned by a recent GAO report I commissioned

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236 that found the Transportation Security Administration's pipeline  
237 security program has troubling weaknesses. At a hearing we held  
238 on pipeline safety and security last week, GAO informed us that  
239 TSA has only four employees to oversee the security of our nation's  
240 nearly 3 million miles of pipeline, and that is, obviously,  
241 unacceptable and frightening.

242 So, I support legislation introduced by Ranking Member Upton  
243 and Representative Loeb sack that would allow DOE to develop a  
244 program to establish policies and procedures to improve the  
245 physical and cybersecurity of our nation's pipelines. And I hope  
246 you work with us to enact that bill as well.

247 Again, Mr. Secretary, thank you for being here tonight.

248 With that, Mr. Chairman, I yield back.

249 Mr. Rush. The gentleman yields back. The chair now  
250 recognizes the ranking member of the full committee, Mr. Walden,  
251 for 5 minutes for the purposes of an opening statement.

252 Mr. Walden. Good morning, Mr. Chair.

253 Mr. Rush. Good morning.

254 Mr. Walden. And thanks for having this hearing.

255 Good morning, Mr. Secretary. Welcome back to the Energy  
256 and Commerce Committee. We are delighted to have you here.

257 The Department of Energy's \$32 billion budget proposal

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258 serves as a reminder of the broad range of defense, science,  
259 energy, and environmental activities that your agency pursues  
260 to perform its really important, critical I would say, national  
261 and energy security missions. The breadth of DOE's  
262 responsibilities is impressive, Mr. Secretary. DOE's work,  
263 which is conducted here in Washington, D.C., and at national labs  
264 and field stations across the nation, includes maintenance of  
265 our nuclear weapons, support for international nonproliferation  
266 programs, and nuclear propulsion work with the U.S. Navy. It  
267 includes the cleanup of Cold War era environmental contamination  
268 and management/disposal of spent nuclear fuel and high-level  
269 radioactive waste.

270 DOE also supports cutting-edge, early-stage scientific  
271 research at our 17 national laboratories, including PNNL, which  
272 you and I got to visit in 2017. It establishes efficiency  
273 standards for appliances and equipment, conducts energy-related  
274 research/development, and demonstration across all forms of  
275 energy and technologies. It maintains the Strategic Petroleum  
276 Reserve and exercises authorities to respond to energy supply  
277 disruptions and maintain the resilience of our electric grid and  
278 pipeline systems.

279 DOE also provides central energy data collection and

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280 analysis through the Energy Information Administration, very  
281 valuable data for our public policy work. Managing this  
282 portfolio, as we all know, remains a challenge, which is why I  
283 believe that it is so important to stay focused on DOE's core  
284 missions.

285 During your time at the Department, Mr. Secretary, this  
286 committee, on a bipartisan basis, has sought to ensure that you  
287 have adequate resources and the statutory authorities required  
288 to align, manage, and fund programs to cost-effectively execute  
289 the Department's mission. Today, I hope you can update the  
290 committee on the progress you have made modernizing the Department  
291 of Energy and the challenges and opportunities that you see going  
292 forward.

293

294 Just a week ago, as you heard earlier, our Oversight  
295 Subcommittee examined the DOE's work to address environmental  
296 liabilities and what can be done to accelerate cleanup and save  
297 taxpayer money. This is of particular interest to me, as you  
298 know, given the Hanford site across the Columbia River from Oregon  
299 in my district. You and I saw firsthand the vast scope of the  
300 work that remains, and I would like to hear from you on how you  
301 plan to accelerate the cleanup at Hanford.

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302           Hanford, as with other major cleanup sites, initially  
303           provided for our nation's defense needs. In fact, over time it  
304           fostered technological and scientific capabilities that continue  
305           to benefit the nation on energy, environmental, and security  
306           matters. The Pacific Northwest National Laboratory was  
307           established as an R&D complex at Hanford for the Manhattan  
308           Project. Now it serves a broader range of missions for the  
309           nation. This technological and innovative capability that now  
310           threads through the Department's labs and field sites provides  
311           the tools for addressing future energy and security challenges.

312           You can see this in the tremendous advances in DOE's  
313           supercomputing capabilities that we talked about yesterday.  
314           Originally developed for weapons work, DOE supercomputers now  
315           promise tremendous advances across the agency's missions and  
316           national priorities, from carbon-free fossil energy to helping  
317           cure diseases. So, I am excited about the potential to utilize  
318           DOE's advanced computing to support the next wave of American  
319           innovation.

320           Now when you testified before us last year, Mr. Secretary,  
321           the committee had been moving legislation to help DOE enhance  
322           our energy security, spread the strategic benefits of our nation's  
323           energy revolution, and further our drive to reduce emissions.

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324       For example, we worked to streamline the export of LNG and nuclear  
325       technology. We sought to enable future innovations that would  
326       lead to a more reliable, modern electric grid. We sought to  
327       increase DOE's capabilities to prepare and respond to  
328       emergencies, including from extreme weather events. We sought  
329       to ensure DOE is able to develop the infrastructure for advanced  
330       nuclear energy currently being pursued by companies such as  
331       NuScale in Oregon and others.

332               So, I must say I am encouraged by the work you and your team  
333       are doing in support of transformative breakthroughs in  
334       carbon-free fossil energy, carbon capture technologies, advanced  
335       nuclear energy efficiency, advanced energy storage technologies,  
336       and modeling for increased energy resilience, all to lower  
337       greenhouse gas emissions and help consumers get affordable power.

338               I would like to understand how DOE could more effectively  
339       support innovation, how it can help bridge the gap between the  
340       lab and commercial development while minimizing taxpayer risk.

341       What can DOE do to attract and harness private capital to help  
342       accelerate deployment of future clean technologies? I also look  
343       forward to learning about your priorities to enhance DOE's  
344       capabilities to ensure the reliable delivery of power, given  
345       ongoing threats from bad actors.

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346           So, Mr. Secretary, how we harness DOE's incredible  
347           capabilities to support future energy innovation, security, and  
348           public interest, given ongoing budget constraints, will be our  
349           focus today, but I look forward to working with you on this and  
350           so much more going forward.

351           With that, Mr. Chairman, I yield back.

352           Mr. Rush. I want to thank the ranking member for yielding.

353           And now, it is my responsibility to introduce our witness  
354           for today's hearing, the honorable Rick Perry, who is the  
355           Secretary of the United States Department of Energy. Mr.  
356           Secretary, we certainly want to welcome you to the Energy  
357           Subcommittee, and we all look forward to your testimony and  
358           eagerly await your participation in this hearing.

359           So now, I will recognize the Secretary for 5 minutes for  
360           the purposes of an opening statement.

361           Mr. Secretary, you have been here countless times and you  
362           are well aware of the lighting system. So, we don't want to take  
363           time to explain something that you already know. So, with that,  
364           we recognize you for 5 minutes for an opening statement.

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365 STATEMENT OF HON. RICK PERRY, SECRETARY, U.S. DEPARTMENT OF ENERGY

366

367 Secretary Perry. Mr. Chairman, thank you very much. And  
368 to the members, thank you all for your kindness and hospitality,  
369 those of you that I have had the opportunity to be in your offices  
370 and in your districts as we are going forward.

371 Mr. Chairman, you have been so kind, as members of both sides  
372 of the aisle, to allow us to show you a brief video that I think  
373 will be substantially more interesting than me going on here for  
374 a minute and a half. But if I could, I would like to direct your  
375 attention over to --

376 Mr. Rush. Hearing no objection, so ordered.

377 Secretary Perry. Yes, sir, thank you.

378 [Video played.]

379 Secretary Perry. Mr. Chairman, again, thank you for the  
380 opportunity to show that. I think the stuff you talked about,  
381 I reflect a lot of excitement about the Energy Department and  
382 the men and women who work there, the technology that comes out  
383 of that. And you are absolutely correct. You all have heard  
384 me say this before. This is the coolest job I have ever had in  
385 my life.

386 And I might add, Mr. Pallone, this is the most interesting

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387 job I have ever had in my life, not the best, but the most  
388 interesting.

389 [Laughter.]

390 Anyway, to each of you, it is my privilege to be before you  
391 today and to respond to the 2020 budget request for the Department.

392 The budget is a request to the American people, through you,  
393 the Representatives, and Congress to secure America's future  
394 through energy independence, scientific innovation, and national  
395 security.

396 As I have already said, this is an exciting time, exciting  
397 time to be at the helm of DOE. It continues to be a great privilege  
398 to serve as the 14th Secretary of Energy. I look forward to  
399 working with each of you as we go forward, passing a budget that  
400 invests in the nation's priorities in energy and science and  
401 national security, while at the same time continuing our shared  
402 support of innovations that have led to America's world-leading,  
403 yet often overlooked progress in reducing energy-related  
404 emissions.

405 When I appeared before the committee last year, I committed  
406 to rebuild and restore our nation's security, to protect our  
407 critical energy infrastructure from cyber threats, to improve  
408 the resilience and the reliability of the nation's electrical

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409 system, to invest in early-stage, cutting-edge research and  
410 development, to advance our leadership in exascale and quantum  
411 computing, and to continue to seek a federal storage repository  
412 for the nation's spent nuclear fuel.

413 And concerning that last point, let me thank each of the  
414 members of the committee, certainly on both sides of this aisle,  
415 for you joined us in searching for a solution to deal with the  
416 waste disposal needs. I am proud to report that, since last year,  
417 DOE has advanced each of these goals that I just cited by investing  
418 in reliable, affordable energy, transformative innovation,  
419 national security. We are approaching the dawn of, as I made  
420 reference to in that film, the new American energy era, a time  
421 of energy abundance, security, and, yes, even independence.

422 This past fall I fulfilled a commitment to visit all 17 of  
423 the national labs, and I got to witness firsthand the brilliant  
424 that is performed by these dedicated professionals.

425 Mr. Rush. Mr. Secretary, I must say that you are on a hard  
426 deadline.

427 Secretary Perry. Yes, sir.

428 Mr. Rush. So, could you move --

429 Secretary Perry. Rock and roll, sir. I am ready.

430 Mr. Rush. Okay. Sorry.

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431 Secretary Perry. No, sir.

432 Mr. Rush. You are on a hard deadline here.

433 Secretary Perry. I am working for you, sir.

434 Mr. Rush. All right.

435 [The prepared statement of Secretary Perry follows:]

436 \*\*\*\*\* INSERT 1\*\*\*\*\*

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437           Mr. Rush. That concludes the opening statement, and I want  
438 to recognize myself for 5 minutes for the purposes of asking  
439 questions of our witness.

440           Mr. Secretary, as you made me aware, the energy workforce  
441 overall is currently dominated by older, white, male workers.

442           And this is also true within the clean energy sector, as women  
443 make up less than 20 percent of workers in the clean energy  
444 production and energy efficiency sectors, and less than 10 percent  
445 of these workers are African-American. Many of the  
446 recommendations for addressing these disparities are included  
447 in my workforce bill, H.R. 1315, including a focus on STEM  
448 education, aligning education and training with industry needs  
449 locally and regionally and increasing apprenticeships and  
450 on-the-job learning.

451           Mr. Secretary, within the past month alone, there have been  
452 three different studies that have been released discussing the  
453 need for a younger, more diverse, trained workforce within the  
454 energy sector. There was the Brookings study that I cited in  
455 my opening statement, a report by the Solar Energy Industries  
456 Association entitled, "Diversity Best Practices Guide for the  
457 Solar Industry," and an Alliance to Save Energy study entitled,  
458 "Growth in Energy Efficiency Demands Investment in a Highly

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459 Skilled Workforce".

460 Mr. Secretary, during your time as Secretary, have you  
461 personally heard from companies within the energy sector  
462 regarding their dire need to find trained workers? Are you aware  
463 that the energy workforce overall is mostly comprised of older,  
464 white men and that many sectors are looking to diversify their  
465 labor force by going into previously underrepresented  
466 communities? Do you believe that it is worth federal investment  
467 to support initiatives to accomplish this law?

468 Secretary Perry. Mr. Chairman, I am glad that you are  
469 excited and kept us focused on this issue of the potential in  
470 the clean energy sector in this country. According to the Bureau  
471 of Labor statistics, solar installers and wind technicians are  
472 projected to be two of the fastest-growing occupations in the  
473 U.S. as we go forward, and leading even the projected growth and  
474 demand for healthcare professionals. So, I think you are a  
475 spot-on in your focus on this, in developing that workforce.

476 American wind energy, Mr. Veasey, who is from my home State,  
477 he knows the work that we did together to expand the wind energy  
478 in the State of Texas. It produces more wind than all but five  
479 other countries, and an incredible impact into those rural areas  
480 where that showed up, and then, obviously, the jobs that get

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481 created, and what have you. It is a major job creator in America  
482 today. There is over 105,000 U.S. workers who have wind-powered  
483 careers. All 50 states are affected by this. And I think there  
484 is 242,000 U.S. workers that are employed in the solar side of  
485 it. So, that is just good news, and we look forward to expanding  
486 that. Ninety percent growth in the solar side in the last two  
487 years in this country.

488 Mr. Rush. Mr. Secretary, so you would think that this would  
489 be a priority for federal investment to --

490 Secretary Perry. Yes, sir. Yes, sir.

491 Mr. Rush. Okay. Thank you.

492 Mr. Secretary, both the majority and minority sides have  
493 been touch with your agency about obtaining data on the funding  
494 levels for workforce programs that the Department currently  
495 conducts. Understanding your staff has been working vigorously  
496 to get us that information, but I really wanted to know and to  
497 remind you that we are still waiting to hear back from you. And  
498 it is important to understand that this is, indeed, a priority  
499 for Members of both sides of the aisle. Will you commit to this  
500 committee --

501 Secretary Perry. Sure.

502 Mr. Rush. -- that you will make sure that we receive the

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503 data in a timely fashion?

504 Secretary Perry. Yes, sir. Yes, sir. And we have a couple  
505 of programs of which you have been briefed, and your staff has  
506 been briefed on. The Equity in Energy is the name of the new  
507 program. It was called Diversity in Energy, but we changed it  
508 over to Equity in Energy. And you will have that data, and we  
509 are working hard.

510 And just as an addition, Mr. Chairman, these XLab projects  
511 that we are working on where we bring the private sector in to  
512 our national labs, as a matter of fact, I think there is one coming  
513 in Argonne. You will, obviously, have more than a passing  
514 interest in Argonne because of your home of residence there in  
515 Chicago. But, anyway, it is an artificial intelligence and  
516 machine-learning project that is going to be working in the early  
517 fall of 2019. So, we obviously will invite you and your staff  
518 to be there as we do that.

519 But a great opportunity for us, not only to showcase the  
520 clean jobs, but also to recruit those young men and women, a  
521 diverse workforce, and maybe prick their interest in science and  
522 technology, engineering, and in math, to bring them into a future  
523 that is going to be not only exciting, but, obviously, a great  
524 opportunity for them to better their lives.

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525 Mr. Rush. I want to thank you, Mr. Secretary.

526 The chair now recognizes Mr. Walden, the ranking member on  
527 the full committee, for the purposes of questioning the witness.

528 Mr. Walden. Thank you, Mr. Chairman. I want to thank Mr.  
529 Upton, too, for yielding. I have a meeting I have to get to down  
530 at the White House.

531 Mr. Secretary, thanks again for being here.

532 Secretary Perry. Sure.

533 Mr. Walden. Thanks for your leadership at the agency. We  
534 work with a number of presidential appointees on this committee,  
535 and you are one of the best we work with in terms of communication  
536 with your team, and going back and forth with us on these energy  
537 policy issues.

538 Now there is one you and I talked about last year, and I  
539 think probably the year before, and everything else. And it  
540 should come as no surprise, related to the proposal to sell off  
541 the Bonneville Power Administration and the idea of selling it  
542 off. So, the question is, the idea of selling off Bonneville  
543 Power Administration's electricity transmission assets and  
544 abandoning cost-based rates is broadly rejected by practically  
545 every Member of the Pacific Northwest Congressional Delegation  
546 in the House and the Senate. Can you assure me the Department

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547 of Energy will not sell off BPA unless Congress provides explicit  
548 authorization?

549 Secretary Perry. I can assure you with great assurance that  
550 we will follow your direction, sir, and this committee, and  
551 Congress' direction.

552 Mr. Walden. Thank you, Mr. Secretary.

553 Now let's move on to innovation. I note this past week DOE  
554 announced a contract to build the Frontier supercomputer at Oak  
555 Ridge National Laboratory, which is anticipated to debut as the  
556 world's most powerful computer. Can you talk about the research  
557 benefits of DOE's supercomputer program?

558 Secretary Perry. That will be difficult in a short period  
559 of time, but I will do my best and I will talk fast, which is  
560 a pretty good test for an Aggie.

561 Mr. Walden. For a Texan.

562 Secretary Perry. But the breadth of what these  
563 supercomputers are allowing us to get answers for of questions  
564 that have vexed us in the past just because we did not have the  
565 computing capacity, we didn't have the bandwidth, if you will,  
566 to put all the data in to get the answers back. These computers,  
567 here is the speed of which they are, a billion billion calculations  
568 per second. I mean, I will be honest with you, I can't get my

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569 little mind around that, the ability to manage that much data.

570 But it gives us the potential in health care, for instance,  
571 to be able to find some cures for cancer, to go back through every  
572 dataset that has been done since time immemorial, on drug tests  
573 that ended up over in a pile. They were failures because we  
574 couldn't get to the final answer. Go back and take all of that  
575 data, and run it through these computers, because they are so  
576 powerful. And we will find new drugs to work on.

577 In brain science, and this is where Mr. McNerney and I were  
578 talking about it. I know of his interest in traumatic brain  
579 injury and the work that is being done there. We are in a  
580 partnership with the University of California, San Francisco,  
581 Dr. Geoffrey Manley out there, finding new solutions on traumatic  
582 brain injury, post traumatic stress, CTE, which obviously the  
583 professional football league is very interested in some of those  
584 studies. And that is just in the health care side.

585 Mr. Walden. What can you say about energy? Can we get to  
586 where coal could be burned with no emissions, do you think?

587 Secretary Perry. Here is my example, Mr. Chairman.  
588 Fifteen years ago, people told us we had found all the energy  
589 that there was to be found, you know, just get used to it. We  
590 have found it all. Even if you find any more, you won't be able

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591 to afford to produce it. Well, that conventional wisdom was  
592 massively wrong. I will suggest to you, those that say you can't  
593 use coal, for instance, in a clean, almost emission-free way,  
594 they can be proven wrong, too. And it is going to be these  
595 supercomputers that are working with our scientists. And I will  
596 suggest to you, the private sector and our national labs in  
597 partnership to find some energy solutions to this incredibly  
598 abundant resource that we have in this country. So, you are  
599 absolutely correct.

600 Mr. Walden. Let me go to a different topic, if I could.

601 We have spent a lot of time in this committee looking at nuclear  
602 waste storage. We appreciate your leadership in this, and we  
603 hope to renew that effort going forward, but, also, at how we  
604 harness new nuclear energy technologies. And so, I know that  
605 the Department is looking at doing some work on micronuclear as  
606 well as some of the other proposals, NuScale, and others. In  
607 the 20 seconds I have left, can you just give us a quick update  
608 on small modular and micro?

609 Secretary Perry. Yes, sir. The work that is being done  
610 in the agency, along with the private sector, INL, Idaho National  
611 Lab and NuScale, they are in a partnership out there. I know  
612 Bill Gates and his company, Terra Energy, they are a different

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613 technology, but these small modular reactors and these  
614 microreactors, the microreactor is even smaller from the  
615 standpoint of using these in our military and in places around  
616 the world.

617 And the small modular reactors also, not only are they  
618 smaller, they are cheaper, they are easier to build, and they  
619 are safer. The fuel that they use is safer. So, the future of  
620 clean energy has never been brighter than it is today.

621 Mr. Walden. Can you give me the horizon? Are we talking  
622 2 years, 10 years, 30 years?

623 Secretary Perry. 2025, if I am correct on that number, 2025  
624 is the projected date on some of the SMRs to be out with their  
625 prototypes.

626 Mr. Walden. All right. Thank you.

627 Thank you, Mr. Chairman, for your indulgence.

628 Mr. Rush. The chair now recognizes the chairman of the full  
629 committee, Mr. Pallone, for 5 minutes for questioning the witness.

630 The Chairman. Thank you, Chairman Rush.

631 I wanted to go back to the lightbulbs, Mr. Secretary. You  
632 recently proposed to rescind rules that would extend 2020  
633 lightbulb standards to the full range of bulb shapes and sizes  
634 commonly used in U.S. homes. And the effect of your proposed

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635 rule is to take back a standard that would save the average U.S.  
636 household about \$100 per year, and by saving electricity, would  
637 deliver very large reductions in carbon emissions. The comment  
638 period on the proposed rule closed last Friday. So, can you tell  
639 me how many comments you received in support of this proposed  
640 rule and who submitted comments in support?

641 Secretary Perry. Mr. Chairman, I will get that information  
642 to you. I don't have it at the tip of my -- if I may, can I respond,  
643 just to kind of share with you what we are doing?

644 The Chairman. Well, look, you can get back to me with the  
645 comments. I mean, I have something that was prepared by staff  
646 that gives us some information, like a summary, about it. So,  
647 I wanted to discuss that, if I could.

648 Secretary Perry. Yes, sir.

649 The Chairman. But if you would get back to me in answer  
650 to that previous question?

651 Secretary Perry. Absolutely.

652 The Chairman. I appreciate it.

653 Now the summary I have -- and I am not going to introduce  
654 it for the record because I would rather get your actual official  
655 document, if we could. But while the Department has been slow  
656 to get all comments posted so far, those opposing your rollback

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657 so far include more than 40 electric utilities; the U.S. Climate  
658 Alliance, which includes Republican and Democratic governors from  
659 24 states representing 60 percent of the U.S. population, and  
660 a wide range of consumer advocates, energy efficiency groups,  
661 and environmental groups. And also, 15 state attorney generals  
662 have opposed the proposal. To date -- again, I only have the  
663 information so far -- to date, the only organizations on the record  
664 supporting your action are the lightbulb manufacturers and their  
665 trade association. So, you have more than 15,000 citizen  
666 comments so far have been filed, with the vast majority opposed  
667 to the rollback.

668 So, again, Mr. Secretary, why is it that at the same time  
669 that DOE has missed 17 congressionally-mandated legal deadlines  
670 for updating a wide range of appliance standards, the Department  
671 is spending scarce time and taxpayer money on eliminating  
672 standards for lightbulbs that will save consumers money and cut  
673 carbon emissions? Why is it that you are so intent on going  
674 backwards on the lightbulb efficiency? Why has this become a  
675 priority?

676 Secretary Perry. Mr. Chairman, I think the bigger issue  
677 from my perspective is the challenge with the way that the statute  
678 is written. I will tell you, we are working hard to meet our

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679 legal obligations on this, but the deadlines for issuing  
680 regulations, whether it is appliances or equipment, I have  
681 instructed the staff to develop a plan to address the missed  
682 deadlines and that plan is in the forthcoming spring unified  
683 regulatory agenda.

684 The Chairman. But, you see, Mr. Secretary, no one -- I mean,  
685 I only have a limited amount of time, and I appreciate your being  
686 here -- but no one seems to agree with your proposal, not the  
687 utility industry, not the 15 state AGs, not consumer advocates.

688 As far as I can see, the only voice supporting your action is  
689 a handful of companies that want to keep on selling outmoded,  
690 grossly inefficient lightbulbs that are a bad deal for consumers  
691 and harm the environment. So, I just don't agree, and I don't  
692 really even understand your argument.

693 But, anyway, let me move on to the LNG. Mr. Chairman, we  
694 have only got a minute and a half here. Last December, DOE  
695 determined that liquified natural gas export volumes to  
696 non-free-trade agreement countries equal to 52.8 billion cubic  
697 feet a day, a volume equal to 71 percent of U.S. demand, is  
698 inconsistent with the public interest under the Natural Gas Act.

699 And DOE also stated it intends to approve LNG export applications  
700 of those countries up to this volume. And then, DOE has also

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701 approved LNG export volumes to free trade agreement countries  
702 equal to 58.1 billion cubic feet per day, and my understanding  
703 is that LNG export application approvals are for periods of 20  
704 to 30 years.

705 My concern with this, because we are running out of time,  
706 is the impact of these approvals on domestic supply and pricing;  
707 that these approvals are going to have a greater demand for more  
708 pipeline infrastructure. The communities and landowners bear  
709 the cost of building out the support for this enterprise. Have  
710 you ever denied any export application for LNG? Not just you,  
711 but has the DOE ever denied an export application?

712 Secretary Perry. I can't speak for prior administrations,  
713 but I can assure you that we have not, and if I am still the  
714 Secretary of Energy, we will not, because we have the most massive  
715 supply in the world, sir. The issue, if the question here is  
716 there are some folks over in the Northeast that are concerned  
717 about the availability or the cost of natural gas, it has got  
718 a lot more to do with the inability to build a pipeline across  
719 New York, for instance, to get into the Northeast than it does  
720 with our supply.

721 The American natural gas-producing regions of this country  
722 -- and we have only seen the tip of the iceberg. That is not

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723 my quote. That is the quote of the International Energy Agency  
724 head, Fatih Birol, last week when I was in the EU, telling the  
725 Europeans that we have more gas than they can purchase. So, I  
726 would suggest that this country is really blessed to have this  
727 low-emissions, this clean-burning fuel, and being able to build  
728 the infrastructure out across the country, so that all Americans  
729 can enjoy that fuel.

730 The folks in the Northeast are paying 40 percent more for  
731 their residential and 60 percent more for their commercial  
732 electricity because of the inability to move that natural gas  
733 into those regions and, then, use it. And I haven't even talked  
734 about the negative effect on our environment because of the fuel  
735 oil that is having to be burned instead of natural gas.

736 Mr. Rush. Mr. Secretary, we have a lot of members who want  
737 to ask questions.

738 Secretary Perry. Yes, sir.

739 Mr. Rush. So, will you be a little bit more succinct with  
740 your answers?

741 Secretary Perry. Yes, sir.

742 Mr. Rush. All right.

743 Secretary Perry. That one, I am just really passionate  
744 about, sir.

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745 Mr. Rush. Yes, I understand, but you have a hard deadline.

746 Secretary Perry. Yes, sir.

747 Mr. Rush. The chair now recognizes the gentleman, the  
748 ranking member of the subcommittee, Mr. Upton, for 5 minutes.

749 Mr. Upton. Well, thank you, Mr. Chairman.

750 I would like to get through three questions, if I can.

751 A number of decades ago, I worked for President Reagan, and  
752 I can remember him, when he signed the Nuclear Waste Policy Act,  
753 saying that this was going to be the bill that actually resolved  
754 the issue, certainly within the next 20 years. We are now 40  
755 years later, and this committee, as you know, voted 49-to-4 in  
756 the last Congress, widely bipartisan, to move John Shimkus' bill,  
757 which we passed with a pretty good margin on the House Floor.

758 For us to finish the job, the one thing that we really need  
759 to spend money on, I think, is to complete the licensing process  
760 at the NRC. Do you agree that that is the case? And can you  
761 commit to trying to help us get to that final stage?

762 Secretary Perry. Yes, sir. If you don't have the  
763 permitting process finalized, then you are not going to -- this  
764 is a map; every one of those red states has waste, and that is  
765 your plan. That is the repository for America.

766 Mr. Upton. And that is why we have to complete the licensing

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767 process.

768 Secretary Perry. Yes, sir.

769 Mr. Upton. We have to get that.

770 Secretary Perry. If we don't finish that licensing -- and,  
771 listen, I am not a Yucca-or-bust person. I am let's find a  
772 solution to this. Yucca is one of the solutions. But if you  
773 do not have a permitting process that is finalized, you are never  
774 going to be able to move this out of your states. And there are  
775 38 of them here. Your states are going to be the ones that are  
776 the final solution for this.

777 Mr. Upton. That is a good answer. That is a good answer.  
778 You can go to "Double Jeopardy" now, right.

779 There was a report earlier this week, a public report, that  
780 disclosed a cyberattack on March 5th. I don't know if you saw  
781 this story. "The Cybersecurity 202: a cyberattack just  
782 disrupted grid operations in the U.S. But it could have been  
783 fair worse. A recently disclosed hack at an electric utility  
784 in the Western U.S. crosses a disturbing new line." What can  
785 you tell us about that a couple of months later?

786 Secretary Perry. Yes. Well, we received the report about  
787 a denial-of-service condition that occurred at an electric  
788 utility. I think it was on or around the 1st of March of 2019.

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789 And the incident did not impact generation, the reliability of  
790 the grid, or cause any customer outages. We were in contact with  
791 that utility, and they are managing the incident coordination  
792 with their firewall manufacturer.

793 Mr. Upton. Any lessons learned from that experience?

794 Secretary Perry. Well, yes, when you get a direction to  
795 put a patch on your firewall, you need to put your patch on the  
796 firewall. I mean, it is pretty simple. They made an error.  
797 And so, we are trying to reiterate to the utilities, no matter  
798 what their size, when you get a directive to protect your firewall,  
799 you need to do it.

800 Mr. Upton. And are you working with the EEI to make sure  
801 that they pass that word along to all their member companies as  
802 well?

803 Secretary Perry. Yes, sir, and the Subsector Coordinating  
804 Council, the folks that deal with these issues, and our  
805 counterparts, if you will, in the private sector, yes, sir.

806 Mr. Upton. So, as you know, we are currently working, I  
807 think, on a Pipeline and LNG Facility Cybersecurity Preparedness  
808 Act. I have introduced a bill, H.R. 370, which codifies some  
809 of what DOE is currently doing on the coordination side and by  
810 authorizing R&D in pilot demonstration projects. Has the

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811 Department looked to this bill at all? Can you offer some  
812 support, some guidance in terms of what we need to do to make  
813 sure that we diminish any threat of cyberattack on our nation's  
814 pipeline system?

815 Secretary Perry. Yes, sir. Obviously, we will give you  
816 any technical information, any technical help that we can on  
817 developing it. And whatever you all decide, we are going to  
818 implement. We are coordinating and working with any threats that  
819 are out there, best practices. We manage the information flow  
820 with the private sector, I think, in a fairly positive way, in  
821 a fairly transparent way, to mitigate any of the challenges that  
822 we have got to best practices. The investment incentives, the  
823 cost recovery practices in the energy sector, pipeline security,  
824 we touch all of those. And I think we have got, for pipelines  
825 and the electrical grid, I think we have got a good flow of  
826 information and we are as on top of this as we can be.

827 Mr. Upton. I appreciate your leadership.

828 And I yield back.

829 Mr. Rush. The chair now recognizes Mr. Peters from  
830 California for 5 minutes.

831 Mr. Peters. Thank you, Mr. Chairman.

832 Thank you, Mr. Secretary, for being here.

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833           Last year we had a similar hearing where we were critical  
834           of the President's proposed budget. They cut a lot of things,  
835           and I think you were candid that some of this was not your idea.  
836           And ultimately, we were able to restore some of the investments  
837           that I think were important.

838           Let me make two observations about that this year, and then,  
839           I had a particular question for you. The first is on ARPA-E.  
840           The Trump administration's continued attempt to fully defund  
841           ARPA-E, which is the basic research component of the Department  
842           of Energy, it just doesn't make any sense. It is inconsistent  
843           with your own initial video that talks about innovation. I think  
844           we would all like to get behind that.

845           One of the largest ARPA-E grants ever awarded was in my  
846           district to a company called Achates Power. They successfully  
847           developed and opposed-piston engine that creates more power with  
848           lower toxic emissions and increased fuel efficiency, and it is  
849           such a great advance that it is now on the way to being the future  
850           engine of many U.S. Army vehicles. And I don't think you would  
851           dispute that that was an important investment for the country.  
852           It is not the kind of thing we want to defend.

853           Second, with respect to carbon capture, as you may know,  
854           I introduced the USE IT Act with my colleague from West Virginia,

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855 Mr. McKinley. There is an example of a West Virginian and a  
856 Californian working together on energy and an environmental  
857 issue. I think that is a good idea. It focuses on the need for  
858 increased investment in carbon capture utilization and  
859 sequestration technology as well as direct air capture  
860 technology.

861 The International Panel on Climate Change, IPCC, has said  
862 that carbon capture is going to have to be part of any strategy  
863 to get us to net carbon zero by mid-century. The Department of  
864 Energy, your own handout here says that you want to reduce the  
865 cost of carbon capture utilization and storage. That is great,  
866 but the commitment is not reflected in a 65 percent cut to CCUS  
867 in this budget. I am not asking for a response on that, other  
868 than to tell you that it is obvious that it is inconsistent with  
869 your goals, Mr. Secretary, as they are stated.

870 But I did want to ask you a particular question about  
871 subsidies. Earlier this week, the IMF updated a working paper  
872 on global fossil fuel subsidies; reported the annual global  
873 subsidy for fossil fuels at \$5.2 trillion. The United States  
874 contributes the second largest portion of that, behind only China,  
875 subsidizing energy efforts that are not part of our sustainable  
876 future. According to the report, quote, "Removing those

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877 subsidies would lower global emissions by 28 percent and deaths  
878 from air pollution by 46 percent." It is my understanding that  
879 the amount that the DOE proposes to subsidize fossil fuels is  
880 \$489 million. Is that your understanding?

881 Secretary Perry. If that is what your numbers show, sir.  
882 I don't know that off the top of my head, but --

883 Mr. Peters. This is from the handout.

884 Secretary Perry. Yes, sir. Yes, I would stick with that.

885 Mr. Peters. And I would just ask you, how is it appropriate  
886 for us to subsidize parts of the fossil fuel industry that are  
887 so mature? Is that really the right role for government? And  
888 I am asking you as rock-ribbed conservative Texan. Is that really  
889 the way we want to use the money, government taxpayer money, to  
890 subsidize a mature industry like fossil fuel extraction?

891 Secretary Perry. Here is what I see, sir. I see the United  
892 States and our fossil fuel industry, particularly through the  
893 development of our natural gas, then turned into liquified natural  
894 gas -- we drove down the emissions in the State of Texas by a  
895 substantial margin. I will just give you the numbers quickly.

896 Sixty percent on SOx, 50 percent on NOx, almost 20 percent on  
897 the carbon dioxide side of it, in the period of time from about  
898 2007 through 2015, while I was the governor there, while we were

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899 leading the nation in the creation of jobs and wealth, I might  
900 add. That occurred because of the transition that we did from  
901 old, inefficient power plants to clean-burning natural gas.

902 So, I will make the statement -- and I think we will stand  
903 by it -- that the tax incentives, the other ways that they  
904 calculate a subsidy of the fossil fuel energy, that will have  
905 a massive amount of impact as American LNG goes to Europe to take  
906 out old, inefficient power plants and transition away from coal  
907 plants in Germany, for instance. So, I think that the tax  
908 subsidies that occur to continue to get American technology into  
909 these countries and American natural resources, like our LNG,  
910 is absolutely a good investment of our tax dollars.

911 Mr. Peters. Mr. Secretary, just so we are not confused,  
912 I am not even talking about the tax subsidies. This is direct  
913 spending on subsidies out of the Department of Energy.

914 Secretary Perry. I still support them, sir.

915 Mr. Peters. And I would say, from my perspective, and I  
916 think if you look at your goals, to be able to spend \$489 million  
917 on ARPA-E, which was \$366 million last year, is a lot more  
918 cost-effective.

919 And I yield back.

920 Mr. Rush. The chair now recognizes Mr. Latta for 5 minutes.

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921 Mr. Latta. Well, thank you, Mr. Chairman.

922 And, Mr. Secretary, thank you very much for being with us  
923 today. Good to have you back.

924 The Department of Energy has important responsibilities to  
925 secure the nation's energy infrastructure against all hazards,  
926 including severe weather, reduce the risk of potential  
927 cyberattack, and to assist with energy restoration and recovery  
928 efforts. DOE's newly-created Office of Cybersecurity, Energy  
929 Security, and Emergency Response leads these efforts.

930 And I would like to kind of follow up on the ranking member's  
931 questions a little bit on strengthening. I know you talked about  
932 the situation with the patch that should have occurred, but would  
933 you talk about your efforts to strengthen the nation's energy  
934 infrastructure against cyberattacks?

935 Secretary Perry. Sure. That is the reason that the CESER  
936 office was stood up. The Department of Energy is the  
937 sector-specific agency dealing with our electrical grid. We  
938 obviously work with our partners at DHS and at U.S. DOT on the  
939 pipeline side of it, too. But the SCADA systems and the  
940 cybersecurity aspects, cybersecurity is an integral part of  
941 energy security. And that is assessing the risks, the  
942 vulnerabilities that occur, both by natural disasters and by

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943 manmade. So, it is not all about the manmade attacks, if you  
944 will, the viruses that get put in place. This is also about how  
945 are we going to deal with hurricanes; how are we going to deal  
946 with polar vortex that comes in and knocks out -- how you manage  
947 and have this diverse portfolio.

948 I think one of my jobs is to make sure that Americans  
949 understand that, if we don't have this baseload of electricity  
950 out there that is 24/7, and frankly, onsite, which is basically  
951 either nuclear or coal, because all the others are interruptible  
952 in some form or fashion. But I think it is good to have that  
953 conversation with Americans, that if we had a triple whammy, if  
954 you will, if we had a polar vortex and we had a cyberattack that  
955 occurred at the same time, along with a physical attack on a  
956 pipeline, how that could massively affect the Northeast, for  
957 instance, the city of New York with the millions of people that  
958 live there.

959 So, we want to make sure that Americans know, No. 1, that  
960 we have the technical ability to deal with this; that we are very  
961 good at analyzing and blocking the attacks that come, and we keep  
962 our private sector partners advised of this. And we have a number  
963 of our private sector utility types that come in that we have  
964 the ability to brief them on classified information about what

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965 is happening in the cybersecurity front.

966 Mr. Latta. I appreciate that because I know in my district  
967 and when I go across the State of Ohio with the folks that are  
968 not only producing the power, but transmitting that power, the  
969 amount of time and energy, and all, that they are taking now just  
970 because of the cyber threats that they face every day, and it  
971 is interesting, when you talk to the customers out there, they  
972 don't realize what is being transferred over just to try to make  
973 sure that those threats aren't done. And I am glad and it is  
974 very important that information is transmitted back to all these  
975 individuals and companies that you deal with.

976 If I could, in my last minute, real quick, if I may, I am  
977 also very interested in the ENERGY STAR program, which you may  
978 know had the appliance portion managed by DOE from 1994 to 2009.

979 In 2009, the previous administration moved the appliance  
980 manufacturers into have a dual-management that is split between  
981 DOE and EPA. And so, these companies out there now are faced  
982 with duplicative reporting requirements and a lot more red tape  
983 that is added up to about \$35 million annually, according to the  
984 Association of Home Appliance Manufacturers. And just in my last  
985 30 seconds, would it make more sense and fit with the  
986 administration's goal to cut that red tape to return that

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987 management back to DOE?

988 Secretary Perry. I am sorry, as your last question again,  
989 sir? I was distracted. I apologize.

990 Mr. Latta. Would it make more sense to have DOE on the ENERGY  
991 STAR split between EPA and DOE, have it just being underneath  
992 the DOE?

993 Secretary Perry. Yes, sir.

994 Mr. Latta. I appreciate that answer.

995 Mr. Chairman, my time has expired and I yield back.

996 Mr. Rush. The chair now recognizes Mr. Doyle for 5 minutes.

997 Mr. Doyle. Thank you.

998 Secretary Perry, welcome back to the committee.

999 Investment in research and advanced technologies, it is  
1000 critical if we are going to reduce harmful emissions from fossil  
1001 energy sources like coal and gas. And in your testimony you  
1002 mentioned your commitment to R&D, particularly for fossil energy.

1003 But the DOE budget cuts funding for fossil energy programs by  
1004 25 percent, including 24 percent to the fossil energy research  
1005 and development, which is vital for funding the National Energy  
1006 Technology Labs in Pittsburgh and in Morgantown, West Virginia.

1007 Mr. McKinley and I had sent a letter requesting \$100 million  
1008 increase in this category, and what we got was \$178 million

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1009 decrease. I would just like to say that what you say your goals  
1010 are and what your budget says are diametrically opposite, and  
1011 it is puzzling to see where the commitment is.

1012 Let me also echo what Mr. Peters says. It is craziness to  
1013 eliminate ARPA-E. I mean, this is a program that is focused on  
1014 high-risk, high-reward innovation, particularly when it is clear  
1015 that the industry is not going to take on this kind of risk and  
1016 other DOE offices haven't quickly produced this type of  
1017 early-stage, high-risk technology. Cutting this program makes  
1018 absolutely no sense. And again, it seems contrary to the goals  
1019 that you state that the Department has.

1020 Now let me give you a compliment. I am glad to see that  
1021 your budget focuses on energy storage. I have introduced the  
1022 Energy Storage Tax Incentive and Deployment Act to expand the  
1023 investment tax credit to encompass battery storage technologies.

1024 I think that is a critical component needed to expand our use  
1025 of renewables and strengthening our grid. So, I appreciate your  
1026 focus on this initiative and I look forward to working with you  
1027 on that.

1028 Let me ask you, Secretary Perry, yesterday Exelon announced  
1029 that Three Mile Island would prematurely retire in September.

1030 This means the loss of carbon-free baseload power and it means

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1031 the loss of a lot of good-paying jobs. And we know that, as  
1032 nuclear plants are prematurely being retired, this energy is being  
1033 replaced by coal and natural gas, which is putting more greenhouse  
1034 gases up into the air. Now I have had concerns with the NOPR  
1035 proposal or the FirstEnergy 202(c) proposal, but I still support  
1036 the nuclear industry because we can't meet our climate change  
1037 goals and obligations without it. So, tell me, what are other  
1038 options that are available to address this issue for nuclear power  
1039 plants across the country that are starting to close down  
1040 prematurely?

1041 Secretary Perry. Mr. Doyle, we totally agree with you on  
1042 your observation about you cannot meet your goals, no matter where  
1043 you may land in the spectrum out there, for the fight to reduce  
1044 emissions without nuclear. So, you ask what some of the options  
1045 are, and I think they are twofold.

1046 One, having been a governor, I think it would behoove the  
1047 states that have nuclear plants to look at whether or not they  
1048 want to at the state level subsidize those plants. Listen, I  
1049 don't necessarily think that the word "subsidy" is a bad term.

1050 I believe that it is up to the people to decide, do you want  
1051 to have these options, this diversity of energy sources? Nuclear  
1052 is, I think, one of the most important ones.

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1053           So, that is on the old plants that are there today and to  
1054           extend their life cycles. And those can be done, and they can  
1055           be done safely. How we deal with that waste is part of it, but  
1056           the other side of this is --

1057           Mr. Doyle. Yes, but, Mr. Secretary, it is beyond the ability  
1058           of a lot of states to do what you are suggesting. And your  
1059           responsibility, as Secretary of the Department of Energy, is for  
1060           our national energy portfolio. We know that nuclear is about  
1061           25 percent of that portfolio, and that if we start to lose --  
1062           we are not building new plants because they cost so much money  
1063           -- if we start to lose existing ones prematurely, our greenhouse  
1064           gases go nowhere but up.

1065           I want to ask you one final question. Worker safety is a  
1066           priority of mine, especially for workers employed in  
1067           environmental remediation and decontamination, because they have  
1068           an uncreased risk of exposure to harmful substances.  
1069           Incorporating robotics into remediation for hazardous or  
1070           radioactive material can not only increase the efficiency of  
1071           remediation, but it protects workers also. What is the  
1072           Department doing to incorporate robotics into cleaning up sites?

1073           Secretary Perry. Yes, sir, we are, obviously, working with  
1074           that. As a matter of fact, we have some projects. Fukushima

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1075 is one of those that the Department is working with the folks.

1076 I actually was over there a year-plus ago to observe at an  
1077 appropriate distance --

1078 Mr. Doyle. I see our time is up. I am going to respect  
1079 Mr. Rush. Thank you, Mr. Secretary.

1080 Secretary Perry. So, the robotics side of it, we are working  
1081 with that. So, our national labs are working with that.

1082 Mr. Rush. The chair thanks the gentleman, and the chair  
1083 now recognizes Mrs. McMorris Rodgers for 5 minutes.

1084 Mrs. Rodgers. Thank you, Mr. Chairman.

1085 And welcome, Secretary Perry. I, too, want to join in  
1086 applauding your enthusiastic leadership at the Department of  
1087 Energy to lead the drive to a new American energy era.

1088 And energy innovation is the key. On this committee, we  
1089 are regularly debating the best ways to promote new American  
1090 energy. And today, because of American ingenuity, we are  
1091 celebrating energy independence. We are celebrating a booming  
1092 economy, and we are also celebrating the fact that we are leading  
1093 the world in bringing down harmful carbon emissions.

1094 In eastern Washington, I am proud to represent many who are  
1095 on the forefront of these energy solutions, research and  
1096 development, production and storage. Right now, there is an

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52

1097 exciting partnership between Washington State University and  
1098 PNNL.

1099 I just wanted to ask you to share some of the details, some  
1100 of the work that is being done at the Department of Energy right  
1101 now on grid modernization space or within grid modernization,  
1102 and how the work of PNNL is benefitting those efforts. I also,  
1103 in that line, wanted just to ask you what you believe needs to  
1104 be done to ensure that the United States remains on the forefront  
1105 of innovation and grid modernization, and do you fear that other  
1106 countries may ultimately surpass the United States in this field?

1107 Secretary Perry. Thank you.

1108 A great example of what we are doing, I think, and it kind  
1109 of goes to Mr. Peters, when you talked about ARPA-E, and I do  
1110 have a rather strong commitment to the whole concept of  
1111 public-private partnerships and working those together. And  
1112 sometimes the budget doesn't reflect the commitment that I have,  
1113 that the agency has, and through some of our cross-cutting. And  
1114 this is one of the great examples of it, of the private sector  
1115 working with us. At Idaho National Lab, for instance, we actually  
1116 operate a grid out there, a standalone grid where we can go in  
1117 and break things and put viruses on, and to really put these  
1118 electrical grids to the test. And we have got very capable

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1119 private sector partners.

1120           And so, one of the things we are focusing on is resilience  
1121 modeling, you know, grid services that energy storage could  
1122 provide for us in this case; you know, advanced sensors. There  
1123 is the institutional support that comes along with that. I think  
1124 we have some \$200 million at DOE in FY16 through '18 for those  
1125 types of services.

1126           And again, the Grid Modernization Initiative is something  
1127 that we certainly support. The Grid Modernization, GMLC, Lab,  
1128 \$40 million for some foundational work from our applied energy  
1129 program. So, we have got multiple offices, and this is kind of  
1130 our philosophy, particularly on the area that ARPA-E and the folks  
1131 that support ARPA-E and that concept of advanced research, this  
1132 is a great example of some of the foundational work that DOE is  
1133 still involved with, and I think it doesn't get counted towards  
1134 ARPA-E conceptually, but it is the type of cross-cutting  
1135 management that we try to do at DOE that keeps these types of  
1136 programs alive and going, although the old ARPA-E structure, the  
1137 money doesn't flow through it.

1138           Mrs. Rodgers. Okay. Thank you.

1139           On another note, I just wanted to give you -- others have  
1140 brought up Hanford. I wanted just to ask you in the time remaining

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1141 what you believe could be done, should be done to ensure that  
1142 the site is cleaned up in a timely and cost-effective manner.

1143 Secretary Perry. Yes, and we are making some progress.  
1144 I mean, that was one of the biggest frustrations that I saw when  
1145 I came to DOE, was the massive amounts of money that had been  
1146 done in the past. There hadn't been a baseline study done on  
1147 that thing for, I think, the previous nine years. And we went  
1148 in and did that, and it was a shocking amount of money that is  
1149 going to be needed. But we are making progress.

1150 For instance, I know Chairman Walden cares about that  
1151 Columbia River, as do you. The last reactor is going to be cleaned  
1152 up. We are going to be able to go announce the last reactor in  
1153 the basin of the Columbia River this fall. So, we are making  
1154 some progress there, the low-level waste facility over there.

1155 I mean, we are ready to move some of that material out of the  
1156 region and go to either some interim, or, obviously, I am looking  
1157 for some permanent wastesites in this country as well.

1158 So, I think we are making some pretty darn good progress  
1159 out there. We have got a couple of those tunnels now grouted  
1160 and filled. And so, there are some good stories. It is going  
1161 to be a long time and it is going to cost a hell of a lot of money.

1162 Mrs. Rodgers. Okay. Thank you.

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1163 Secretary Perry. But we are making some good progress.

1164 Mrs. Rodgers. And thanks for being here.

1165 I yield back.

1166 Mr. Rush. The chair recognizes Mr. Sarbanes for 5 minutes.

1167 Mr. Sarbanes. Thank you, Mr. Chairman.

1168 And thanks, Secretary, for being here.

1169 Secretary Perry. Sure.

1170 Mr. Sarbanes. You said a moment ago that sometimes the  
1171 budget doesn't reflect the commitment you have and the agency  
1172 has on certain things.

1173 Secretary Perry. Yes.

1174 Mr. Sarbanes. So, how do we solve for that here? Because  
1175 the budget is obviously reflecting something. And I guess you  
1176 are between a rock and a hard place, the rock being your personal  
1177 commitment, if I can give you credit for that, and wanting to  
1178 invest in these things, and the hard place being orders that are  
1179 coming from someplace else in the administration, where that  
1180 commitment is not as strong.

1181 So, I am looking at the Office of Energy Efficiency and  
1182 Renewable Energy, which has done some great work over the years.

1183 I mean, I think some of the estimates on the return on investment  
1184 there, that it has netted about \$230 billion for the taxpayers,

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1185 which is just incredible. But the budget you have brought here  
1186 today would cut that office by 86 percent.

1187 And then, you look at the Solar Energy Technologies Office.  
1188 Again, they have done terrific work. It has been an economic  
1189 driver, generating economies, employing over 240,000 Americans,  
1190 \$17 billion of investment in the nation's economy. And these  
1191 are award-winning numbers by any measure, helping to keep driving  
1192 the cost, commercial cost, of solar energy down because of the  
1193 continuous attention and focus that that office brings. And that  
1194 office in your budget would be reduced by 70 percent.

1195 Last year when you were here, we were talking about the  
1196 importance of the Solar Energy Technologies Office's work, how  
1197 it was helping to make solar electricity more affordable. In  
1198 Baltimore, we have been working on a project that DOE was a partner  
1199 in to bring this opportunity to low-income homeowners, create  
1200 a workforce pipeline in the solar industry for people in some  
1201 of the hard-hit parts of Baltimore City, et cetera.

1202 So, I guess the first question is, do you agree that this  
1203 Solar Energy Technologies Office has done good work and helps  
1204 to improve affordability, reliability, and performance of solar  
1205 technologies on the grid? And how can they continue to do that  
1206 good work if they are going to experience, according to the budget

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1207 request you are making, a 70 percent cut in their resources?

1208 Secretary Perry. The short answer is, yes, sir, I do think  
1209 that that office and the whole of EERE and what they do -- and  
1210 as a matter of fact, in March, we announced the largest-ever solar  
1211 funding opportunity. It was \$130 million in new research to  
1212 advanced early-stage solar technologies.

1213 Speaking specifically to this line item that you make  
1214 reference to, the Solar Energy Technologies Office, we had a FOA  
1215 reissue and it went through the process. And on the 25th of March,  
1216 we announced, I think, \$36 million worth of projects there.

1217 So, there are two things that I would like to just lay out  
1218 for your consideration. One is you have made reference to, and  
1219 you are absolutely correct, the historic progress and the historic  
1220 winds, if you will, that EERE has had historically. And now,  
1221 we are seeing the industry, both solar and wind, become  
1222 substantially more mature and be able to stand on its own two  
1223 feet, so to speak, and not be requiring the amounts of dollars  
1224 that we had historically. So, I hope there is some recognition  
1225 about the shifting of dollars has been because of the maturing  
1226 of the wind and the solar energy.

1227 As a matter of fact, since 2016, since this administration  
1228 has come into office, there has been a 90 percent increase in

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1229 the growth of the solar --

1230 Mr. Sarbanes. Let me just interrupt because I have got 5  
1231 seconds. I understand your argument about it matures and maybe  
1232 the investment doesn't have to be at the same levels. But I think  
1233 if you maintain that investment, you will keep us on the cutting  
1234 edge. We will be more competitive compared with our peers around  
1235 the world than if we start to pull back from that investment.

1236 So, I hope you will reconsider this as we move forward.

1237 And I yield back.

1238 Mr. Rush. The chair now recognizes the gentleman from West  
1239 Virginia, Mr. McKinley, for 5 minutes.

1240 Mr. McKinley. Thank you, Mr. Chairman.

1241 And, Mr. Secretary, welcome again back to this, and thank  
1242 you.

1243 There are several things I would like to run past you a little  
1244 bit. I liked your opening film clip about energy independence  
1245 in the new era. Can you give us a perspective, however, of what  
1246 is happening in New England? Because I don't know that we can  
1247 suggest, or should be offering, that New England is  
1248 energy-independent. Especially last year in Boston Harbor there  
1249 was an LNG tanker from Russia providing LNG gas to New England,  
1250 and the fact that other New England states and across the country

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1251 were importing 73 terawatt hours of electricity from Canada.  
1252 That, in and of itself, doing some rough math, represents about  
1253 9 percent of the population in this country of America is getting  
1254 its electricity from Canada. So, could you address a little bit,  
1255 just briefly, on that? Because I have got two other questions.

1256 Secretary Perry. Mr. McKinley, I think what you bring up  
1257 here is really important, and I touched on it a little earlier  
1258 when I think Mr. Pallone and I were having our discussion. But  
1259 being able to deliver energy, U.S.-produced energy, to the  
1260 totality of the United States is really important. What the  
1261 President talked about in his Executive Order on infrastructure  
1262 was, I think, spot-on, of focusing on our ability to deliver the  
1263 energy all across this country. And by and large, that is going  
1264 to be in the form of natural gas. It is going to be in the form  
1265 of nuclear energy, and it is going to be in the form of coal-powered  
1266 energy flowing from, you know --

1267 Mr. McKinley. But we are at the discretion, unfortunately,  
1268 as we are finding out -- that is my second question -- of how  
1269 states are interacting with the 401 permitting process. We have  
1270 got now four states -- New York, Washington, Maryland, and now  
1271 Oregon -- that have stepped in and said they are going to use  
1272 this federal permitting process to prevent us from using fossil

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1273 fuels or crossing fossil fuels in their state. I am just  
1274 wondering, where is the administration in the pushback about this  
1275 commerce clause? Is that troubling --

1276 Secretary Perry. Yes.

1277 Mr. McKinley. -- the administration?

1278 Secretary Perry. Yes, sir, it is. As a matter of fact,  
1279 the President talked about it yesterday during the Cabinet  
1280 meeting, Mr. Chairman. He brought it up. Sonny Perdue and  
1281 myself are both former governors. And I wrote a book about the  
1282 10th Amendment. I am kind of on the record of being a pretty  
1283 strong proponent of states being able to decide what is in their  
1284 best interest.

1285 With that said, I think it does beg the question, is it in  
1286 America's national security for a state to block a pipeline that  
1287 is going to have an impact from a national security standpoint?

1288 At that particular point in time, I think both the Commerce Clause  
1289 and the national security of this country trumps a state being  
1290 able to stop a pipeline going across, for whatever reason that  
1291 might be.

1292 And not even to mention what it is doing to the citizens  
1293 of the Northeast from the standpoint, when they are having to  
1294 pay 60 percent more for energy, when the emissions are going up

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1295 because they are having to use fuel oil instead of natural gas,  
1296 I mean, not only are they affecting the environment in a very  
1297 negative way, their citizens are having to pay more expensive  
1298 energy.

1299 So, this isn't just about this issue of is it okay for the  
1300 governor of New York to stop a pipeline going across the state.

1301 The citizens of New York need to be engaged in this conversation  
1302 as well about the cost of their energy. And then, all of the  
1303 people of the Northeast need to be talking about here is what  
1304 you are doing to our environment because you choose to block a  
1305 natural gas pipeline going across your state.

1306 Mr. McKinley. Thank you. So, I am hoping the  
1307 administration gets active in joining other states that are trying  
1308 to fight back against this. I know we have got the Crow Tribe  
1309 in Montana is trying to ship gas or coal across, export it, and  
1310 they are being blocked.

1311 But let me close in the 10 seconds I have on, can you give  
1312 us an update of what is going on with the status of petrochemical  
1313 complex in the Appalachia?

1314 Secretary Perry. Sure.

1315 Mr. McKinley. I know the President has called for a study  
1316 to see if that is not something for energy independence --

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1317 Mr. Rush. The gentleman's --

1318 Secretary Perry. It is going forward.

1319 Mr. Rush. Thank you, Mr. Secretary.

1320 Mr. McKinley. Thank you.

1321 Mr. Rush. Let me remind members, please be succinct with  
1322 your questions. We have 18 members who have not asked questions,  
1323 and we have a hard conclusion at 12:30.

1324 Secretary Perry. Yes, sir.

1325 Mr. Rush. So, please.

1326 The chair now recognizes Mr. McNerney for 5 minutes.

1327 Mr. McNerney. I thank the chairman.

1328 I thank Secretary Perry for coming here this morning. I  
1329 appreciate your diligence in running the Department and, also,  
1330 your passion about traumatic brain injury. I hope we get to work  
1331 together on that issue.

1332 Secretary Perry. Yes, sir, absolutely, we will, sir.

1333 Mr. McNerney. Well, I am sure you can know that I am not  
1334 thrilled about the Department of Energy's proposed budget. A  
1335 10 percent reduction in environmental management, an 8 percent  
1336 reduction in the Office of Science, 86 percent reduction in energy  
1337 efficiency and renewable energy. My gosh, a complete elimination  
1338 of RPE. None of these are acceptable, and Congress will create

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1339 its own budget that looks a lot more like last year's. I am sure  
1340 you are aware of that.

1341 So, tell me, how committed is the Department of Energy, and  
1342 how committed are you, to reducing carbon emissions?

1343 Secretary Perry. I think our record, I will stand on our  
1344 record, sir. Not only did I bring to the agency, as my work as  
1345 the governor of Texas, the State that was reducing emissions as  
1346 much as any state in the nation, but this country is doing it  
1347 as well. So, we have got a great story to tell about our emissions  
1348 reduction. I think we can help the world by selling them American  
1349 LNG and by getting our products, not only our natural resources,  
1350 but also our technology and our innovation --

1351 Mr. McNerney. Well, I mean, LNG sounds good, but LNG has  
1352 fugitive emissions, both at the wellhead and throughout the  
1353 system.

1354 Secretary Perry. Yes, sir.

1355 Mr. McNerney. Emissions of natural gas are worse by a factor  
1356 of 20 maybe than carbon. So, we have a lot of cleaning up to  
1357 do. We are not there where we need to be, and I am sure you  
1358 understand that.

1359 Let me ask you a question about cyber. I have introduced  
1360 two cyber bills on grid security with my friend, Bob Latta. And

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1361 that will promote a partnership with industry to mitigate physical  
1362 and cyber risks. So, how did the CESER office learn about the  
1363 March 5th denial-of-service attack on the SCADA system? That  
1364 affected Western states. And when did they notify the utilities  
1365 to be more watchful?

1366 Secretary Perry. Well, we were in contact with the  
1367 utilities. And I will suggest to you we have very timely -- I  
1368 can't tell you time and hour at this particular point in time.

1369 I can get that to you as best I can. But we not only facilitated  
1370 contact with the Department of Homeland Security and their hunt  
1371 and incident response teams and the FBI --

1372 Mr. McNerney. So, is that how you learned about the attack?  
1373 How did you learn about the attack? How did the Department of  
1374 Energy learn about the --

1375 Secretary Perry. Our Emergency Management Office was  
1376 contacted.

1377 Mr. McNerney. Well, it is clear that we should work with  
1378 industry, government and industry, to create public-private  
1379 partnerships to make the utilities more secure.

1380 And in a desire to move on, as I mentioned, the budget would  
1381 cut the Renewable Power Office by 86 percent. That is  
1382 disappointing to me personally since I spent a career developing

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1383 renewable energy. Specifically, however, the budget intends on  
1384 ending the origination of new loans in the Loan Program Office.  
1385 However, Congress has been repeatedly funding this office at  
1386 over \$20 million a year. Has the office continues to process  
1387 loan applications and do due diligence on the applications, as  
1388 Congress intended?

1389 Secretary Perry. Yes.

1390 Mr. McNerney. Good. I am glad to hear that. Thank you.

1391 Secretary Perry. Succinct.

1392 Mr. McNerney. We are following the chairman's --

1393 Secretary Perry. We are making progress, Mr. Chairman.

1394 [Laughter.]

1395 Mr. McNerney. Thank you.

1396 Nuclear waste, I have been a strong voice in dealing with  
1397 nuclear waste. We have nuclear waste, a lot of nuclear waste,  
1398 around the country sitting in poorly-secured sites. Any  
1399 solution, however, absolutely must work with nearby communities,  
1400 which we have seen fail in the past. However, on October 10th,  
1401 2018, the DOE issued a public notice about the way it interprets  
1402 the words "high-level nuclear waste". If this were suddenly  
1403 reinterpreted or reclassified, then the DOE could dispose of it  
1404 in less secure sites. Can you tell us how much high-level

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1405 radioactive waste the Department is considering reclassifying?

1406 Secretary Perry. Mr. McNerney, here I think what is really  
1407 important for us to have a conversation about and be very open,  
1408 this issue is about identifying not where waste comes from,  
1409 whether it is from a weapons program or whether it is from a civil  
1410 nuclear program. And that is how we decide where this waste goes  
1411 at this particular point in time. I think it makes abundant good  
1412 sense for us to identify this waste by its radioactivity levels  
1413 rather than where it comes from. And that is what we are talking  
1414 about doing, is being able to put waste where it needs to be,  
1415 based on its radioactivity and the strength of that radioactivity,  
1416 rather than where it came from. And that is what we are trying  
1417 to decide.

1418 Mr. Rush. Thank you, Mr. Secretary.

1419 Mr. McNerney. I yield back.

1420 Mr. Rush. The chair now recognizes the gentleman from  
1421 Illinois for 5 minutes.

1422 Mr. Kinzinger. Thank you, Mr. Chairman.

1423 And, Mr. Secretary, thank you again for being here.

1424 I am concerned about the news this week that our European  
1425 and NATO ally, Romania, is now seriously considering doing  
1426 business with a Chinese state-owned enterprise, China General

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1427 Nuclear Power Group. Just this week, the Romanians signed a  
1428 preliminary agreement with the Chinese to refurbish and build  
1429 multibillion dollar nuclear reactors in Romania. We have  
1430 American companies vying for the project that have been shut out  
1431 by the Romanian government because of this growing Chinese  
1432 influence in Bucharest. To make matters worse, these two new  
1433 Romanian nuclear reactors near the Black Sea sit merely 30 miles  
1434 from Camp MK, where we have boots on the ground. Mr. Secretary,  
1435 from a national security standpoint, do you have concerns with  
1436 the Chinese investment in the energy infrastructure of our NATO  
1437 allies such as Romania?

1438 Secretary Perry. Yes.

1439 Mr. Kinzinger. Luckily, the agreement between Romania and  
1440 China is not yet finalized. So, how can we engage with our  
1441 partners in Romania to ensure that the bidding process for these  
1442 projects is fair and transparent?

1443 Secretary Perry. We are headed back over in that part of  
1444 the world the first week of June. I was just back from Brussels,  
1445 meeting with the Deputy Prime Minister of Romania this last week.

1446 We are in active engagement with our allies and our friends in  
1447 the European theater on the U.S. engagement on civil nuclear  
1448 projects. It is incredibly important for the future of the U.S.

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1449 civil nuclear industry to be engaged there, to be partners with  
1450 them, to develop the new technologies. Because if we don't, then  
1451 at some point in time -- and the challenges that we face in America  
1452 today are pretty abundant and pretty clear, when we have only  
1453 got one project that is ongoing today building a new reactor.

1454 It is why small modular reactors and the work that we are doing  
1455 on funding those small modular reactors is so important going  
1456 forward. So, yes, sir.

1457 Mr. Kinzinger. Excellent. Thank you.

1458 And this question, you can take as much time as I have left  
1459 to answer it. But the U.S. is now predicted to be a net energy  
1460 exporter, as you have well noted. That is a stunning turnaround  
1461 from about 15 years ago, when we thought our own resources were  
1462 dwindling and we would be forever reliant on foreign energy.

1463 U.S. sanctions on Iran's oil export, which come into full  
1464 force this November, would not have been possible were it not  
1465 for the shale boom in the U.S. I understand that you have been  
1466 actively engaged with your counterparts in the world's major  
1467 oil-supplying nations, and that you have expressed confidence  
1468 that we can offset any potential disruptions in supply. How has  
1469 America's energy abundance strengthened our hand diplomatically  
1470 as we deal with global threats such as Iran? And you could even

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1471 add maybe Venezuela into that.

1472 Secretary Perry. I think most of us, even in this room,  
1473 don't understand the leverage that the United States now has.

1474 When I talked to, for instance, our European allies in the EU  
1475 last week, they understand, maybe better than we do, the leverage  
1476 that Russia has over those countries. One of the reasons that  
1477 the Russians fight our LNG coming into Europe is so that they  
1478 can be the dominant source of energy to those countries. And  
1479 Ukraine will share with you, and other countries as well, that  
1480 the Russians will cut off your gas supply if it is in their best  
1481 political interest at any given time.

1482 So, the U.S., our message isn't you have got to buy U.S.  
1483 gas. Ours is there needs to be a diversity of supply, a diversity  
1484 of routes, and a diversity of suppliers.

1485 Mr. Kinzinger. And let me just say, you know, kind of  
1486 piggybacking on that, I want to thank you for your leadership  
1487 with the European allies at the Three Seas Initiative Business  
1488 Forum in Bucharest in September. I appreciate the Department's  
1489 recent creation of the Partnership for Transatlantic Energy  
1490 Cooperation.

1491 Secretary Perry. Thank you.

1492 Mr. Kinzinger. I would like to just mention, in short, a

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1493 bill that we passed out of the House, the European Energy Security  
1494 and Diversification Act. In short, it would help both U.S. as  
1495 well as European and Eurasian countries attain energy security  
1496 diversification and improve supply routes and energy  
1497 infrastructure through partnerships. Thankfully, it passed the  
1498 House in March with overwhelming bipartisan support, and it awaits  
1499 action in the Senate. If the bill is enacted, I would just ask  
1500 you to commit to working with Congress and the State Department,  
1501 and any other relevant agencies, to coordinate a national strategy  
1502 for European energy diversification.

1503 And, Mr. Secretary, I deeply appreciate your service and  
1504 your leadership.

1505 And I yield back my still remaining 5 seconds.

1506 Secretary Perry. Thank you, sir.

1507 Mr. Rush. The chair now recognizes the gentleman from New  
1508 York for 10 minutes.

1509 Mr. Tonko. Thank you, Mr. Chairman.

1510 Mr. Rush. For 5 minutes.

1511 Mr. Tonko. Thank you, Mr. Chairman.

1512 Secretary Perry, thank you for being here. I appreciate  
1513 the work you are doing at the agency, although, like many of my  
1514 colleagues, I do have concerns about the President's budget.

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1515           Mr. Secretary, you have made a point to visit all of our  
1516           national labs. And from a New York perspective, focusing on  
1517           Brookhaven, I can say the research being done is truly  
1518           cutting-edge.

1519           In recent months, we have been having a good, bipartisan  
1520           dialog about how energy innovation can play a role in our nation's  
1521           clean energy transition and contribute to greenhouse gas  
1522           emissions reductions. In the past, you have testified that  
1523           spurring innovation is a part of DOE's core mission. Do you  
1524           believe that DOE must continue to play an important role in funding  
1525           RD&D --

1526           Secretary Perry. Yes, sir.

1527           Mr. Tonko. -- to support the United States private sector  
1528           in making innovative energy breakthroughs?

1529           Secretary Perry. Yes, sir.

1530           Mr. Tonko. Well, we all agree that innovation can unlock  
1531           tremendous opportunities, including creating jobs, empowering  
1532           consumers, lowering energy costs, and reducing pollution. But,  
1533           in many cases, when we talk about innovation, we mean  
1534           breakthroughs in less proven technologies. This requires  
1535           riskier investments, and DOE can play an important role in shaping  
1536           that risk. We should also accept that not all research projects

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1537 are going to work out. When it comes to research failure, it  
1538 is often a down payment on success.

1539 So, Mr. Secretary, setting aside the President's budget  
1540 request, do you believe that it is a good thing for DOE to make  
1541 investments in riskier, emerging technologies and processes; for  
1542 example, the type of work done by ARPA-E?

1543 Secretary Perry. Yes, sir.

1544 Mr. Tonko. ARPA-E is really the proven model for incubating  
1545 innovation. I want to provide one example where I believe these  
1546 investments are essential. Last year, ARPA-E initiated the DAYS  
1547 project, which is focused on long-duration energy storage. In  
1548 my mind, technology development and cost reductions in storage,  
1549 particularly long duration, are absolutely necessary for us to  
1550 achieve ambitious clean energy goals. Mr. Secretary, do you  
1551 believe ARPA-E has played a constructive role in identifying  
1552 energy challenges and helping to find solutions and foster  
1553 innovation?

1554 Secretary Perry. Yes, sir, there have been programs that  
1555 ARPA-E funded that certainly made progress in that direction.

1556 Mr. Tonko. Thank you.

1557 Secretary Perry. Not all of them.

1558 Mr. Tonko. Thank you.

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1559           We have other big challenges just around the corner.  
1560           Low-emissions industrial products, cleaner fuels for aviation  
1561           and shipping, battery recycling and disposal, direct air capture  
1562           technology development. DOE needs to lead the efforts in these  
1563           areas, and I would be eager to work with the Department and other  
1564           Members on these issues.

1565           Now I understand, you know, I heard your exchange with some  
1566           colleagues about solar technology and the like, but I also want  
1567           to focus on the role DOE can play in reducing costs to encourage  
1568           deployment of existing technologies. For example, DOE has  
1569           identified inconsistent permitting requirements and processes  
1570           as a significant cost of residential energy installations. The  
1571           patchwork of permitting requirements across thousands of local  
1572           jurisdictions causes unnecessary delays and adds administrative  
1573           costs. This not only increases energy prices for consumers, but  
1574           also stifles homeowner and business investment in these  
1575           technologies, such as rooftop solar. Other countries like  
1576           Germany and Australia have sought ways to streamline permitting.  
1577           The average cost of a residential solar installation, for  
1578           example, in Australia is less than half the cost in the United  
1579           States.

1580           So, Mr. Secretary, DOE and NREL have worked on reducing these

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1581 permitting costs. Do you believe DOE or another federal entity  
1582 can continue to play a role in helping to streamline the permitting  
1583 process itself for residential energy systems?

1584 Secretary Perry. Yes, sir.

1585 Mr. Tonko. Can you give us any examples of how they might  
1586 be able to work with us, the agency itself or others?

1587 Secretary Perry. Yes, and certainly, I think you all have  
1588 a role to play in that as well from the standpoint of analyzing  
1589 where there may be some duplication of effort, where there are  
1590 some places that we can cut back on the regulatory side without  
1591 there being a cost. You know, do a cost-benefit analysis of the  
1592 rules and regulations that Congress puts into place. I think,  
1593 having been a member of a legislature and having been a chief  
1594 executive in a state, I can assure you that there is probably  
1595 a legitimate conversation that can be had about federal  
1596 regulations and how those could be streamlined.

1597 The President is focused on that. He has given all of us  
1598 in his Cabinet a clear directive to look at the regulations that  
1599 you have where you can reduce the regulation and, obviously, not  
1600 affect the public safety or the reason that it was put there.

1601 If it was a good reason, leave them alone. But, if not, reduce  
1602 them. So, I think there are some great opportunities of us

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1603 continuing to make progress on that.

1604 Mr. Tonko. We look forward to working with you and NREL  
1605 and get the President to believe in climate change.

1606 Mr. Rush. The chair now recognizes the gentleman from Ohio,  
1607 Mr. Johnson, for 5 minutes.

1608 Mr. Johnson. Thank you, Mr. Chairman.

1609 And, Mr. Secretary, it is good to see you here today.

1610 Secretary Perry. Thank you, sir.

1611 Mr. Johnson. Several topics to talk with you about. You  
1612 and I have discussed the emergence of NGL opportunities within  
1613 the eastern and southeastern Ohio region, a region of the country  
1614 that has become known as the Shale Crescent. Your Department  
1615 and others have put out studies showcasing the economic advantages  
1616 of investing in this region, where companies can build directly  
1617 on top of the NGL feedstock, which can result in an increase of  
1618 steady, reliable jobs. Factors like market proximity also make  
1619 this region an extremely compelling economic opportunity, as  
1620 roughly 70 percent of North American polyethylene and 77 percent  
1621 of North American polypropylene is within a day's drive of this  
1622 region, my district. These two factors, among others, greatly  
1623 lower the production cost of ethylene and polyethylene.

1624 So, my question to you is, what else can Congress or DOE

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1625 do to ensure these opportunities are fully realized? I mean,  
1626 is there a need to increase our focus on workforce development  
1627 or ensure smart regulations are in place to encourage the safe  
1628 development of these opportunities? What else should we be  
1629 thinking about or looking at?

1630 Secretary Perry. Yes, certainly that is two of the areas  
1631 that we should be focused on. But the key here is to put a plan  
1632 together. There are four states, in particular, your home state,  
1633 West Virginia, Pennsylvania, and Kentucky, that have  
1634 extraordinary opportunity to both deliver products to this  
1635 country that are very important, and the value-added side of that  
1636 that comes with that, the jobs that get created, using the  
1637 feedstock that you are actually sitting on top of.

1638 So, this is not one of those where the government needs to  
1639 go, well, here is "X" numbers of hundreds of millions of dollars.

1640 This is one of those where we need to tell those companies, look,  
1641 government is going to get out of your way. And I am confident  
1642 that those four states also have that goal as well. So, you are  
1643 not at loggerheads with the states in this case. You know, we  
1644 talked about some challenges with states relative to pipeline  
1645 transferring across their states. But this one is, we don't have  
1646 that type of -- we are going to be sending Mark Menezes, who is

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1647 our Under Secretary, in the coming weeks to meet with the states  
1648 on these.

1649 So, I think what those states need to hear is that the federal  
1650 government is going to be a very good partner. We are going to  
1651 be not in their way. We are going to remove any hurdles that  
1652 are there. We have obviously met with the folks in West Virginia  
1653 already. We will come and work with Ohio and Pennsylvania and  
1654 Kentucky as well.

1655 I don't think there is a more important project in the U.S.  
1656 than to see that development of a petrochemical, a duplicative  
1657 petrochemical industry, because the State of Texas could have  
1658 a hurricane that could have massive impact on that, not only that  
1659 region, but also that industry.

1660 Mr. Johnson. We certainly agree on that, Mr. Secretary.  
1661 We have seen studies that indicate that as much as 45 percent  
1662 of our nation's natural gas needs will be produced by that Shale  
1663 Crescent region by 2040. I mean, there are a lot of energy  
1664 resources there.

1665 Shifting gears just real quick, you and I have also talked  
1666 about, and your budget funds, a demonstration project that can  
1667 help ensure we have a domestic enrichment capability for our  
1668 emerging HALEU needs, as well as a domestic enrichment capability

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1669 to help meet our national security needs. You and Representative  
1670 Kinzinger talked about that a few minutes ago.

1671 As you know, Piketon, Ohio has a long tradition of helping  
1672 the U.S. meet its national security needs by working on these  
1673 domestic enrichment capabilities. Can you discuss briefly the  
1674 importance of this project in your budget request?

1675 Secretary Perry. Yes, sir. To have a stable, growing,  
1676 small modular reactor industry, advanced reactors, we are going  
1677 to have a high-assay, low-enriched uranium source. Obviously,  
1678 at Piketon there is a project there that is working on that.  
1679 I think the DOE is funding some of that effort there.

1680 Every advanced reactor under development is going to require  
1681 this. So, having that access to that HALEU is very important.  
1682 So, the Department intends to contract with Centrus that is in  
1683 Piketon.

1684 Mr. Rush. Thank you, Mr. Secretary.

1685 The chair now recognizes Mr. Loeb sack for 5 minutes.

1686 Mr. Loeb sack. I thank you, Chairman Rush, Ranking Member  
1687 Upton, for holding this important hearing today.

1688 And thank you, Mr. Secretary, for being here today. Often  
1689 when you are here, I note that you and I have something in common,  
1690 and that is all the wind energy that we produce in our respective

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1691 states. We are doing more every day, and I thank you for  
1692 supporting that --

1693 Secretary Perry. Yes, sir.

1694 Mr. Loeb sack. -- both in your State and nationwide. It  
1695 is very, very important.

1696 My home State of Iowa, as you know, leads the nation in  
1697 biofuels production. Right now, there is a significant concern  
1698 in the biofuels community, which includes our corn and soybean  
1699 farmers, surrounding the drastic increase in the number of  
1700 so-called small refinery exemptions that have been issued under  
1701 this administration. And I think we have talked about this  
1702 briefly before.

1703 As you know, the small refinery waiver process requires that  
1704 the EPA consult with the Secretary of Energy in the review of  
1705 exemption petitions. And unfortunately, we still have  
1706 essentially no transparency regarding this process. So, my first  
1707 question, Mr. Secretary, is, has the DOE submitted its  
1708 recommendations to the EPA for the 40 pending small refinery  
1709 waiver requests for compliance for the year 2018?

1710 Secretary Perry. Yes, sir. April 26th is the date that  
1711 we transmitted over to EPA the -- I think there were 37 petitions.

1712 Mr. Loeb sack. Thirty-seven?

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1713 Secretary Perry. Yes, sir.

1714 Mr. Loeb sack. Okay. Thank you. I do appreciate that.

1715 Question two: last month, Administrator Wheeler testified  
1716 that EPA has taken the advice of DOE on all but one waiver  
1717 application, contradicting press reports the EPA has disagreed  
1718 many times in the past with DOE's recommendations. I am talking  
1719 about historically. Please confirm how many times EPA's decision  
1720 to grant a waiver request since 2016 has contradicted DOE's  
1721 recommendation, if you could.

1722 Secretary Perry. Yes, let me give you the high level here.

1723 Mr. Loeb sack. Sure.

1724 Secretary Perry. I will get back with you with a specific  
1725 number. But we give guidance to EPA after analyzing a small  
1726 refinery's petition to determine if there is disproportionate  
1727 economic hardship.

1728 Mr. Loeb sack. Right.

1729 Secretary Perry. So, you know, I will get you the specific  
1730 number of times that we have said yes and they have said no.

1731 Mr. Loeb sack. And I realize it is supposedly refineries  
1732 that produce 75,000 barrels, and we have a lot of concerns,  
1733 obviously, because we think it is much larger refineries that  
1734 have been granted these exemptions in the past as well. And this

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1735 is a concern, it is a bipartisan concern that a lot of us have,  
1736 especially in corn and soybean country. But I would like to  
1737 request you provide us with a list of refiners that have received  
1738 the waivers from the EPA in cases where DOE recommended a denial.  
1739 And thank you for providing that information.

1740 A number of companies that receive waivers are publicly  
1741 traded, as you know, publicly-traded firms that report on the  
1742 waivers they have received in their SEC filings. Since the  
1743 information from these companies is disclosed, at least to the  
1744 SEC, why does the DOE need to treat similar information as  
1745 confidential business information? Clearly, it is not. Can you  
1746 answer that question?

1747 Secretary Perry. Let me get back with you on that.

1748 Mr. Loeb sack. Okay. All right. That would be great, if  
1749 you would. I would really appreciate it.

1750 The fourth question, on April 12th, EPA released a request  
1751 for comment on a proposal to make some information regarding small  
1752 refinery waivers available to the public, some information.  
1753 However, it appears that EPA has walked back this proposal under  
1754 pressure from the White House and the oil industry. And, Mr.  
1755 Secretary, was DOE consulted in the development of this proposal  
1756 and in the decision to walk back this attempt to provide even

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1757 a basic level of transparency?

1758 Secretary Perry. Yes, I am going to share with you that  
1759 that is an EPA question. That one really is not in my purview.

1760 Mr. Loeb sack. But we would like you to clarify, if you  
1761 would, whether DOE was consulted on that? And if you need to  
1762 look into that further, that is fine.

1763 Secretary Perry. What I will tell you is that we get asked  
1764 about the issue of seeing if there is a substantial hardship that  
1765 these waivers would -- that is our role here. I am not sure we  
1766 get into the area that you have just mentioned, sir.

1767 Mr. Loeb sack. Well, we are just trying to track down,  
1768 obviously, and provide as much transparency as possible --

1769 Secretary Perry. Yes, sir, absolutely.

1770 Mr. Loeb sack. -- for what happens with these small  
1771 refinery exemptions. And I know DOE does have a role to play  
1772 in all of this.

1773 Secretary Perry. Yes, sir.

1774 Mr. Loeb sack. So, the transparency issue, we will continue  
1775 to follow up with you on that.

1776 Just final comments I would like to make. Mr. Chairman,  
1777 a prolific number of small refinery exemptions issued has  
1778 undermined the renewable fuels standards, caused significant

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1779 demand destruction across the biofuel industries, and has hurt  
1780 our farmers. The EPA, under this administration, has not denied  
1781 a single waiver request, and the number of refineries applying  
1782 to be exempted from their obligation continues to increase each  
1783 year, despite falling RIN prices. It is very frustrating,  
1784 obviously. I am going to continue to pursue this relationship  
1785 that you folks have with the EPA on this issue. And I thank you  
1786 for your testimony.

1787 Secretary Perry. Sure.

1788 Mr. Loeb sack. And I yield back, Mr. Chair.

1789 Mr. Rush. The chair now recognizes Mr. Bucshon for 5  
1790 minutes.

1791 And the chair would ask the members, if you could -- we have  
1792 got about seven-eight members now -- if you could quickly to your  
1793 questions? You don't have to use your entire 5 minutes.

1794 Mr. Bucshon. Thank you, Mr. Chairman.

1795 I am an "all-of-the-above" energy supporter.

1796 And, Secretary Perry, thank you for being here.

1797 As you know, solar power electricity is growing at a rapid  
1798 pace. According to the Solar Energy Industries Association,  
1799 solar has ranked first or second in new electric capacity  
1800 additions in each of the last six years. After reaching 1 million

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1801 solar panel installations in 2016, 2 million installations are  
1802 projected to hit in early 2019 and 4 million by 2023.

1803 In Evansville, Indiana, we have two 2-megawatt universal  
1804 solar projects and an additional 50-megawatt facility scheduled  
1805 to be in operation by 2020. My point being, there are a lot of  
1806 solar panels operating in the field today. I understand, with  
1807 the normal life expectancy between 20 and 30 years for these solar  
1808 panels, it may not be on the forefront of many people's mind,  
1809 but I worry about how we will properly recycle and/or dispose  
1810 of solar panels at the end of their lifecycle. Solar panels,  
1811 as you probably know, harbor several toxic chemicals, including  
1812 cadmium compounds, silicon tetrachloride, and lead, which, if  
1813 not disposed of or recycled properly, can be harmful to the  
1814 environment and extremely wasteful. As of right now, most solar  
1815 panels in the United States at the end of their lifecycle are  
1816 landfilled, unless specified by state law.

1817 Secretary Perry, is the DOE aware of any recycling procedures  
1818 or guidelines in place today by either the manufacturers or the  
1819 end-users for when these panels reach the end of their lifecycle?

1820 Secretary Perry. I am not aware of any at this particular  
1821 point in time, and I think there is, obviously, some additional  
1822 research that is going to be required to understand just how these

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1823 systems are being handled, not only by the owners, but by the  
1824 waste management operations. If they are going to end up in,  
1825 whether it is -- or however they are going to be. So, I think  
1826 there are good points you make, sir, and I think the national  
1827 labs and the private sector, and probably in conjunction with  
1828 some states as well that have a preponderance of these, finding  
1829 some public-private partnerships to work together and come up  
1830 with some solutions.

1831 Mr. Bucshon. Because my understanding, the Europeans in  
1832 Europe do have a process that is included in the manufacturing  
1833 process that also relates to end-of-the-lifecycle disposal of  
1834 those. And right now, I am working on draft legislation that  
1835 would ask the Department of Energy, in consultation with EPA,  
1836 to conduct a study on the environmental impact and analysis of  
1837 the disposal procedures in place for solar panels at the end of  
1838 their full cycle. Is that something that you think the DOE might  
1839 be supportive of?

1840 Secretary Perry. Yes, sir.

1841 Mr. Bucshon. Thank you very much. I do think that it is  
1842 important, when we look at any source of energy, we look at the  
1843 entire lifecycle of that product. Again, I support an  
1844 "all-of-the-above" energy approach, but in this particular area

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1845 this is just one example, I think, where we are not looking at  
1846 the entire lifecycle and the overall not only economic, but  
1847 environmental impact of a way that we generate energy.

1848 With that, Mr. Chairman, I yield back.

1849 Mr. Rush. The chair thanks the gentleman.

1850 The chair now recognizes Mr. Welch for 5 minutes.

1851 Mr. Welch. Thank you very much.

1852 And thank you, Mr. Secretary.

1853 I want to ask you about energy efficiency. I want to ask  
1854 you about some impounded money that would help on energy  
1855 efficiency. First of all, I want to say, it is very dispiriting  
1856 that we are not making the progress on energy efficiency that  
1857 both sides know is really good. We can bring down carbon  
1858 emissions. We can save homeowners and businesses money. And  
1859 all of the efficiency measures usually require local labor. So,  
1860 I know as a former governor, that would be very important to you.

1861 And I don't necessarily think it is you. I just don't know what  
1862 the stall is.

1863 The administration has been consistent in its efforts to  
1864 strip funding from the ARPA-E program. And the GAO found that  
1865 the Department of Energy was impounding funds from ARPA-E in 2017.

1866 And this is very concerning. The President's budget proposed

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1867 using \$350 million of funding Congress had previously  
1868 appropriated to help the Office of Energy Efficiency and Renewable  
1869 Energy in FY 2020. And I know that the Department has authority  
1870 to carry over funds between fiscal years to support research  
1871 efforts, and I understand funding delays can happen, but it is  
1872 starting to appear that this is much more like an impoundment.

1873 Can you address that and tell us how we are going to get that  
1874 money in the pipeline? That has been appropriated. Go ahead,  
1875 Mr. Secretary.

1876 Secretary Perry. Yes, sir. I just wanted to make sure --  
1877 you used the term "impounded" some dollars, and I want to, just  
1878 for the committee --

1879 Mr. Welch. No, it is looking that way to me.

1880 Secretary Perry. Yes, sir.

1881 Mr. Welch. All right? At a certain point, it goes from  
1882 repurposing to --

1883 Secretary Perry. You are interested in the results --

1884 Mr. Welch. Exactly.

1885 Secretary Perry. -- whether you use the word  
1886 "impoundment," or whatever.

1887 Mr. Welch. That is exactly right.

1888 Secretary Perry. And I just want to share with you, from

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1889 my perspective, when we came in, you know, I obviously, a new  
1890 administration, new to the job, and I wanted to take a look at  
1891 these programs. And that is one of the reasons these dollars  
1892 didn't flow. I will take full responsibility. It was me getting  
1893 up-to-speed on these programs, knowing where these dollars were  
1894 going to be spent. With that said, they now have been released  
1895 and gone forward.

1896 Mr. Welch. Well, I would like to see what those projects  
1897 are because my understanding is that money is not getting out  
1898 the door. Whether it is going to Mr. Bucshon's district or my  
1899 district --

1900 Secretary Perry. Yes, sir.

1901 Mr. Welch. -- that is all intended to try to make progress  
1902 --

1903 Secretary Perry. Yes, sir.

1904 Mr. Welch. -- on energy efficiency.

1905 Let me ask you about the appliance standards. There is  
1906 always debate about that, and there are some improvements in the  
1907 appliance standard program that can be made. Mr. Latta and I  
1908 have been working to try to do that.

1909 But the bottom line here is these efficiency standards where  
1910 you set a requirement that all manufacturers have to meet have

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1911 saved homeowners and businesses a lot of money. In fact, because  
1912 there has been no action on these standards, like the lightbulb  
1913 standards --

1914 Secretary Perry. Yes, sir.

1915 Mr. Welch. -- individual states like Vermont, and now  
1916 other states, are adopting the federal standard and getting the  
1917 benefit of that. But there is obviously an advantage all around  
1918 if this is federal. Can you tell me what you are doing about  
1919 these efficiency standards?

1920 Secretary Perry. Yes, sir. And here is what I would ask  
1921 you, Mr. Welch. One of the things that I found when I got to  
1922 the agency and we were looking at this specific was that I think  
1923 that the statute needs to be revisited. I think there are some  
1924 cumbersomeness that has been put into place. I think there is  
1925 some hurdles in place.

1926 Mr. Welch. Right.

1927 Secretary Perry. And I told somebody, I said, listen, the  
1928 way this thing is written, because you can never back up a  
1929 standard, is that I think there is more time being taken than  
1930 needs to be taken on this because we are more interested in getting  
1931 it right than we are getting it fast.

1932 Mr. Welch. All right. Let me just make a suggestion. I

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1933 am always open to improving the standard. Okay? And I would  
1934 be willing to work with my colleagues and with you --

1935 Secretary Perry. Let's do this.

1936 Mr. Welch. -- but the standards have made a difference.

1937 You know, there is about 2.7 billion lightbulb sockets where,  
1938 if we use those, it is going to save homeowners about 100 bucks  
1939 a year. That is real money in Vermont, and I know it is for some  
1940 of your folks in Texas.

1941 Secretary Perry. Yes, sir. Let's work on this together.

1942 Mr. Welch. But let's not kill any notion of standards  
1943 because we can make progress there.

1944 Secretary Perry. Yes, sir.

1945 Mr. Welch. And then, finally --

1946 Secretary Perry. I don't think that is what -- that is  
1947 certainly not my intention.

1948 Mr. Welch. All right. Well, I am going to follow up with  
1949 your office.

1950 Secretary Perry. Yes, fir.

1951 Mr. Welch. Finally, the DOE loan program, there is about  
1952 \$5 billion in that. That actually gets out and works well. So,  
1953 let's get it out the door.

1954 Thank you, Mr. Chairman.

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1955 Secretary Perry. Yes, sir.

1956 Mr. Welch. I yield back.

1957 Mr. Rush. The chair now recognizes the gentleman from  
1958 Texas, Mr. Flores, for 5 minutes.

1959 Mr. Flores. Thank you, Chairman Rush and Leader Upton, for  
1960 hosting today's meeting.

1961 Howdy, Secretary Perry. It is great to have you in front  
1962 of the committee again, and it is also great to have a fellow  
1963 Texan leading the Department of Energy, a state that has done  
1964 more than any other to reduce emissions, at the same time becoming  
1965 a leader in energy production for this country. That has done  
1966 two things. It has made the U.S. a net energy exporter over time,  
1967 and, also, we are part of the overall emissions reductions in  
1968 the United States, which leads the world in emissions reduction  
1969 among industrialized countries.

1970 So, three quick things. The first one has to do with nuclear  
1971 energy. You talked about the impact of small modular reactors,  
1972 microreactors, and advanced nuclear reactors when it comes to  
1973 helping to decarbonize the environment. As you said also, one  
1974 of the essential elements of that is to have a new fuel,  
1975 high-assay, low-enriched uranium, to do that. Can you expand  
1976 on the importance of HALEU to be able to put these reactors into

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1977 service and, also, the impact it has on decarbonizing the  
1978 environment?

1979 Secretary Perry. Sure. Mr. Flores, I think it is really  
1980 important that we recognize that the project that we are working  
1981 on in Piketon on the HALEU is the only domestically-owned source  
1982 of HALEU. So, that is one of our reasons to be focused on that.

1983 But these small modular reactors, we truly believe that  
1984 that is the answer to being able to have a reasonably-priced,  
1985 sustainable civil nuclear program in the United States. So,  
1986 having that fuel available by a domestically-owned company is  
1987 very important. I mean, without the fueling, then you are wasting  
1988 your time with all of the other work that you are doing.

1989 So, your question about SMRs, they are linked together.

1990 You can't have one without the other. The SMR programs are going  
1991 to go forward. I have got a lot of faith that America will lead  
1992 the world in nuclear power. And when we do that, we will be  
1993 able to sell this innovation to the rest of the world and be able  
1994 to get old, inefficient greenhouse, massive-producing power  
1995 supplies out of the world's fleet out there and doing our part  
1996 not just for the United States, but for the entire world from  
1997 the standpoint of emissions reduction.

1998 Mr. Flores. Mr. McNerney and I introduced legislation in

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1999 the House that actually passed the House unanimously last year  
2000 to help create that structure for HALEU, and I am hoping that  
2001 we can do that again and, also, get it to the Senate; get it to  
2002 the President's desk. Your Department provided good advice to  
2003 us in terms of the structure of that legislation. So, we hope  
2004 to get that back on the table before too long.

2005 I would like to talk about another issue to expand on what  
2006 Mr. Bucshon was talking about in terms of the environmental impact  
2007 of silicon-based PV panels. That is a concern in terms of the  
2008 environmental impact at the end of their lives. You don't have  
2009 to respond to this. This is just a question. People seem to  
2010 think that lithium batteries are the way to go when it comes to  
2011 trying to make intermittent sources of electricity, to make them  
2012 part of a baseload power supply. Lithium has a variety of  
2013 environmental issues that are part of it, a part of the end-of-life  
2014 problems --

2015 Secretary Perry. Yes.

2016 Mr. Flores. -- when batteries are disposed of. And so,  
2017 I would ask your Department, if you would, to be looking at this  
2018 in the future. It is going to be more of an EPA issue, but the  
2019 DOE is obviously going to have a seat at the table. So, keep  
2020 that in mind in your future plans.

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2021 Secretary Perry. EPA has probably has the back end of it.

2022 The front of it is come up with innovative ideas and new  
2023 compounds, so that EPA doesn't have a problem.

2024 Mr. Flores. Yes, that is a good idea. I like that.

2025 So, I yield back the balance of my time. Thank you, Mr.  
2026 Chairman.

2027 Mr. Rush. The chair thanks the gentleman.

2028 The chair now recognizes Mr. Schrader for 5 minutes.

2029 Mr. Schrader. Thank you very much, Mr. Chairman.

2030 And thank you for being here, Mr. Secretary. I apologize  
2031 -- I was in another meeting -- for dashing up and down.

2032 I would like to take a little bit of time discussing my  
2033 favorite topic, the Power Marketing Administrations,  
2034 specifically the 2020 budget proposal. At page 8 of your  
2035 testimony, you state, "The budget proposes the sale of the  
2036 transmission assets of Western Area Power Administration, the  
2037 Bonneville Power Administration, and the Southwestern Power  
2038 Administration, and to reform the laws governing how the PMAs  
2039 establish power rates to require the consideration of  
2040 market-based incentives, including whether rates are just and  
2041 reasonable."

2042 This is exactly the same testimony that we had in the 2019

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2043 budget. And I think last year, when you came before the  
2044 committee, we chatted about this a bit. And at the time, you  
2045 said, "I'm reminded of a Kenny Rogers song when he talked about  
2046 you need to know when to hold them and when to fold them. Congress  
2047 has been very clear about the issue. I will be more than happy  
2048 to carry the message back." So, the obvious question, Mr.  
2049 Secretary, is, were you able to follow up, take that message back,  
2050 and was it just not received?

2051 Secretary Perry. I can't answer whether it was received  
2052 or not. It was given.

2053 Mr. Schrader. All right. Well, I appreciate that, and I  
2054 am going to give you a little more ammunition.

2055 Secretary Perry. But I will go on the record one more time  
2056 in saying that I suspect that the outcome is going to be the same  
2057 this time as it was in 2018 and 2017.

2058 Mr. Schrader. Congress does have the ability to dispose  
2059 of what the taxpayers' use of our --

2060 Secretary Perry. I know how to salute, sir.

2061 Mr. Schrader. Well, let me help you a little bit here.  
2062 Nine members of this committee, including my fellow Northwest  
2063 colleagues, Mrs. McMorris Rodgers, Ranking Member Walden, have  
2064 asked our colleagues in the administration to please reject this

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2065 misguided proposal. As a Member in the Northwest, I remain  
2066 concerned about the administration's continued insistence on  
2067 this.

2068 It seems ill-advised for several reasons. It is a nonprofit  
2069 federal wholesale utility and power marketer. It receives no  
2070 congressional appropriations. It doesn't cost the taxpayer.  
2071 It must recover its costs with revenues that it earns from selling  
2072 wholesale power and its transmission services.

2073 BPA provides approximately half the electricity used in the  
2074 Pacific Northwest, operates three-quarters of our high-voltage  
2075 transmission grid. Selling these assets would just fragment the  
2076 grid, cause national security issues. Requiring BPA to sell at  
2077 market rates would essentially be the death knell of BPA. The  
2078 whole goal here is to have low-cost energy, low-cost opportunity  
2079 for our municipalities as well as our industry partners. They  
2080 sell the power at cost. That is an advantage economically to  
2081 individuals and to businesses in the Pacific Northwest.

2082 We have had some problems with natural gas. Certainly, it  
2083 is competitive, putting pressure on BPA, the Bonneville Power  
2084 Administration. And we also have increased costs with mandated  
2085 spill to take care of the fish and wildlife mitigation out there.

2086 Fully a third of our electric bill goes for fish mitigation.

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2087 Without BPA, the federal government would be having to pick up  
2088 those costs.

2089 And frankly, at this point in time, it is really exciting.

2090 The Bonneville Power Administration has entered into this  
2091 historic agreement with fish groups, industry groups,  
2092 municipalities, to share the Columbia River in a way that allows  
2093 for increased marketing opportunities to our neighbors to the  
2094 south that require a lot of energy during different times of the  
2095 day, during different times of the year. And you get a lot of  
2096 fish passage that heretofore has been a problem with the dams  
2097 in the river. So, it is an historic opportunity to get us out  
2098 of the courts and into the power generation business and into  
2099 the fish passage business, where all boats rise at the same level.

2100 So, I would just ask us to ask you to do the easiest thing  
2101 in the world. Just leave us alone at the end of the day, sir.

2102 Secretary Perry. Yes, sir.

2103 Mr. Schrader. And with that, I yield back, Mr. Chair.

2104 Secretary Perry. Mr. Schrader, could I just share with you  
2105 one thing? We just left Oak Ridge, and I would like to bring  
2106 to your office and show you some technology there on new turbines  
2107 for hydro that they are working on at our national labs, in  
2108 conjunction with the private sector.

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2109 Mr. Schrader. All right.

2110 Secretary Perry. So, I would like to bring those to you.

2111 Mr. Schrader. Excellent.

2112 Mr. Rush. The chair now recognizes the gentleman from  
2113 Michigan, Mr. Walberg, for 5 minutes.

2114 Mr. Walberg. Thank you, Mr. Chairman.

2115 And thank you, Secretary, for being here, and I appreciate  
2116 your work.

2117 I appreciate very much the increased dollars that have been  
2118 put in for CESER. I think it is an important function, as we  
2119 are considering this week in the House potentially a supplemental  
2120 disaster funding package, and potentially more hurricanes coming  
2121 in the season that we can expect. How important is it that DOE  
2122 have the resources to proactively plan for and deploy resources  
2123 to respond to emergency situations in carrying out this mission  
2124 as the sector-specific agency for the energy sector?

2125 Secretary Perry. Yes, very important, sir. I mean,  
2126 obviously, this is one where the game never stops getting played,  
2127 where the bar is moved higher. Every time we come up with a patch  
2128 or a way to deflect those that would do nefarious deeds to our  
2129 national security through our electrical grid, they come up with  
2130 a new way to attack it. So, it is a never-ending -- this is just

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2131 as important as what the DoD does on keeping this country safe  
2132 through the work that they do.

2133 Mr. Walberg. I appreciate that. And representing the  
2134 energy district for Michigan on the banks of Lake Erie with nuclear  
2135 and all of the rest, we appreciate knowing that.

2136 Would DOE be better positioned to carry out these functions  
2137 in the long term if the Assistant Secretary position responsible  
2138 for the functions were made permanent in your organization?

2139 Secretary Perry. Yes, sir, I think so.

2140 Mr. Walberg. Then, let me cut to the chase and ask if you  
2141 would commit to working with Chairman Rush and myself on our  
2142 important legislation to elevate and ensure that these critical  
2143 functions will continue to be led by an Assistant Secretary.

2144 Secretary Perry. In the appropriate way for me to  
2145 participate, yes, sir.

2146 Mr. Walberg. I appreciate that.

2147 I yield back.

2148 Mr. Rush. The chair thanks the gentleman.

2149 The chair now recognizes the gentlelady from Arizona, Ms.  
2150 O'Halleran, for 5 minutes. No, no, I am sorry. The gentleman  
2151 from Arizona, Mr. O'Halleran, for 5 minutes.

2152 Mr. O'Halleran. Thank you, Mr. Chairman.

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2153 Thank you, Secretary Perry, for appearing before the  
2154 committee today to discuss the critical work underway at the  
2155 Department of Energy to modernize and support our economy.

2156 Americans deserve access to reliable and efficient energy  
2157 resources, and I firmly believe the U.S. should always strive  
2158 to lead the world in innovation within the energy sector. It  
2159 is no secret that solar energy technologies are rapidly advancing.

2160 It is also no secret that Arizona leads the nation in total days  
2161 of sunshine per year. With the abundance of sun my State has  
2162 to offer, we are at the forefront of the energy transition, and  
2163 I am looking forward to working on legislation that advances  
2164 resilient, grid-scale storage technologies.

2165 According to the Department's 2020 budget request, energy  
2166 storage can effectively buffer increased variable supply and  
2167 demand in our electric grids. While the Department has invested  
2168 significantly in research for grid-scale storage technology, how  
2169 will the proposed Advanced Energy Storage Initiative supplement  
2170 other research across the Department also related to energy  
2171 storage?

2172 Secretary Perry. Mr. O'Halleran, less than 90 days ago,  
2173 we were outside of Phoenix, or Tucson, at a facility visiting  
2174 that solar-top-generated power that was going into the batteries,

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2175 I mean, an Arizona Power Service, APS, project out there. So,  
2176 they are a model for some of the Southwestern states to look at  
2177 from the standpoint of generation and storage of electrical power.

2178 Mr. O'Halleran. Thank you, Secretary.

2179 Beyond research and tax incentives, are there other ways  
2180 Congress could further help storage technologies become scalable  
2181 into electric utility markets? Are targeted pilot projects with  
2182 local communities a possibility?

2183 Secretary Perry. Yes, sir, well, obviously, the work that  
2184 is being done at some of our national labs, I totally believe  
2185 that the holy grail of battery storage will be found in the  
2186 not-too-distant future, and I will suggest it will be a  
2187 public-private partnership with a national lab, a DOE national  
2188 lab, and some private sector partners.

2189 Mr. O'Halleran. I would be interested in visiting one of  
2190 your laboratories also.

2191 While our energy market continues to evolve, I continue to  
2192 maintain an "all-of-the-above" approach to energy policy.  
2193 However, I am mindful of the impacts felt in communities when  
2194 a coal-fired power plant closes. My district is home to the  
2195 Navajo Generation Station, which is facing hardship. In fact,  
2196 it is going to be closed. Its closure would simply devastate

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2197 the Navajo and Hopi Tribes.

2198 Secretary, in terms of helping communities have access to  
2199 the resources they need for an economic transition of displaced  
2200 workers in these dire situations, what role can DOE and Congress  
2201 play? Cuts to the Tribal Energy Loan Guarantee Program are not  
2202 going to help us.

2203 Secretary Perry. Yes, sir, I think one of the ways -- and  
2204 this gets back to Chairman Rush's effort on clean energy jobs.

2205 The transition, if the decision is made to shut that plant down,  
2206 I think the focus on the diversity of that workforce and being  
2207 able to bring those individuals into some of the clean energy  
2208 jobs is one of the alternatives that we can do, too.

2209 And the other side of it is that, hopefully, the innovation  
2210 that you are going to see out of, again, DOE labs dealing with  
2211 the usage of coal, and the technologies that come of that, can  
2212 keep that plant going and be able to be a source of energy and  
2213 a source of innovation for the country.

2214 Mr. O'Halleran. It will be interesting to see what those  
2215 programs look like --

2216 Secretary Perry. Yes, sir.

2217 Mr. O'Halleran. -- since the plants are scheduled for  
2218 closure across the entire Western United States fairly quickly

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2219 --

2220 Secretary Perry. Yes.

2221 Mr. O'Halleran. -- within the next 10 years.

2222 Secretary Perry. Yes.

2223 Mr. O'Halleran. Thank you, Secretary, for providing your  
2224 insight into these critical issues facing the energy sector.

2225 As a member of this committee, we will continue to work on ensuring  
2226 the Department continues to advance American leadership in energy  
2227 policy. And I look forward to trying to understand the entire  
2228 Department's focus on renewables and the ability to address the  
2229 considerable impact climate change has in our society.

2230 Secretary Perry. Yes, sir.

2231 Mr. O'Halleran. And thank you, Secretary.

2232 Secretary Perry. Thank you, sir.

2233 Mr. Rush. Mr. Secretary, I know you have a hard stop. I  
2234 know you have a hard stop this morning at 12:30. We have three  
2235 more members. Can you indulge us? If they will be brief, can  
2236 you indulge us?

2237 Secretary Perry. And I will be brief, too, sir.

2238 Mr. Rush. All right.

2239 Secretary Perry. I promise.

2240 Mr. Rush. The chair now recognizes Mr. Duncan.

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2241 Mr. Duncan. Thank you.

2242 Thank you, Secretary Perry, for being here, and thank you  
2243 for taking some extra time. I know you had a hard break.

2244 Back in March of this year, President Trump released an  
2245 Executive Order on coordinating national resilience to  
2246 electromagnetic pulses. A key component of the President's  
2247 strategy is enhancing grid resiliency and hardening, which you  
2248 mentioned in your testimony, and I couldn't agree more. Securing  
2249 our nation's electric grid infrastructure is vital to our nation.

2250 But, down in Charleston, South Carolina, Clemson University  
2251 -- go Tigers -- and private partners like Duke Energy have  
2252 established the eGRID facility. It is providing a platform for  
2253 innovating and validating and testing multi-megawatt electrical  
2254 grid components and real grid conditions without the risk to the  
2255 wider grid. This capability is needed to facilitate the rapid  
2256 introduction of new technologies in our grid system. There is  
2257 no other facility in the country with the capabilities of the  
2258 Clemson-Duke Energy eGRID, and the project is way ahead of anyone  
2259 else in the nation.

2260 I believe grid resiliency is critical to our national  
2261 security, but I am also a fiscal conservative and I don't believe  
2262 we should duplicate tax dollars and spending. The obvious choice

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2263 for completion of the testbed is at the eGRID facility in  
2264 Charleston, in conjunction with Clemson University. It is the  
2265 most efficient and effective use of taxpayer dollars.

2266 Secretary Perry, are you familiar with the work being done  
2267 at that facility?

2268 Secretary Perry. Yes. This North American Energy  
2269 Reliability and Resiliency Model, I think it is a \$30,000 program  
2270 that I am looking at here -- excuse me -- \$30 million. I missed  
2271 it by a few zeroes there.

2272 Mr. Duncan. Have you visited that facility?

2273 Secretary Perry. No, sir, but --

2274 Mr. Duncan. I know it is Clemson University and I know of  
2275 Texas A&M, but I want to invite you to come.

2276 Secretary Perry. Texas A&M is playing Clemson this fall.  
2277 So, that seems like it might be a good time for me to come visit.  
2278 What do you think, sir?

2279 [Laughter.]

2280 Mr. Duncan. I look forward to hosting you in South Carolina  
2281 and, hopefully, down in Charleston for that.

2282 Secretary Perry. I have been there before; I hope the  
2283 outcome is different than it was the last time we were there.

2284 Mr. Duncan. Right.

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2285 Secretary Perry. I am speaking from a Texas A&M  
2286 perspective, of course, sir.

2287 [Laughter.]

2288 Mr. Duncan. Let me shift gears because I want you to come  
2289 down to Charleston, and we are going to make that happen, because  
2290 it is important for our nation. The threat of natural or manmade  
2291 EMPs, and just where our grid system, this is a vital component.

2292 There is also a drivetrain facility, which you will see, testing  
2293 all of the wind turbines for all the dynamics that the wind can  
2294 put on those. It is a neat facility. I was down there Tuesday.

2295 And you will find it fascinating, and you will understand how  
2296 important that is to the nation, just like H Canyon is at Savannah  
2297 River Site.

2298 And I think you visited the Savannah River Site. H Canyon  
2299 is a chemical separation facility. It is vital to pit production.

2300 Secretary Perry. Yes, sir.

2301 Mr. Duncan. New missions at the Savannah River Site that  
2302 I know you support, the transition from MOX over to pit production  
2303 is important. You have mentioned that. I want to tell you, I  
2304 stand with you on that for the folks down at the Savannah River  
2305 Site.

2306 In the interest of time, I just want to mention one last

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2307 thing. It is something you and I agree with. A national solution  
2308 to a national problem, and that is Yucca Mountain. A hundred  
2309 and twenty-one sites around this country currently hold  
2310 commercial spent fuel. We also have defense waste sitting at  
2311 places like Savannah River and Hanford. Yucca Mountain is the  
2312 law of the land, and I support the Nuclear Waste Policy Amendments  
2313 Act. And I know you do as well. I look forward to working with  
2314 you and John Shimkus and others to get Yucca Mountain back on  
2315 track.

2316 And I want to give you an opportunity to comment on either  
2317 Yucca Mountain, or anything you would like to, for this last couple  
2318 of seconds.

2319 Secretary Perry. Yes, sir. We have spent \$8 billion on  
2320 Yucca Mountain. We spend \$2 million a day keeping it right here.  
2321 That is the plan right now. And I don't think that is what  
2322 Americans want to see. I think they want to have a permanent  
2323 repository. The law of the land, you are correct, is Yucca, but  
2324 we can't get an answer on whether Yucca is the right place or  
2325 some other place is the proper disposal site unless we have the  
2326 permitting process going forward. So, we can stand up in front  
2327 of Americans and say we have found a solution to this  
2328 \$2-million-a-day problem that we got, but also here is our

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2329 solution to it; here are the sites that we need to look at. And  
2330 we can't do that unless the permitting process at NRC goes forward  
2331 and DOE.

2332 Mr. Duncan. I will just remind this committee that  
2333 ratepayers paid for the construction and operation fees for Yucca  
2334 Mountain. In South Carolina, that has amounted to \$1.3 billion,  
2335 not tax dollars, ratepayer dollars. And it is the same way in  
2336 all the states. There is nuclear waste is sitting on the shores  
2337 of Lake Erie in Ohio, sitting on the shores of Lake Keowee in  
2338 South Carolina, and other places that we don't want to see anything  
2339 negative happening. Yucca Mountain is a national solution to  
2340 a national problem and something we need to support the Secretary  
2341 on and get Yucca Mountain back, because, as he said, and I have  
2342 said, it is the law of the land.

2343 And with that, Mr. Chairman, I yield back.

2344 Mr. Rush. The chair now recognizes the gentlelady from  
2345 California, Ms. Barragan, for 5 minutes.

2346 Ms. Barragan. Thank you, Mr. Chairman.

2347 Secretary Perry, in 2017, the Department of Energy finalized  
2348 and published a comprehensive policy to incorporate environmental  
2349 justice into the decisionmaking process at the Department.  
2350 Secretary Perry, do you know what environmental justice means?

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2351 Secretary Perry. I can tell you what it means to me.

2352 Ms. Barragan. What does it mean to you?

2353 Secretary Perry. Environmental justice to me is being able  
2354 to pay an electrical rate that I can afford and at the same time  
2355 knowing that the emissions are not going up because of a decision  
2356 that is made. I see environmental justice being attacked every  
2357 day when the folks in the Northeast have to pay an exorbitant  
2358 amount of money for the cost and the emissions are going up.  
2359 To me, that would be a --

2360 Ms. Barragan. Mr. Secretary, let --

2361 Secretary Perry. -- social and an economic injustice.

2362 Ms. Barragan. Okay. Mr. Secretary, I represent a district  
2363 that is a majority minority. It is 88 percent Latino,  
2364 African-American. They disproportionately have the burden of  
2365 injustices that are happening from air pollution, from the lack  
2366 of efficiency, not investing enough in energy efficiency. But  
2367 let me tell you, your own report here says the Department of Energy  
2368 defines environmental justice as, quote, "the fair treatment and  
2369 meaningful involvement of all people with respect to development,  
2370 implementation, and enforcement of environmental laws,  
2371 regulations, and policies". That is directly from this report  
2372 here from your Department, and your photo is right in the front

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2373 here.

2374 So, what progress has your Department made in achieving these  
2375 goals in the two years since it was published?

2376 Secretary Perry. I would suggest we are making progress.

2377 Ms. Barragan. Okay, well, you know, that is not a very  
2378 specific answer. I would like to know what specific progress  
2379 you are making. Just to help remind you of the goals here, goal  
2380 No. 1 says to fully implement Executive Order 12898, the "Federal  
2381 Actions to Address Environmental Justice in Minority Populations  
2382 and Low-Income Populations". Goal No. 3 says, "to minimize  
2383 climate change impacts on vulnerable populations". Many of those  
2384 populations are just like my district, low-income, communities  
2385 of color.

2386 And I would like, if you could, please, to make sure that  
2387 you follow up with me on what progress your Department has made.

2388 Unfortunately, your answer just that you are making progress  
2389 doesn't help us know what it is you are working on.

2390 Secretary Perry. Well, can I expand then? I am just trying  
2391 to follow the chairman's lead and be as concise as I can be.

2392 When you look at what the United States is doing from the  
2393 standpoint of reducing emissions, I think that goes right to the  
2394 heart of what you are talking about. That goes right to the heart

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2395 of, if your constituents care about the emissions going down,  
2396 the United States and what we are doing with liquified natural  
2397 gas -- as a matter of fact, I would think it would make sense  
2398 to go across the State of California and export that gas off the  
2399 West Coast somewhere, so they can go and impact the rest of the  
2400 globe somewhere. So, all of those things collectively I think  
2401 go to the heart of what you are talking about from the standpoint  
2402 of environmental justice.

2403 And if we are going to be serious about this, we can't block  
2404 an emission-reducing fuel like natural gas from going across New  
2405 York into the Northeast. You can't block that type of fuel going  
2406 across your State to keep it from going to somewhere in the world.

2407 I mean, you can't, on the one hand, talk about environmental  
2408 justice, and then, say, "Oh, but we can't send any of this fuel  
2409 across our state because," you know, for whatever reason, we don't  
2410 like that particular fuel.

2411 Ms. Barragan. Mr. Secretary, will you commit to giving me  
2412 in writing something about what you are doing on environmental  
2413 justice in your Department, to just supplement what you said here  
2414 today?

2415 Secretary Perry. Sure. Absolutely.

2416 Ms. Barragan. That would be great. I just want to say,

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2417 look, I know a lot of my colleagues have talked about the cuts  
2418 to research and development. I am a firm believer that we need  
2419 to fund, adequately fund, investment in renewable energy  
2420 programs. Because if we don't, it is going to put the U.S. at  
2421 a geopolitical disadvantage, considering how aggressively some  
2422 other nations are phasing out fossil fuels. And I think there  
2423 is a great tie here to environmental justice, and given time,  
2424 maybe we can have this conversation another time.

2425 Secretary Perry. We will do it.

2426 Ms. Barragan. Thank you, Mr. Secretary.

2427 Secretary Perry. Thank you.

2428 Mr. Rush. The chair now recognizes the gentleman from  
2429 Virginia, Mr. Griffith.

2430 Mr. Griffith. Thank you very much, Mr. Secretary. I know  
2431 it has been a long day. I apologize that I have not been here  
2432 for the entire hearing. I have been upstairs working on trying  
2433 to figure out ways to lower drug prices in another subcommittee,  
2434 and that is important as well. You are doing great work. We  
2435 appreciate you. When you come to testify, it is usually one of  
2436 my favorite days. So, I really do regret that I have not been  
2437 able to be here all day.

2438 And I would just have to say that there is a lot of great

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2439 stuff going on. Now I am concerned about cuts to research. I  
2440 think there needs to be more money on research, but that needs  
2441 to be a parity between our fossil fuels and making sure that we  
2442 are finding the best ways that we can use them. As you know,  
2443 the rest of the world is not going to stop using fossil fuels,  
2444 even if we do.

2445 And one of the things that is interesting is, a couple of  
2446 years ago, you all gave a research grant for trying to separate  
2447 rare earth minerals from coal.

2448 Secretary Perry. Yes.

2449 Mr. Griffith. Well, here is what happened. It has just  
2450 been really exciting, and I have just learned about this in the  
2451 last couple of weeks. I have been talking about it everywhere  
2452 I go.

2453 They haven't got that perfected. In fact, Dr. Yoon at  
2454 Virginia Tech, who I greatly respect, said they weren't ready  
2455 to go to phase 2; that DOE was working on it. They were hoping  
2456 you all might go to phase 1.5 on that. But they have licensed  
2457 that technology to steel mills in India. Why? Because, as a  
2458 part of their research, they are separating things from coal and  
2459 they can separate out the dirtier coal from the cleaner coal,  
2460 the higher-carbon coal. And now, we have got steel plants in

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2461 India that are going to use that technology to get a higher grade  
2462 of coal to burn, to make their steel, which means that they are  
2463 lowering their carbon footprint because of technology financed,  
2464 in part, by the Department of Energy at Virginia Tech and other  
2465 places. And that is progress.

2466 When you say we are making progress, I don't know how you  
2467 could ever list out everything that you all are doing because,  
2468 as we work as a nation, both on renewables and on fossil fuels,  
2469 to make it better, to burn it cleaner, to do more, we are going  
2470 to find things that benefit the rest of the world as well. And  
2471 we should be able to export that. I congratulate you on that.

2472 Are there any things that you all can do to help us export  
2473 those technologies as they come up? Because when we are dealing  
2474 with climate change and we are talking about CO2 in the atmosphere,  
2475 we are not talking about just the United States or the State of  
2476 Virginia.

2477 By the way, thanks for stealing our coach at Virginia Tech,  
2478 my district, but that is all right, to Texas A&M in basketball.

2479 [Laughter.]

2480 Secretary Perry. A good man.

2481 Mr. Griffith. He is a good man.

2482 But we can do a lot for the world if we will export American

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2483 technology --

2484 Secretary Perry. Yes.

2485 Mr. Griffith. -- to the rest of the world, so they can  
2486 lower their carbon footprint. Because the Indians are going to  
2487 burn coal, no matter what. The Sub-Saharan and African nations  
2488 have plenty of coal. They are going to burn it. What say you?

2489 Secretary Perry. Absolutely.

2490 Mr. Griffith. And is there anything that you can do to help  
2491 us export that technology as we come up with it?

2492 Secretary Perry. It is really interesting, as I was having  
2493 the discourse previously and we were talking about our European  
2494 friends who are getting out of the natural gas -- or, no, excuse  
2495 me -- they are getting out of the coal. They are going to all  
2496 renewables, et cetera. And, you know, they criticize us for  
2497 leaving the Paris Accord.

2498 Yet, what I tell them is, I said, when you all have the  
2499 reductions in emissions that the United States has, then you can  
2500 lecture me about getting out of the Paris Accord, but until you  
2501 do that, please don't. And then, when you close the door, they  
2502 say, "And by the way, how can we buy some of that LNG?"

2503 So, I mean, they get it, that it is the United States' ability  
2504 to deliver liquified natural gas. It is our ability to deliver

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2505 technology like you are talking about to help lower emissions  
2506 around the world. That, I will suggest, is the absolute  
2507 definition of environmental justice.

2508 Mr. Griffith. And you are absolutely right. And as a part  
2509 of that, we also keep rates low.

2510 Secretary Perry. We do.

2511 Mr. Griffith. I thank you very much.

2512 And I yield back.

2513 Mr. Rush. The chair thanks you, Mr. Secretary, for your  
2514 participation in today's hearing. And now, Mr. Secretary, I know  
2515 you have to leave. You really were gracious with your time, and  
2516 thank you so very much for your participation.

2517 Secretary Perry. Thank you, Mr. Chairman.

2518 Mr. Rush. Thank you.

2519 Now the chair wants to remind members that, pursuant to  
2520 committee rules, they have 10 business days to submit additional  
2521 questions for the record to be answered by the witness who has  
2522 appeared.

2523 And I ask, Mr. Secretary, if you will respond promptly to  
2524 any such questions that you may receive. The chair has a  
2525 unanimous consent request to enter into the record the following  
2526 submissions: a study from the Brookings Institute entitled,

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2527 "Advancing Inclusion Through Clean Energy Jobs," a report by the  
2528 Solar Energy Industries Association entitled, "Diversity Best  
2529 Practices Guide for the Solar Industry," and an article from the  
2530 Alliance to Save Energy entitled, "Growth in Energy Efficiency  
2531 Demands Investment in a Highly Skilled Workforce".

2532 Hearing no objection, so ordered.

2533 [The information follows:]

2534

2535 \*\*\*\*\* COMMITTEE INSERT 2\*\*\*\*\*

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2536 Mr. Rush. The subcommittee now stands adjourned.

2537 [Whereupon, at 12:49 p.m., the subcommittee was adjourned.]

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