

U.S. Senate Committee on Energy and Natural Resources
May 25, 2017 Hearing: The Nominations of
Mr. Dan R. Brouillette to be Deputy Secretary of Energy, and Mr. Neil Chatterjee
And Mr. Robert F. Powell to be Members of the Federal Energy Regulatory
Commission
Questions for the Record Submitted to Mr. Dan Brouillette

Questions from Ranking Member Maria Cantwell

Question 1: The transportation sector remains the top contributor greenhouse gas (GHG) emissions and foremost consumer of oil in the United States. But strong standards, coupled with new vehicle technology developed with the support of the Department of Energy and our national labs, have helped to reduce emissions and oil consumption. In fact, current fuel economy standards have slashed emissions by almost 130 million metric tons of CO₂ – roughly the amount of GHGs emitted to power about 20 million homes for one year.

- Will you encourage the Administration to support strong automobile efficiency standards that help save consumers money?

Answer: I will encourage the Administration to strongly support standards that work best for American families.

- How do you see the Department of Energy partnering with industry to further promote fuel efficiency and reduced emissions?

Answer: It is my understanding the Department is already partnering with industry and if confirmed, I look forward to being fully briefed and ensuring these important relationships continue.

Question 2: The Department of Energy has published an annual U.S. Energy and Employment Report during each of the last two years. This report provides an overview of the current national energy employment landscape across a variety of sectors and is an important tool for policy makers, energy stakeholders, workers, and the energy industry at large.

- Will you commit that the Department of Energy will continue to publish the U.S. Energy and Employment Report on an annual basis?

Answer: Employment data is, indeed, an important tool for policy makers and others. The most recent edition of the *U.S. Energy and Employment Report* was published by the Department on January 3, 2017. If confirmed, I will review this report and be fully briefed.

- The most recent U.S. Report found that 73 percent of energy companies found it difficult to hire skilled employees. How will you make workforce training a priority at the Department of Energy?

Answer: A highly skilled workforce is vital to America's energy needs. If confirmed, I look forward to ensuring work force training is appropriately prioritized.

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Question 3: The Hanford Waste Treatment and Immobilization Plant will treat the radioactive and hazardous wastes currently stored in 177 underground tanks and convert them to glass waste forms for disposal through a process known as vitrification. Hanford has been an interim storage site for 70-plus years.

The final report of the Blue Ribbon Commission on America's Nuclear Future urged the Obama Administration to conduct a review of policy to dispose of defense waste. After this review was completed the Administration decided to seek to site a separate facility to safely store defense waste.

Defense waste has different physical characteristics than commercial. In addition, several states have legally-binding site clean-up commitments that require the Department of Energy to remove defense waste by a specific date. Moreover, scientific analysis has shown there are both technical advantages and potential cost-savings associated with a separate Defense Waste Repository.

- Can we count on you to provide a disposal option for the Defense Waste that has resided at Hanford for 70 years?
- Will you ensure that any decisions that are made about how waste is processed will be done with input from the state of Washington Department of Ecology and the entire Washington congressional delegation?

Answer: Visiting these sites and understanding the nature of this waste, as well as options for waste processing that enable us to achieve our obligation to the taxpayers will be a high priority for me. If I am confirmed, I will work with the State of Washington, the Washington congressional delegation, and other stakeholders to ensure we are making sustainable, risk-informed, and fiscally wise decisions regarding the processing of this waste.

Question 4: Nuclear nonproliferation is an important mission throughout the Department of Energy. The National Nuclear Security Administration's (NNSA's) Defense Nuclear Nonproliferation program is critical to our security. The NNSA works with the National Laboratories to provide partner countries and the International Atomic Energy Agency with the expertise needed to prevent nuclear materials and technology from reaching the hands of terrorists and rogue states.

Yet, despite the importance of the work done by the National Laboratories and the NNSA to prevent dangerous nuclear materials getting in the hands of terrorists the Trump Administration has proposed to cut the Defense Nuclear Nonproliferation account.

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It strikes me as ridiculous that this Administration advocates building a wall to keep us safe but then cuts programs that protect us from 21st century threats such as nuclear weapons, cyber threats, and terrorist attacks with WMDs.

- Will you impress upon the Administration the importance of the Defense Nuclear Nonproliferation program to keep our nation safe?

Answer: If confirmed, I commit that I will advocate for the Department in interagency deliberations. The Department is committed to nuclear security, including its nonproliferation functions. I look forward to being fully briefed on the Department's nonproliferation functions if I am confirmed.

Question 5: 97 percent of climate scientists believe that climate change is real, is already happening and is going to get worse. If we don't heed this scientific consensus, the U.S. will be forced to spend tens of billions of dollars a year responding to the impacts of extreme weather, sea level rise, and infrastructure damage due to climate change. You may ask, how can our economy afford to do what is necessary to reduce greenhouse gas emissions.

- How can we afford not to act?

Answer: I believe the climate is changing. We're all living here, so we must have some impact. I agree with Secretary Perry that the question is how we address it in a thoughtful way that doesn't compromise economic growth, the affordability of energy, or American jobs.

- Do you believe it is in the nation's best interest to continue to collect and make available to the scientific community the data and modeling capabilities necessary to understand how our climate is changing, and what it means for our national security, our infrastructure investments, our economy and our citizens?

Answer: I believe the climate is changing. We're all living here, so we must have some impact. I agree with Secretary Perry that the question is how we address it in a thoughtful way that doesn't compromise economic growth, the affordability of energy, or American jobs

Question 6: The Department of Energy's appliance efficiency standards program has been extremely successful. For example, today the typical new refrigerator uses one-quarter the energy it did in 1973 – despite offering 20 percent more storage capacity and being available at half the retail cost. New clothes washers use 70 percent less energy than they did in 1990 and air conditioners use about half the energy.

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The typical household spends about \$500 less a year on utility bills thanks to existing national efficiency standards for appliances and equipment. Starting with the first standard finalized by President Reagan, appliance efficiency standards will have saved American consumers and businesses nearly \$2 trillion on their utility bills by 2030.

- The appliance efficiency program has a long history of bipartisan support going back to President Reagan. Do you agree that the program is valuable?

Answer: I believe we owe it to the American people to examine all programs to see how they are being implemented and make sure that all programs work for the benefit of the country.

Question 7: Secretary Perry told this Committee during his confirmation hearing that cybersecurity is going to be one of his top priorities at the Department of Energy.

- How can cybersecurity be a top priority if the agency's budget proposes to cut spending on cybersecurity by 32%?

Answer: I support the President's budget. Cybersecurity remains a top priority and, if confirmed, I will work within the resources provided by Congress to ensure we support this important mission.

- How can the Department protect our critical energy infrastructure from cyber intrusions if you do not have the funds to do so?

Answer: I support the President's budget. Cybersecurity remains a top priority and, if confirmed, I look forward to working alongside our national security experts to support this important mission.

Question 8: Modernizing the Columbia River Treaty is of critical importance to Washington State, the Pacific Northwest, and the country. Tribes, power companies, environmental interests, transportation and agriculture interests, the fishing industry, counties, and towns are all intently focused on how and when the treaty will be modernized.

I personally discussed this issue with Canadian Prime Minister Justin Trudeau and Secretary of State John Kerry, and I urged the Obama Administration to finalize its negotiating position. In October, 2016, the State Department finalized the United States negotiating authority, and we currently have a chief negotiator in place. However, the Canadians have not appointed a chief negotiator, and under the current administration, progress has been extremely slow.

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- Will you commit the Department of Energy to help expedite the negotiations with Canada should you be confirmed?

Answer: Should I be confirmed, I will learn more about this effort from Bonneville Power Administration (BPA) officials. I also will support BPA's effort to modernize the Columbia River Treaty in a manner consistent with the Administration's goal of renegotiating or terminating international agreements that no longer benefit the interests of the United States.

- Can you ensure that the critical voice of the stakeholders in my state and region can remain in regular contact with the Administration during the negotiations?

Answer: Yes

Question 9: The President's Budget proposes to sell approximately 270 million barrels of Strategic Petroleum Reserve (SPR) crude oil by 2027; leaving roughly half of the remaining SPR inventory after all sales currently authorized by law are completed.

Forty years ago, we created the SPR to prevent economic and security impacts of crude oil supply disruptions. That's exactly what had happened with the Arab oil embargo in 1973. The core policy reason for the reserve hasn't changed since then – nor should it. The SPR is our most important, federal, energy security asset.

- Do you agree that we should auction off our energy security by selling the Strategic Petroleum Reserve?

Answer: I have not been part of the discussion to draw down the Strategic Petroleum Reserve. I look forward to being briefed on this matter and working with you going forward should I be confirmed.

- Do you believe oil markets are subject to price volatility that affects U.S. consumers?

Answer: Yes. Price volatility -- especially price spikes -- does impact consumers.

- Do you believe the core policy reasons for the establishment of the Strategic Petroleum Reserve still exist today?

Answer: The core reasons exist, though there is room for discussion as to the actual size needed and the footprint of the reserve itself.

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Question 10: Our 140 million residential and commercial buildings consume 40 percent of the nation’s energy – that’s more than any other sector of the economy. That is why I am a strong supporter of “smart buildings” – which uses advanced technologies, such as improved building controls, sensors, and more efficient equipment to increase efficiency.

In 2014 efficiency measures reduced energy bills for home and building owners by \$70 billion. When energy efficiency reduces our utility bills it has a direct, positive effect on the overall economy. The American Council on an Energy Efficient Economy estimates that for each dollar saved due to energy efficiency, the economy benefits by 2 dollars and 24 cents.

The Department of Energy, through its Building Technologies Office and the National Labs, has played a critical role in advancing energy efficiency in buildings by, for example, improving building monitoring and control equipment to enable significant additional building energy savings.

At a cost of less than \$2 per household, the Building Technologies Office helps consumers save almost \$500 per year. The budget proposal released on Tuesday cuts this program by two-thirds.

- Do you agree with me that it’s critical to use the Department of Energy’s capabilities to help building owners make retrofit and construction choices that employ smart technologies to make dramatic reductions in building energy consumption?

Answer: Yes, and I believe this is possible under the President’s proposed budget.

- In your opinion, isn’t helping energy bill payers cut energy waste in order to unleash American productivity an important function of the premiere energy R&D agency?

Answer: I agree that helping to cut energy waste is an important function and I believe this will happen under the President’s proposed budget.

Question 11: DOE’s Weatherization Assistance Program (WAP) lowers energy use and costs for low income families by supporting energy efficiency home retrofits through state-managed networks of local weatherization providers.

Although WAP has improved more than 7 million homes since the program began in 1976, approximately 39.5 million households are eligible for WAP services today.

- Mr. Brouillette, are you aware that every dollar invested in the program attracts one matching utility program dollar and produces \$2.51 in benefits to households and

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society? Isn't this the kind of return on federal investment we should be expanding not eliminating?

Answer: I have not read the study that this question references. If confirmed, I look forward to being fully briefed on this matter.

- Are you aware that DOE's Weatherization Assistance Program is also a job creator? WAP funds support approximately 8,500 direct and indirect jobs per year. Weatherization programs have also trained more than 200,000 American workers, boosting their eligibility for jobs and helping to grow the clean energy workforce.

Answer: I need to learn more about this program and its effectiveness. I support the President's budget and believe that it leaves more money in the private sector, allowing the private sector to create sustainable jobs.

Question 12: During his confirmation hearing, Secretary Perry committed to adequately fund Hanford to continue progress being made at the site and protect the workers there. The President's Budget makes the Secretary's commitment ring hollow. The budget does not allow for progress to be made on the Central Plateau of Hanford, where recently a tunnel containing radioactive materials collapsed.

The budget remained flat for the Hanford Tank Farms where just last week a workers' clothing was contaminated with radioactive constituents. The budget cuts community support by 46%, this money is used for oversight and outreach purposes and perhaps most importantly funding the Richland School district. This is baffling. Mr. Brouillette, you previously served at the Department and knows how important it is that we adequately fund the work being done there.

- What actions will you take immediately to change the Administration's thinking on Hanford? How will you educate them on how critical this mission is to the people of Washington and the nation?
- I toured the tunnel collapse two weeks ago and it is extremely close to active work sites. We were extremely lucky that no one was hurt. But I would rather not have luck dictate worker safety. I need you to meet with the proper DOE officials to determine what funds are needed to stabilize facilities at Hanford. Will you do that and get back to me this month?

Answer: Visiting the Hanford Site and other former defense sites across the nation is a high-priority for Secretary Perry. If confirmed, I will commit to using the information I learn about

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Hanford to better inform members of this administration and strengthen our decision-making process.

Question 13: We have an obligation to the people working at the Hanford site. In just the past two weeks a tunnel collapsed adjacent to the Plutonium-uranium extraction facility, which contains fatally harmful radioactive constituents and more recently radioactive contamination was found on a workers clothing.

These events of course highlight how dangerous Hanford is and the extreme focus we must maintain on the safety mission whether that be improving union-contractor relations, maintaining a robust research and development program to improve safety and remediation technology, and improving the workers compensation program.

The complexity of the Hanford clean-up and safety risks requires oversight and that is why I have requested the Department of Energy Office of the Inspector General to investigate the workers compensation program at Hanford, which was recently initiated and asked the National Institute for Occupational Safety and Health and the Department of Energy Office of Enterprise Assessments to maintain an annual oversight mission of the safety practices at Hanford and development of new technology.

- Do you acknowledge the extreme risk to workers at the Hanford site and commit to improving worker safety and improving the worker compensation program and the Departments contribution the Energy Employees Occupational Illness Compensation Program.
- Do you acknowledge that the Department has a lot of work to do to improve how it helps sick workers?
- Will you commit to work with me to fix the Departments deficiencies and work with the unions and advocacy groups to get to the bottom of the problems plaguing the workers compensation program at Hanford?
- Will you commit to working with us to ensure the workers at Hanford are receiving the proper training and equipment and that they are not exposed to chemical vapors?

Answer: I am committed to cleaning up the Hanford site and will make it a priority if confirmed. Protecting workers and the surrounding communities is of paramount importance. I look forward to getting up to speed on these issues and working with the State of Washington, its Congressional delegation, and other relevant stakeholders.

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Question 14: The Hanford facility in the state of Washington pioneered the plutonium extraction process and produced plutonium in support of our national defense for more than 40 years. The site now represents the largest cleanup operation in the United States and, arguably, the most technically challenging on the planet.

Each new Administration comes in and thinks they can cut corners at Hanford and the other nuclear weapons complex sites. But it never works. My constituents and I – and the State of Washington -- need your word that you will support sufficient funding levels for the Hanford cleanup, including the completion of the Waste Treatment and Immobilization Plant.

- Do you understand the moral and legal obligations as well as the urgency for the Department of Energy to properly fund and proceed with the cleanup effort at the Hanford site, including construction of the Waste Treatment Plant?

Answer: I take the Department's moral obligations and regulatory commitments seriously. I understand that we are actively working to meet our cleanup commitments while continuing key risk reduction and remediation activities at Hanford.

- Will you commit to working with the State of Washington, to uphold the Federal government's commitments pursuant to the Tri-Party Agreement?

Answer: If confirmed, I will work with you, the State of Washington and others to ensure we are making sustainable, risk-informed, and fiscally wise decisions regarding our Environmental Management obligations at Hanford.

- Will you ensure that you will impress upon the Administration that any changes in the Department's approach must include input from the state of Washington before moving forward. This is critical to avoid costly litigation that will only hamper progress. You must be aware of how sensitive of an issue this is to my constituents and how hard we are willing to fight any decisions that we believe will harm the environment or potentially the public. Do I have your word you will work with the Washington delegation and state of Washington on the Hanford cleanup?

Answer: Yes

Question 15: During Secretary Perry's confirmation process, he said: "the Department can be a great resource in cooperating with the private sector to spur innovation, particularly by investing in cutting-edge research." However, the President's budget proposal jeopardizes the very science and technology programs that Secretary Perry said he values, which undermines U.S. energy

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leadership and kills American jobs. The President has proposed to dramatically slash funding for and, in some cases, eliminate several important DOE programs.

The Department of Energy is a science and technology leader, with an unrivaled network of national laboratories, accelerating innovation in energy, manufacturing, and nuclear security. This budget will lose 17,000 scientists jobs from our national labs, universities, research institutions and businesses across the country.

- The budget proposes to eliminate ARPA-E, which advances high-potential, high-impact energy technologies that are too early for private-sector investment. Do you support eliminating ARPA-E?

Answer: I support the President's budget. If I am confirmed, I look forward to finding alternative solutions to advance these goals.

- The budget proposes to eliminate the Weatherization Assistance Program and State Energy Program, which provide critical technical assistance and state-controlled competitive grant funding to all 50 states to support state- and county-level energy projects. Do you support eliminating the Weatherization Assistance Program and State Energy Program?

Answer: I support the President's budget and, if confirmed, I look forward to finding alternative solutions to advance these goals.

- The budget proposal includes draconian cuts to the Office of Energy Efficiency and Renewable Energy, the Office of Electricity Delivery and Energy Reliability, and other applied energy programs. These programs invest in all stages of innovation across a diverse portfolio of energy technologies to enhance economic competitiveness and secure America's long-term energy security. Do you agree with these cuts? Do you believe there is a Federal role in investing in R&D in these areas?

Answer: I support the President's budget. I believe there can be a role in spending taxpayer dollars on R&D.

- The budget proposes to cut 17 percent of the Office of Science, which is the largest federal sponsor of basic research in the physical sciences. Do you agree that Federal investments in basic research are critical for maintaining U.S. leadership in science and technology and creating future jobs?

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Answer: I support the President's budget and know that basic research will continue under it to maintain our leadership. I am committed to both investing in energy innovation and using taxpayer dollars responsibly. If I am confirmed, I will explore ways to make technology and scientific development at the Department and the labs available to interested parties. I also believe in engaging with the private sector. While being careful not to duplicate private sector efforts, the Department can be a great resource in cooperating with the private sector to spur innovation, particularly by investing in cutting-edge research.

Question 16: Cybersecurity vulnerabilities in our nation's energy infrastructure pose grave national security and economic risks to the country. The Department of Homeland Security reported that 56% of cyber incidents against critical infrastructure in 2013 were directed at energy infrastructure. This number has since decreased: in 2016 it was down to 20%, but it is still too high. Although we have mandatory cybersecurity standards for electric utilities, natural gas pipelines are subject to merely voluntary guidelines issued by the Transportation Security Administration (TSA).

- DOE's most recent Quadrennial Energy Review suggested that DOE should assess whether any additional or mandatory cybersecurity guidelines are necessary for natural gas pipelines given the increased dependence between the electric and natural gas sectors. Do you agree?

Answer: Cybersecurity of the networks on which we rely and the threats to our critical infrastructure are evolving at a very rapid pace. Flexibility is most important to stay ahead of tomorrow's threats rather than merely addressing yesterday's. We can achieve this by partnering with infrastructure owners and enriching cross-sector collaboration and preparedness efforts.

Question 17: The President's budget proposes to auction-off to the highest bidder the Bonneville Power Administration's transmission facilities and the transmission assets owned by the other Federal power marketing administrations (PMAs).

Mr. Brouillette, you previously served at the Department of Energy and were around this town for a long time. I am certain that you are aware that Presidents from both parties have over the years proposed to sell-off the PMAs and on each occasion, Congress – on a bipartisan basis – said absolutely not!

The President's proposal could allow private companies to substantially raise transmission rates which will raise the price of power for consumers in more than 30 states.

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- Please tell me the Department isn't seriously going to pursue this proposal to auction off the PMA transmission lines, including those owned by the Bonneville Power Administration?

Answer: Congress and the President will arrive at a budget agreement, as they have in the past, and I will work to ensure that the Bonneville Power Administration's customers receive dependable service at a reasonable price.

Question 18: In 2015 a Blue Ribbon Commission referred to the National Laboratories as a – *“place where sustained, long-term, complex research and development programs can be managed and executed across a range of basic and applied research areas”*.

Our labs and DOE work across the R&D spectrum, from basic to applied research and including demonstration of technologies before handing-off their work to industry for commercialization. That's how our innovation machine works.

Based on Tuesday's proposed budget, I can only assume the Trump Administration has misunderstood the role of DOE and the Labs to be basic research alone. If not corrected, I believe this will cripple the innovation pipeline in this country that we have worked so hard to build, with significant impacts to American competitiveness and economic strength.

- Can you please explain what you understand to be the innovation pipeline in this country and what role the National Labs play in basic and applied research as well as the demonstration of the feasibility of technologies?

Answer: If confirmed, I commit to working to increase the effectiveness of taxpayer dollars spent by the Department for the greatest benefit and opportunities for innovation. I strongly believe that the scientific research that is conducted and funded by the Department is absolutely critical. Because the national labs conduct the best research in the world, I believe it is necessary to provide a pathway and an opportunity for that research and technology to reach the market, which will generate tremendous economic opportunities.

Question 19: Last month, Secretary Perry sent a memo to his Chief of Staff asking that the Department prepare a study examine the state of wholesale electricity markets, especially why coal and nuclear plants are having a hard time competing with natural gas and renewable resources. The Secretary's memo also hinted that state and federal renewable energy incentives are to blame.

The Secretary followed this up a few days later with a speech in New York during which he suggested that the Trump Administration may try to preempt state programs, such as renewable

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energy standards. It does not take a rocket scientist to know that it is low natural gas prices, not renewable energy, that is making coal and nuclear power uncompetitive.

But it is also troubling that the Administration appears to be suggesting that adding more renewable energy threatens grid reliability especially when our national labs have repeatedly found this is not true. It is even crazier that Secretary Perry is making these false statements since Texas has more wind power than any other state.

- Are you aware that the National Renewable Energy Laboratory (NREL) has found that the eastern grid and the western grid could each reliably accommodate 30 percent renewable energy rates without changes and that a third NREL study concluded that renewable energy will be able to reliably generate 80% of U.S. power needs by 2050 if we invest in increased grid flexibility?

Answer: If confirmed, I look forward to reviewing these studies, alongside the study commissioned by the Secretary, and engaging with you and your staff.

- Do I have your commitment that the Department will not attempt to preempt state renewable energy programs, such as renewable portfolio standards, in an attempt to bolster less competitive sources of energy, such as coal?

Answer: I believe state governments should be able to exercise their autonomy to the fullest extent possible under our federal system, as prescribed by the Constitution.

Question 20: I am deeply troubled by continuous reports that DOE has delayed awarding funds and, in some cases, is refusing to release funds altogether for various activities for which Congress has already provided appropriations in order to ensure that these activities are consistent with President Trump's priorities.

It is unlawful for the President and DOE to ignore statutory requirements or funding direction provided by appropriations legislation already enacted by Congress. Although DOE last week did finally release funds for three ARPA-E projects, I am told that this issue has not been resolved.

- Will you commit that DOE will follow the law to fund projects as directed by Congressional intent and appropriations, notwithstanding the policy priorities included in the Administration's budget proposal?

Answer: If confirmed, I will follow the law.

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- When you arrive at DOE, will you investigate these issues and resolve them immediately?

Answer: If confirmed, I will look into these matters you have raised. I will work to ensure that all statutory requirements related to appropriations legislation are followed and that the American people receive the best value for their tax dollars.

Question 21: If confirmed, you will serve as the Chair of the Department's Credit Review Board, which reviews loan applications and recommends to the Secretary whether to issue a loan guarantee under the Title XVII program. There are a number of current DOE loan applicants that are very far along in the application process but now face uncertainty given the President's budget proposal.

- Will you commit to allowing existing DOE loan applicants the opportunity to complete the loan approval process, if they meet the requirements of the Title XVII program?

Answer: If confirmed, I commit to receiving full briefings on this program.

- Existing loan applicants have paid hundreds of thousands of dollars in application fees to DOE and spent months, if not years, going through the loan process under the expectation that DOE would honor their applications. How will you handle existing DOE loan applicants given the President's budget proposal?

Answer: If confirmed, I commit to receiving full briefings on this program.

- According to DOE's numbers, the loan programs have helped create or save more than 56,000 jobs. Unfortunately, the President's budget proposes eliminating these programs. I know of 2 potential projects that would support over 2,000 jobs. I am concerned that these job losses were not considered when this budget proposal was put together. Frankly, this seems to run contrary to the President's stated objectives to support economic growth and American jobs. Can you work with us to make sure these real job impacts get their due consideration?

Answer: Yes

Question 22: The United States has enjoyed a formal energy relationship with Israel since 2007, rooted in a joint research and development program to allow U.S. and Israel scientists to partner in the creation of new energy technologies. This Committee has prioritized the expansion of this relationship, supporting funding for the program and looking to expand the parameters of that partnership.

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In 2014 Congress passed the U.S.-Israel Strategic Partnership Act, which included a significant energy title. The bill encourages enhanced research and development, elevated dialogue opportunities, collaboration between U.S. national labs and Israeli research institutes, and the creation of a new platform – a U.S.-Israel center on energy and water to link our governments, academia to further joint research and development and technology transfer.

- How do you view the U.S.-Israel energy relationship as it stands today and what opportunities do you see for growth?

Answer: DOE values our long-standing partnership with Israel. I understand that Israel and the United States have made great progress in expanding our bilateral strategic economic relationship. But, I believe there is more we can do to expand our energy cooperation, both bilaterally and multilaterally. Collaboration in the energy-water nexus, on desalination in particular, and on cybersecurity, are potential areas of collaboration that could help achieve U.S. domestic energy priorities.

- Do you share my belief that enhanced cooperation in water management is particularly pressing, given the state of much of the American west?

Answer: I agree. Present day water and energy systems are interdependent and it is important to engage on the energy-water nexus.

- If confirmed, how would you work toward the implementation of the US-Israel Center on Energy and Water?

Answer: DOE has a robust collaboration with Israel. I believe both the U.S. and Israel could benefit from expanded collaboration on energy and water. If Congress provides the resources, I'd be happy to work toward implementation of the U.S-Israel Center on Energy and Water.

Question from Senator John Barrasso

Question: On May 18, 2017 the Wall Street Journal reported that PAO Rosneft, the state-owned Russian oil company, may be in a position to take over the U.S. energy assets of Citgo if Citgo's parent company defaults on its debt. Citgo's energy assets in the U.S. include oil refineries, pipelines, and numerous petroleum platforms.

Foreign investment in the U.S., especially by an adversary like Russia, has national security implications. The Committee on Foreign Investment in the United States (CFIUS) is charged with reviewing transactions that could result in control of a U.S. business by a foreign entity. CFIUS is authorized to block transactions or impose conditions on a transaction in order to

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mitigate any threat to national security. The Secretary of Energy, and by delegation the Deputy Secretary, is a member of CFIUS.

What steps will you take to ensure that the Russia-Citgo deal does not pose any threat to national security?

Answer: CFIUS, as a matter of policy and under its regulations applicable to DOE- to protect the confidentiality of parties that may be before the Committee- does not comment on subject cases that may or may not be actively before the Committee; this includes not commenting on matters that appear in the media and that may or may not be before the Committee. However, I can assure you that the Department takes its responsibilities as full time members of CFIUS very seriously. If confirmed, I commit to working closely with you on this matter.

Questions from Senator Ron Wyden

Question 1: Mr. Brouillette, as we discussed in my office, I'm seriously concerned about the administration's budget proposal to privatize the transmission assets of the Bonneville Power Administration. This amounts to highway robbery in the Northwest. Oregon families' dollars -- especially the communities in rural Oregon, who most rely on the Bonneville system -- are already stretched too thin without the administration trying to raise their monthly utility bills. Other administrations have tried this before, and I fought it. I will oppose this attempt as well. When we met in my office, I asked if you would commit to opposing the sale or privatization of Bonneville. As you may know, this was the same commitment that Energy Secretaries Abraham and Bodman gave to me during their nomination hearings when a similar privatization gimmick was proposed by the Bush Administration.

So let me ask you, for the record, will you make the same commitment that Secretaries Abraham and Bodman made to oppose selling off or privatizing Bonneville?

Answer: I recognize the importance of Bonneville to the citizens of the Northwest. Congress and the President will arrive at a budget agreement, as they have in the past, and I will work to execute that agreement to the letter. I will also work to ensure BPA customers receive dependable service at a reasonable price.

Question 2: The 17 DOE laboratories make up a federal research powerhouse, providing the United States with the best in energy technology innovation and scientific research. Would you agree that the national labs, like the National Energy Technology Lab facility located in Albany, Oregon, represent crucial one-of-a-kind assets to this country, which should be maintained and invested in? And will you commit to maintaining the existing network of labs?

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Answer: I agree that our national laboratories are a critical part of the DOE enterprise and a national treasure. Our national laboratories are the crown jewels of the nation and I plan to support and advocate for their work. I support the President's budget and, if confirmed, I plan to visit as many national labs as possible and learn from our outstanding men and women who work there.

Question 3: Mr. Brouillette, the Pacific Northwest has been a dumping ground for high-level, radioactive nuclear waste going back to the Manhattan Project. The Federal Government has an obligation to clean up this waste, but the Department of Energy, which is in charge of the effort, has spent tens of billions of dollars over 3 decades without processing a single gallon of the waste. This is a problem that both Democratic and Republican Administrations have failed to fix. What are you going to do to turn things around at Hanford?

Answer: I fully understand the magnitude and importance of the Environmental Management mission in this country. If I am confirmed, I very much look forward to visiting sites like Hanford in Washington State that directly contributed to our nation's victories and national security. If confirmed, I will work with you to ensure we are moving this important mission forward while making sustainable, risk-informed, and fiscally wise decisions in the future.

Question 4: Senator Grassley and I head up a bi-partisan caucus here in the Senate to try to protect whistleblowers. As you may know, whistleblowers have been mistreated at Hanford and across the Department--with multiple examples of retaliation and intimidation. As Deputy Secretary, what are you going to do to change the culture at DOE so that employees can come forward and tell you, and Congress, when things are going off the rails without losing their jobs?

Answer: When there are issues, I encourage people to come forward. If confirmed, I will look into current protocols in place, including the new whistleblower protection structure. It is my intention to emphasize the processes under that structure and to protect the people who take pride in looking after the good work of the Department of Energy.

Question 5: U.S. government clean energy research and development (R&D) is at risk due to the administration's proposed FY 2018 budget cuts at the Department of Energy (DOE). Around 3.3 million Americans are already employed in the clean energy sector, and job growth has been experiencing record highs. And yet there is no guarantee that the United States will retain a leadership position on clean energy. If DOE R&D programs are weakened, it's quite possible that China or another growing economy will fill our leadership vacuum. Consider that China, who is hosting the Clean Energy Ministerial and Mission Innovation meetings this year, is already poised to take the lead, with the second largest Mission Innovation pledge after the United States. What, specifically, would you do at the program level within DOE to ensure continued U.S. leadership on clean energy technology?

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Answer: I understand that Secretary Perry will be attending the Clean Energy Ministerial and Mission Innovation meetings in June. If confirmed, I look forward to discussing this topic with Secretary Perry to ensure the U.S. remains committed to these overarching goals.

Question 6: Will you commit to upholding full U.S. participation in the Mission Innovation (MI) initiative, including by keeping the pledge to double U.S. clean energy investment, by partnering with the private sector to deploy game-changing technologies, and by engaging actively in the MI steering committee and sub-groups—beginning with attending the Clean Energy Ministerial (CEM) and MI meetings next month in Beijing?

Answer: I understand that Secretary Perry will be attending the Clean Energy Ministerial and Mission Innovation meeting in June. If confirmed, I look forward to discussing this topic with Secretary Perry to ensure the U.S. remains committed to these overarching goals.

Question 7: Mr. Brouillette, it is important for DOE to execute programs and deploy funds previously allocated and obligated. It has been disheartening to hear of DOE delaying expenditures of funds with little to no justification. Can you commit today to ensuring that DOE follows through on its funding commitments for the good of the U.S. energy sector without undue partisan considerations?

Answer: I understand that a process is in place to provide an equitable review of all applications for funding assistance. If I am confirmed, I will work to ensure that all statutory requirements related to appropriations legislation will continue to be followed and that taxpayer dollars are allocated in a manner that provides the best value to the American people.

Question 8: Mr. Brouillette, energy storage is one of the most rapidly growing energy technologies out there, and it can provide multiple benefits to the grid, including enhanced grid reliability. And yet, many energy storage technologies are still in their infancy, requiring further research and development, which historically requires a significant governmental role. Do you support increasing funding levels at the Department of Energy for energy storage research, development, and demonstration?

Answer: I have not been briefed on DOE's energy storage research and look forward to being briefed on this important issue if I am confirmed.

Question 9: I am aware of the study that Secretary Perry has called for on the relationship between renewable energy and coal and nuclear retirements. I am concerned by what appears to be an attack on renewables. Can you assure me that, if confirmed, you will continue to prioritize renewable energy research, development and deployment at the Department of Energy?

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Answer: I have not been fully briefed on the study you reference in your question. If confirmed, I will advocate for the programs of the Department.

Question 10: Will you commit to defending the Office of Energy Efficiency and Renewable Energy and Advanced Research Projects Agency-Energy (ARPA-e) in DOE's budget and operations?

Answer: I support the President's budget. Congress and the President will arrive at a budget agreement, as they have in the past, and if confirmed I will work to ensure that agreement. If confirmed I look forward to finding alternative solutions to advance these goals.

Question 11: I am currently thinking about the "next big things" in the energy and energy efficiency sectors. For instance, I am very curious about the potential to extract savings from the efficiencies generated when devices and buildings become connected and those connections optimized. This is commonly referred to as "systems efficiency" and it has applications in building energy codes, appliance and equipment standards, workforce development, and the various research activities underway at DOE. What do you think is the potential at DOE, across the federal government, and in states to capture these savings and deliver greater benefits to homeowners, consumers, and businesses? What are some barriers that we in Congress could consider removing to unlock even greater savings?

Answer: There is vast potential for improvement. If I am confirmed, I look forward to working with DOE staff and your staff to identify any barriers Congress could consider removing.

Question 12: Mr. Brouillette, given your experience, I am sure you recognize the importance of federal support of state efforts to help homeowners, consumers, and businesses lower their energy consumption. Yet the budget proposal released on Tuesday would cut funding by over two-thirds for the DOE office responsible for helping state and local governments adopt building energy codes and eliminate funding for state energy programs and weatherization for lower-income families. Oregon alone would stand to lose over \$500,000 for our state energy office and funding that helped improve the energy efficiency of over 1,700 homes. What will you do, if confirmed, to ensure these programs are funded and continue to generate savings and benefits?

Answer: I support the President's budget and, if confirmed, I look forward to finding alternative solutions to advance these goals. I will ensure that the will of Congress, as expressed through statute, is carried out.

Question 13: What role do you see the Trump administration's DOE should have in fighting climate change?

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Answer: A strong, vibrant economy is the best defense to a number of concerns, including climate change. I believe the climate is changing. Some of it is naturally occurring, but we are all living here so we must have some impact. If confirmed, I look forward to working with DOE laboratories to find balanced answers to this issue.

Question 14: What specifically would you do at the DOE to protect the electricity grid--and American citizens--from cyber-attack?

Answer: As the Sector-Specific Agency for the energy sector, DOE serves as the voice of the sector. If confirmed, I look forward to collaborating with the private sector to strengthen the security of the grid and protecting American citizens from a cyber-attack.

Question 15: Our troops are often reliant on dangerous fuel convoys to keep them operating. Do you think tightening vehicle efficiency standards and supporting the deployment of renewable energy technologies is worth supporting, to help minimize the risk to our troops?

Answer: I support giving the troops the tools they need to best carry out their mission and the focus is obviously on the safety and security of our troops.

Question 16: Mr. Brouillette, our electricity grid--once touted by the National Academy of Engineering as the single greatest engineering achievement of the twentieth century--is in need of serious help. Can you commit on working to modernize our electric grid? If so, what steps will you take to advance grid modernization?

Answer: Yes, if I am confirmed, I commit to working with other agencies of government and with the Congress to modernize our electric grid. The Secretary has commissioned an agency-wide study on the electric grid, which is due shortly. If confirmed, I look forward to reviewing this study and engaging with you and your staff.

Question 17: Mr. Brouillette, I'm sure you realize that energy storage and an increasing number of aggregated distributed energy resources (DERs) can provide a range of valuable services to the electricity grid, such as frequency regulation and capacity. In many parts of the country there are no means for remunerating these technologies for the services that they provide, which creates a market distortion against these technologies. What will you do at the Department of Energy, and in your relationship with the Federal Energy Regulatory Commission, to ensure that the full suite of technologies are identified for the value-streams they provide to the grid? For example, would your DOE continue working to better define the value different services the grid can provide?

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Answer: The Secretary has commissioned an agency-wide study on the electric grid, which is due shortly. If confirmed, I look forward to reviewing this study and engaging with you and your staff.

Question 18: Considering the integrity and security of the nation's electricity system, as well as the efficiency with which smart-grid enabled appliances and equipment are deployed in the market, do you believe it would be useful to promote open interoperability standards for smart-grid enabled technology? And if so, how would you recommend doing so?

Answer: It is my understanding the Department has funded a wide array of advanced grid R&D technologies and, if confirmed, I look forward to being briefed further.

Question 19: Utility data access is important for many businesses capable of providing services to consumers, such as enabling more accurate modeling and forecasting of locational electricity demand needs. What is your view on utility data access, and how would you work to make sure both sides of this debate get a fair shake?

Answer: I am not familiar with the issue but, if confirmed, I look forward to learning more and being briefed on it.

Question 20: Electric vehicles (EVs) have come a long way. The problem is that we're talking about two very separate, siloed industries with very few interconnections. With more EV-grid integration, it's possible for EVs to even provide valuable services back to the grid when needed. What can we expect from you in supporting further electric vehicle-grid integration, and in facilitating dialogue between US automakers and electricity companies?

Answer: I believe that the key to resolving such issues is through dialogue. If I am confirmed, I hope to be able to facilitate such a dialogue between the automakers and electricity companies.

Questions from Senator Bernard Sanders

Lessons from past positions

Question 1: Based on your experiences as an executive at Ford, what can DOE do to support the production and use of electric vehicles?

Answer: From my time at Ford, I learned that the private sector must make cars and trucks that the American public demand. To support the production and use of electric vehicles, we need to make sure that electric vehicles are at the right price and have the features that work for American families.

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Question 2: At USAA, you served military members and their families. Military members at lower ranks can face considerable financial challenges. A number of federal energy programs—such as the Weatherization Assistance and Low Income Home Energy Assistance programs—benefit low-income Americans. What lessons did you learn from working with low-income families at USAA that you believe are applicable to DOE?

Answer: One of the important lessons I learned is the value of the private sector in helping low-income Americans. A strong and vibrant economy is the best defense to many problems. It is important that we maintain a level of economic growth that will mitigate the need for federal assistance.

Ethics

Question 3: A common critique of Energy Secretary Perry’s administration while he was governor of Texas was that his largest campaign donors received benefits in the form of preferential access, contracts, appointments, and even multi-million dollar tax cuts for their businesses. You have also substantially contributed to Secretary Perry’s gubernatorial and presidential campaigns:

- Donations of \$5,000 to Secretary Perry’s 2012 presidential campaign, and in 2006 and 2009 nearly \$2,000 for his gubernatorial campaigns.
- Collection of \$77,000 from other donors as a “bundler” for Perry’s 2012 presidential campaign.
- Contributions of almost \$49,000 to USAA-PAC. USAA-PAC donated \$210,000 to Perry’s gubernatorial campaigns and donated \$64,500 to RickPerry.org toward his 2012 presidential campaign.

The Texas “pay to play” political culture raised significant concerns during Secretary Perry’s nomination. These donations suggest loyalty to Secretary Perry. If confirmed, how will you ensure that the Texas “pay to play” political culture does not affect DOE decisions and management?

Answer: I was a supporter of then Governor Perry and am glad to have had the opportunity to help elect him at the time. If I am confirmed, I will work with the employees at the Department of Energy to promote the best possible solutions facing the Department because that is what the American people deserve and expect.

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Briefings

Question 4: If confirmed, do you commit to regular scientific briefings on the subjects of nuclear waste and nuclear security?

Answer: If confirmed, I commit to receiving regular briefings on all important subjects in my purview, including nuclear waste and nuclear security.

Question 5: If confirmed, will you encourage the President to receive regular briefings on nuclear waste and national security?

Answer: I understand that the President already receives regular briefings on national security matters. If confirmed, I will advocate for the Department in interagency deliberations.

Climate change

Question 6: President Trump has suggested in the past that climate change is a hoax. Is the President correct? Is climate change a hoax?

Answer: I believe the climate is changing. We're all living here, so we must have some impact. I agree with Secretary Perry that the question is how we address it in a thoughtful way that doesn't compromise economic growth, the affordability of energy, or American jobs.

Question 7: Do you agree with the vast majority of scientists that climate change is real, it is caused by human activity, and that we must aggressively transition away from fossil fuels toward energy efficiency and sustainable energy like wind, solar, and geothermal?

Answer: I believe that the climate changes and I believe that the cost of the benefits of climate-related policies need to make sense for American families.

Question 8: Do you agree with the vast majority of scientists that the combustion of fossil fuels contributes to climate change?

Answer: As previously stated, I believe the climate is changing. Some of it is naturally occurring, but we are all living here so we must have some impact. If confirmed, I look forward to getting a better understanding of the dynamics.

Question 9: Do you believe that DOE has a role in reducing the extraction and use of fossil fuels?

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Answer: According to the DOE Organization Act, I believe the Department's roles were created by Congress and can be updated by Congress. For example, Congress has stated that "a strong national energy program is needed to meet the present and future energy needs of the Nation consistent with overall national economic, environmental and social goals." I believe in those goals, and, if confirmed, I will be a public servant and my job will be to follow the law.

Question 10: How important do you think it is to reduce the amount of fossil fuels that we use to support our energy needs?

Answer: As noted in the previous question, and as expressed by Congress, I believe "a strong national energy program is needed to meet the present and future energy needs of the Nation consistent with overall national economic, environmental and social goals." I believe a strong energy program can include natural gas, oil, and coal.

Question 11: What do you believe are the best current and prospective DOE policies to effectively reduce carbon pollution from energy development and use?

Answer: I look forward to being briefed by DOE staff on DOE's current policies in this area.

Question 12: What role should the United States play in the Paris climate agreement?

Answer: As the President has said that the Paris Agreement is under review and, if confirmed, I will carry out the President's decision.

Question 13: If confirmed, how will you work to address climate change?

Answer: As previously stated, I believe the climate is changing. Some of it is naturally occurring, but we are all living here so we must have some impact. If confirmed, I look forward to getting a better understanding of the dynamics.

Energy future

Question 14: What technologies do you think are most important for the United States to invest in to meet our long-term energy needs?

Answer: The 17 national labs are the crown jewels of the nation and if I am confirmed, I look forward to exploring ways in which to make technology and scientific development available to interested parties. I believe in engaging with the private sector. While being careful not to duplicate private sector efforts, the Department can be a great resource in cooperation with the private sector to spur innovation, particularly by investing in cutting-edge research.

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I also believe that taxpayer dollars should be spent on things that make sense.

Question 15: What do you believe is the role of renewable energy in our energy future?

Answer: I support the President's all of the above energy strategy, and renewable energy plays an important role in that strategy.

Question 16: What role should nuclear power play in our energy future?

Answer: I support the President's all of the above energy strategy. Nuclear power will remain an important component of our energy mix providing inexpensive and clean baseload power.

Question 17: What role do you think DOE should have in the future extraction and use of fossil fuels?

Answer: I envision the Department continuing to develop technologies that produce energy more efficiently and in an environmentally friendly way. I believe, as Congress has said in the Department of Energy Organization Act, that "a strong national energy program is needed to meet the present and future energy needs of the Nation consistent with overall national economic, environmental and social goals." I believe that this strong national energy program can include natural gas, oil, and coal.

Question 18: What are the geopolitical consequences of U.S. fossil fuel consumption on our national security?

Answer: I believe the State or Defense Departments may be more qualified to answer this question.

Question 19: What do you believe the role of tax incentives should be in the future of American energy? If confirmed, will you commit to supporting tax credits for renewable resources like wind, solar, and geothermal?

Answer: If confirmed, my role at DOE will be to execute the law. To my knowledge, DOE does not have statutory or regulatory authority over these tax credits.

Question 20: What do you think our energy sources will be at the end of this century?

Answer: I cannot predict what energy sources we may be using at the end of the century. I know our national labs are on the cutting edge of many new technologies and I am confident they will play a significant role in developing future energy sources.

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Question 21: Oil, gas, and coal are global commodities subject to market supply and demand. Even if the United States completely met its own demand for fossil fuel energy—as it is close to achieving—consumers would remain subject to significant variability in fuel prices. For solar and wind energy, however, the electricity produced by these sources of energy remains in the United States. Would it not make more sense to prioritize solar and wind-generated electricity that can't be exported from the United States and is invulnerable to global pricing swings?

Answer: I believe it makes the most sense to consider the risks, the costs, and the benefits of a wide range of energy sources. I would also prioritize reliability and affordability.

Question 22: The availability of cheap natural gas through the process commonly known as fracking has drastically changed the economics of electricity generation. Coal-fired and nuclear power plants are closing because they are unable to economically compete with high-efficiency gas-fired power plants. What DOE efforts or incentives would you consider appropriate to assure that the nation's capacity to generate electricity through means other than uneconomic coal, nuclear and natural gas-fired power stations, while assuring stable electricity prices?

Answer: The Secretary has commissioned an agency-wide study on the electric grid, which is due shortly. If confirmed, I look forward to reviewing this study and engaging with you and your staff.

Clean coal

Question 23: The Kemper “clean” coal project received some \$500 million in DOE grants by DOE's Office of Fossil Energy. The most expensive power plant per megawatt ever built in the United States doesn't work, and costs five times its initial budget of \$1.2 billion. Yet DOE continues to support this boondoggle that saddles local utility customers with unsustainable rate increases. This is a failed project many times the size of the much-criticized Solyndra. If confirmed, will you commit to review the Kemper project and DOE's costly investment of taxpayer money?

Answer: Yes, if confirmed, I will undertake a review of the previous administration's Kemper plan and the Department's expenditures.

Clean energy

Question 24: Vermont is a leader in clean energy innovation and jobs, from companies that assemble solar arrays to firms that specialize in making homes and businesses more energy-efficient. The State of Vermont has set a goal of 90 percent clean energy by 2050. How will you support Vermont's efforts?

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Answer: I have not been fully briefed on the tools available to help Vermont move forward with their goals. If confirmed, I look forward to learning more about how the Department can help support Vermont's efforts.

Question 25: In Vermont, Act 56 requires that Vermont utilities assist customers with adopting new technologies that reduce carbon emissions. If confirmed, how will you support Vermont's efforts to protect low-income communities?

Answer: I have not been fully briefed on the tools available to help Vermont move forward with their goals. If confirmed, I look forward to learning more about how the Department can help support Vermont's efforts.

Question 26: If confirmed, what specific actions will you take as deputy secretary of DOE to expand access to equitable clean energy and to clean energy jobs in low-income communities, communities of color, and tribal communities?

Answer: A growing economy helps all Americans. If confirmed, I will focus on making sure energy is affordable as a key strategy to expanding an inclusive economy and helping all Americans.

Question 27: Electricity costs represent a disproportionate share of the household spending of low-income households, as pointed out by DOE's Quadrennial Energy Review. What specific actions will you take to ensure that DOE programs, technical assistance, and regulations provide low-income households with access to affordable clean energy so that they do not bear a disproportionate burden of investments in the power system?

Answer: Affordable electricity is important for all of America, including tribal communities, communities of color, and low-income communities. Making sure that communities have access to affordable energy of all types is the best way to solve the problem. If confirmed, I will look into making sure our electricity grid is not only reliable but also has affordable electricity for all.

Solar and wind

Question 28: The DOE SunShot Initiative is a hugely successful research and development program that has made solar more affordable. The program is 70% of the way toward achieving its goal of making solar fully cost-competitive with traditional energy sources by 2020. It has helped contribute to a 22% increase in employment year over year totaling more than 260,000 solar industry jobs as of 2016. Jobs in the solar industry are growing at a rate 12 times faster than the overall economy. If you are confirmed, will you commit to finishing what SunShot started?

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Answer: If confirmed, I commit to learning more about the solar program's goals and progress. I further commit to faithfully execute the law.

Question 29: China leads the world in solar photovoltaic manufacturing. The largest markets for solar and wind are also in China. Do you believe the US is falling behind in clean energy? Will competing with China to develop renewable technology be a priority if you are confirmed?

Answer: No, I do not believe the U.S. is falling behind in any energy technology. Competing with China to develop not only renewable technology, but all kinds of technology, will be a priority if I am confirmed. I should note that one of the things that makes America great is that we have a vibrant private sector that is actively competing with China. The U.S. has led the world and will continue to lead the world on clean energy technologies.

Question 30: President Trump has tweeted that “[n]ot only are wind farms disgusting looking, but even worse they are bad for people's health.” There are more than 10,000 wind turbines installed across the state of Texas. Do you agree with the President's characterization of the wind industry as “bad for people's health”?

Answer: I share the President's commitment to an “all of the above” energy strategy. There are positives and negatives to all sources of energy, including some downsides to wind turbines. If confirmed, I will work to help reduce the downsides of all sources of energy.

Nuclear fuel and power

Question 31: In using railroads to transport Spent Nuclear Fuel, how would you propose to balance state and local government needs for assuring public safety against the US railroad industry's rights to select transportation routes and manage commodity (i.e. the spent fuel) movement as guaranteed by “Common Carrier” law?

Answer: If confirmed, I look forward to receiving a briefing on the transport of our nation's spent nuclear fuel. I believe these objectives can and should be achieved in a balanced way that respects our federal system and the rule of law.

Question 32: If confirmed, will you commit to considering altering the pace and scope of nuclear modernization plans if significant taxpayer savings can be achieved while meeting national security requirements?

Answer: It is my understanding that the Nuclear Posture Review is already underway. If confirmed, I commit to receiving briefings on this subject.

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Nuclear weapons

Question 33: If you are confirmed, will you undertake a comprehensive review of the need and affordability of current nuclear weapons modernization plans?

Answer: It is my understanding that the Nuclear Posture Review is already underway. If confirmed, I commit to receiving briefings on this subject.

Question 34: What would be the strategic consequences of countries such as Russia, China, India, or Pakistan resuming nuclear tests? Will you support international norms against nuclear testing?

Answer: I support the President's FY 2018 Budget Request, which would fund international monitoring and verification capabilities and continue our partnership with the International Atomic Energy Agency.

Question 35: It has been more than 15 years since the Senate last considered the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Since that time, there have been two National Academy of Sciences reports and several National Intelligence Estimates that have documented the remarkable progress made in the United States to sustain the nuclear weapons arsenal without testing and the United States and international community's ability to monitor and verify compliance under the treaty.

If confirmed, will you commit to reviewing the large body of new evidence in support of the CTBT that has emerged since the Senate last considered the treaty in 1999?

Answer: If confirmed, I commit to receiving briefings on this subject.

Question 36: If confirmed, will you commit to promoting the ratification of the Comprehensive Nuclear-Test-Ban Treaty?

Answer: I believe your question would be best addressed to The Department of State.

Question 37: Would you support developing and implementing an international detection system, where costs are shared by a coalition of governments, which would allow us to detect a nuclear explosion and determine if a country was in compliance with the Nuclear Nonproliferation Treaty? If no, why not?

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Answer: I support the President's FY 2018 Budget Request, which would fund international monitoring and verification capabilities and would continue to fund our partnership with the International Atomic Energy Agency.

Question 38: The National Nuclear Security Administration's science-based stockpile stewardship program has successfully maintained the nation's nuclear weapons deterrent for more than 20 years without underground nuclear testing. Our country's leading universities play an important role in this program. They not only train and educate the future workforce on science issues relevant to the stockpile, but they also build and operate world-class facilities and instrumentation to help resolve issues related to an aging stockpile. Do you support academic programs in support of the science-based stockpile stewardship program?

Answer: If confirmed, I will be proud to work alongside the highly skilled men and women of the National Nuclear Security Administration. I support the President's FY 2018 Budget Request, which would continue funding basic science related to stockpile stewardship and academic programs to train the next generation.

Question 39: The National Nuclear Security Administration project to build a plant to fabricate plutonium (MOX) fuel from excess United States weapons plutonium is decades behind schedule and is projected to cost \$50 billion or more. The plant is being built to comply with a U.S.-Russian agreement, but Russia has suspended implementation of its side of the compact. Do you agree that this wasteful project should be terminated and a cheaper and more efficient method for disposing of waste plutonium be developed instead?

Answer: I support the President's FY 2018 Budget Request, which proposes to terminate the project and pursue "dilute and dispose," an alternative strategy.

Question 40: If confirmed, will you support the DOE continuing to assist the International Atomic Energy Agency in its ongoing work ensuring Iranian compliance with the Joint Comprehensive Plan of Action?

Answer: Yes. I support the President's FY 2018 Budget Request, which would fund international monitoring and verification capabilities and continue our partnership with the International Atomic Energy Agency. The Department's ongoing work in monitoring Iranian compliance with the JCPOA is vital to our national security.

Tribal issues

Question 41: Please describe the relationship between the federal government and American Indian tribes as it relates to sovereignty.

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Answer. American Indian tribes retain a considerable quantum of sovereignty. The Department of Energy recognizes this sovereignty as a limitation on federal, State, and local jurisdiction, as well as the foundation for a trust-based obligation to protect tribal land and powers of self-government.

Question 42: What obligations do federal agencies have to formally consult with American Indian tribes?

Answer: The Department of Energy has implemented Executive Order 13175 and the 2009 Memorandum for Heads of Executive Departments and Agencies Regarding Tribal Consultation through DOE Order 144.1, which creates mechanisms to ensure that all DOE offices and components engage in outreach and consultation to ensure that tribal rights and interests are considered and protected in the development and execution of all DOE policies and programs.

Question 43: What procedures should be followed by the federal government regarding the permitting of infrastructure projects that could potentially impact American Indian tribes and their citizens?

Answer: If confirmed, I look forward to being briefed by the appropriate personnel on the intersection of American Indian and permitting issues.

Question 44: How do you interpret the United Nations Declaration on the Rights of Indigenous Peoples, especially as it relates to the obligations of the federal government?

Answer: The primary significance of the UN Declaration on the Rights of Indigenous Peoples is that it urges the U.S. to engage in meaningful consultation with tribes.

Question 45: What is the role of inter-agency cooperation on American Indian issues?

Answer: It is my understanding there is a Memorandum of Understanding between the Department of Energy and the Interior Department. If confirmed, I commit to being fully briefed on this matter.

Programmatic support

Question 46: What is your position on each of the following programs, and if confirmed, will you commit to continuing their funding?

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1. Photovoltaic Regional Test Centers
2. Nuclear Energy
3. Weatherization and Intergovernmental Programs
4. Solar Energy
5. Dedicated Funding for Advanced Heat Pump Deployment
6. Northern Border Regional Commission

Answer: If confirmed, I look forward to reviewing all programs and to working with Congress on the FY 2018 budget request to ensure the critical missions of the Department of Energy are accomplished.

Energy Information Agency

Question 47: One of the many DOE offices you will oversee is the Energy Information Agency (EIA), which provides critical data that industry relies on to make long-term decisions. For this reason, the integrity of EIA's data is critical. If confirmed, will you honor the independence of this data collection agency and maintain their funding?

Answer: Yes. The independence of EIA is fundamental to its mission.

The Holman Rule

Question 48: What is your position on the Holman Rule, which allows any member of Congress to propose amending an appropriations bill to single out a government employee or cut a specific program?

Answer: I have briefly read about the Holman rule, but cannot comment at this time. I am committed to the outstanding staff and work of the Department.

Question 49: If confirmed, will you support or oppose Congressional passage of an amendment under the Holman Rule that targets one of your employees?

Answer: If confirmed, I am committed to the outstanding staff and work of the Department and believe that personnel decisions are best made by the people closest to the employees.

Question 50: If confirmed, do you believe that you will be better able to recruit and retain top talent at DOE if Congress is able to individually target employees based on political criteria?

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Answer: If confirmed, I believe my background and experience can be useful in recruiting and retaining top talent. As mentioned above, I believe that personnel decisions are best made by the people closest to the employees.

Question 51: Do you support or oppose Congress targeting and altering the salaries of individuals at DOE?

Answer: I believe that personnel decisions are best made by the employing authority.

Question 52: How would you describe the division of responsibility and authority between Congress and DOE on agency personnel issues?

Answer: It is my understanding that the responsibilities and authorities are set forth in the Constitution, statutes, and judicial decisions. If confirmed, I will faithfully execute the laws.

Scientific integrity

Question 53: Are you familiar with the Department of Energy's scientific integrity policy? If so, what do you see as its strengths and weaknesses?

Answer: I have not had the chance to review the documents in full, but I support the goal of ensuring a culture of scientific integrity. Should I be confirmed, I look forward to being briefed on current laws and practices.

Question 54: Professional development is important to most federal employees. To stay current in their field of research and be most effective in serving the taxpayer, DOE scientists must be able to participate in scientific society meetings, where they learn about new research and develop new collaborations with academic and private sector scientists. Recently, the White House clarified guidance for federal agencies to ensure that federal scientists are able to travel to scientific meetings in a fiscally responsible way. What steps would you take to ensure that this balance is maintained?

Answer: I support our scientists being at the forefront of innovation in their respective fields. I look forward to being briefed on current laws and practices.

Question 55: Should DOE scientists be allowed to express their personal opinions about any issue as private citizens as long as they provide a disclaimer that they are speaking in a personal capacity and not for the department?

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Answer: I believe there are standards in place that allow for the free expression of belief so long as the employee does not appear to speak on behalf of the Department of Energy when expressing personal opinions.

Question 56: Should DOE scientists have the right of last review to ensure the accuracy of materials that rely on their scientific work or expertise—including scientific reports, executive summaries, Congressional testimony, press releases, and websites?

Answer: Should I be confirmed, I look forward to being briefed on current policies and practices.

Question 57: Are there any parts of the DOE website that you believe contain incorrect, incomplete, or erroneous information or descriptions of climate change science?

Answer: I have not reviewed the full website. But, I believe it is important to maintain accurate and helpful information for the benefit of the American people.

Question 58: Do you think that DOE collects sufficient data to address environmental and public health threats? If not, what additional data is worth collecting?

Answer: Should I be confirmed, I look forward to being briefed on data collection.

Question 59: Are you committed to ensuring that DOE data is proactively made available to the public, consistent with privacy and confidential business information laws?

Answer: While I have not had the occasion to review all the privacy and confidential business information laws, I believe the Department should follow the law.

Question 60: Will you ensure that all data and data interpretations that are currently on the DOE websites continue to be publicly available, and if they become out of date, are archived in an accessible manner?

Answer: I am not aware of current archival practices. If confirmed I will ensure the Department is compliant with the law.

Question 61: Do you believe that the Freedom of Information Act has an assumption of openness—that documents should be made available to the public unless there is a compelling need to withhold them?

Answer: Yes, the Freedom of Information Act has an assumption of openness.

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Question 62: The most robust scientific integrity policies allow government scientists to speak openly with the press and the public about scientific matters. Would you improve your agency's policies to make this explicit?

Answer: I have not had the chance to review the documents in full, but I support the goal of ensuring a culture of scientific integrity. Should I be confirmed, I look forward to being briefed on current laws and practices.

Question 63: Do you agree that only scientists and technical experts should edit scientific and technical content?

Answer: Should I be confirmed, I look forward to being briefed on current policies and practices.

Question 64: Do you think public affairs officers have a role in editing scientific or technical content? If so, why?

Answer: The job of public affairs officers in the Department of Energy, in general, is to make information understandable to non-scientific general audiences.

Questions from Senator Al Franken

Question 1: Earlier this week, President Trump released a budget that guts funding for research and development across the government. This is especially pronounced at the Department of Energy.

- a. I know that you did not help conceive these plans, but do they adhere to your vision for the department?
- b. Do you support the federal government funding applied research?
- c. Do you support the President's proposal to eliminate ARPA-E?
- d. Do you support the President's plan to eliminate the federal energy loan program?

Answer: I support the budget's broad goal of shifting the Department's focus to early-stage research and development at our national laboratories to more efficiently and cost effectively advance American dominance in scientific and energy research. Congress and the President will ultimately arrive at an agreement to fund the Department's programs, and I will faithfully implement that agreement.

Question 2: OMB Director Mulvaney made his views on climate research evident in describing the President's budget proposal: "Regarding the question as to climate change, I think the

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President was fairly straightforward — we’re not spending money on that anymore; we consider that to be a waste of your money to go out and do that.”

- a. Do you agree with Mr. Mulvaney?
- b. Do you agree with the overwhelming scientific consensus that we need to address human-caused climate change?

Answer: I believe the climate is changing. We’re all living here, so we must have some impact. I agree with Secretary Perry that the question is how we address it in a thoughtful way that doesn’t compromise economic growth, the affordability of energy, or American jobs.

Question 3: Last month, Secretary Perry ordered a 60-day review of U.S. electricity policy to determine whether coal and nuclear plants are being “unfairly” pushed off the grid. He suggested that renewable resources—like wind and solar—were threatening grid reliability and that because of that, we need to prop up coal and nuclear plants.

- a. Are you familiar with an extensive two year study, completed by the Department of Energy last year, which found that the U.S. energy grid could accommodate up to 80 percent wind and solar power with no loss of reliability?

Answer: No. If confirmed, I look forward to reviewing this study, alongside the study directed by the Secretary, and engaging with you and your staff.

- b. *E&E News* reports that the nation’s top energy experts are notably not being consulted as part of the new “study.” Does this concern you?

Answer: It is my understanding the 60 day study is using the research and institutional knowledge of the Department’s foremost career and contractor employees across all relevant program offices and National Laboratories. If confirmed, I look forward to being fully briefed on this study and many others.

- c. Minnesota and other states have renewable portfolio standards that drive the transition to clean energy. Do you believe states should be able to implement these kinds of policies without federal interference?

Answer: I believe state governments should be able to exercise their autonomy to the fullest extent possible under our federal system, as prescribed by the Constitution.

Question 4: Because of its low prices, more and more Americans are using natural gas, both in homes and in industry. And the DOE Energy Information Administration projects that use of natural gas will continue to grow. At the same time, the federal government has already issued

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final authorizations for liquid natural gas export volumes of over 72 billion cubic feet per day—which is equal to about 96 percent of U.S. demand. Explain to me how increasing exports of domestic natural gas won't drive up the price Americans pay to power their factories and heat their homes.

Answer: I understand that DOE has produced a number of reports on LNG exports. If I am confirmed, I commit to being fully briefed on these reports.

Question from Senator Steve Daines

Question: In Montana, coal and hydropower provide much needed baseload power that keeps electricity affordable and reliable. As we look at growing global energy demand through 2040—especially with the planned coal and natural gas plants in China, Japan—America has an opportunity for global energy dominance through exports. At the same time, we also need to protect existing fleets to keep our grid secure and help spur innovation here at home. In your view, how important is protecting baseload energy to electric grid security and our national security?

Answer: Power generation fueled by natural gas, coal, hydropower, and nuclear energy is essential to our nation's economy and security, providing a continuous and reliable source of electricity. The Secretary has commissioned an agency-wide study on the electric grid, which is due shortly. If confirmed, I look forward to reviewing this study and engaging with you and your staff.

Questions from Senator Joe Manchin III

Question 1: West Virginia's existing installed capacity is 90% coal (12,584 MW). The remainder is natural gas, hydro, wind and a little bit of oil. Overall, in PJM, coal represents 34% of capacity and natural gas is slightly higher than that. The Energy Information Administration states that "West Virginia typically generates more electricity than it consumes. Although more than two-fifths of West Virginia households use electricity as their primary source for home heating, retail sales to all customers account for less than half of West Virginia's net electricity generation. As a result, West Virginia is a net supplier of electricity to the regional grid. West Virginia is a leader in the nation in net interstate sales of electricity."

Do you believe that the regional grid (PJM specifically) can continue to operate without the contributions of West Virginia's fleet of power plants?

Answer: West Virginia's power plants make essential contributions to the security of the regional grid.

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Question 2: Earlier this week, E&E news published an article regarding the cybersecurity challenges facing our natural gas infrastructure. They highlighted a five-year old attack on our nation's natural gas utilities which was perpetrated by Chinese hackers who were also members of that country's military. Gerry Cauley, President of the North American Electric Reliability Council (NERC) – a frequent witness before this committee stated that "Undercutting the gas supply is certainly a threat to the electric system." While NERC, utilities, and regional transmission operators (RTOs) like PJM are planning for multiple scenarios like extreme weather events (a repeat Polar Vortex for example), I'm also interested in your perspective on how FERC and DOE can further support natural gas utilities in their efforts to harden their systems not just against natural threats but against cyber threats.

Understanding that these energy stakeholders can't always pull back the curtain for us because of the threat of revealing too much to potential enemies, what more can DOE and FERC do to support natural gas pipeline operators in the face of these threats?

Answer: Additional efforts to bolster pipeline operators' cybersecurity efforts include closer alignment with state and regional energy assurance planning; stronger collaboration in industry, regional, and national exercises; enhancing information sharing through enabling technologies; and advocating that key leaders in the industry receive actionable classified threat intelligence when needed.

Question 3: West Virginia is hurting. The decline of the coal industry has been devastating. We are losing businesses and population. So, in addition to doing everything we can to stop the bleeding and help our people in the near-term, we are also looking for ways to revitalize our home state economy. One of the ideas that I am intrigued by and increasingly optimistic about is an opportunity that we have because of the wet gas in the Marcellus and Utica shale plays. We are working with the Mid-Atlantic Technology Research and Innovation Center (MATRIC) to help realize the potential of an Appalachian Storage Hub which could bring jobs to West Virginia. It would ensure we are maximizing the opportunities associated with our vast reserves of natural gas liquids (NGLs) such as ethane. According to MATRIC, about 20% of the value in the Marcellus Shale alone is ethane, propane and butane natural gas liquids. So, ideally, the cultivation of such a hub would attract manufacturing companies that need reliable affordable access to these feedstocks. With safety and the environment top of mind, I'd like to see the Storage Hub move forward and it seems to me that this type of effort is what the creators of the Title XVII loan program at the Department of Energy envisioned when the Energy Policy Act of 2005 was passed. The loan program would help provide access to low cost financial capital that would alleviate investor concerns regarding technology and market risks.

Putting aside that the President's budget proposes the elimination of the loan program, what is your perception of this program which has a 97% repayment rate?

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Answer: I support the President's budget. If confirmed, I look forward to finding alternative solutions to advance these goals.

Can you commit to work with me on how the Department of Energy can help the Appalachian Storage Hub?

Answer: Yes. Natural gas liquids are a part of the American energy renaissance, particularly in the Appalachian region, and if confirmed, I look forward to working with you and your staff. I am aware that this concept received bipartisan legislative support at the Committee in the last Congress, under Chairman Murkowski's leadership.

Question from Senator Cory Gardner

Question: Industry engagement is showing that grid modernization and the Energy Systems Integration Facility (ESIF) at the National Renewable Energy Laboratory are both critical to innovation. How would you advise Secretary Perry on where federal dollars should be spent within the Department's budget in order to best prepare the country for energy leadership and cyber readiness? Would it include grid modernization and ESIF?

Answer: I understand that ESIF is funded in the President's FY 2018 Budget request, including the initial phase to double the high performance computing capacity.

Questions from Senator Mazie Hirono

Question 1: Your written testimony makes not a single mention of climate change. Given the Department of Energy's National Laboratories provide world-class scientific and technological research and development capabilities, I found this omission concerning. I am interested in your thoughts on the threat climate change poses to our national security. In Hawaii, we are witnessing the direct impact on homes and businesses from rising sea levels and higher rates of coastal erosion that are attributable to climate change. This Memorial Day weekend, in fact, Hawaii is expected to experience severe flooding due to sea swells in the 8 to 12 foot range combined with astronomical King tides. The severity of the flooding will come at an economic cost to our communities.

- a) Do you believe that our climate is changing in ways that are presenting a danger to our communities and our way of life?

Answer: Quite simply, I believe the climate is changing. Some of it is naturally occurring, but we are all living here so we must have some impact. If confirmed, I look forward to getting a

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better understanding of the dynamics. Additionally, our national laboratories are the crown jewels of the nation and I plan to support and advocate for their work.

- b) Do you believe the Department of Energy and its National Laboratories have a role to play in discovering and deploying energy innovation solutions to address climate change?

Answer: Yes. For example, I believe a strong, vibrant economy is the best defense to a number of concerns, including climate change. If confirmed, I will work to implement pro-growth and pro-environment policies at DOE that will empower more people to address impacts of climate change.

- c) The Department of Defense considers climate change a “threat multiplier” and has identified climate change in the 2010 and 2014 Quadrennial Defense Reviews as threats to U.S. national security as it exacerbates droughts, intensifies extreme weather, and can lead to instability and conflict over resources and other matters. Will you push the President and Congress to fund the Department of Energy to carry out its vital roles in funding scientific research and developing solar, wind, and other low-carbon energy technologies to build our clean energy economy and reduce our impact on climate change?

Answer: The Department of Energy Organization Act states that “a strong national energy program is needed to meet the present and future energy needs of the Nation consistent with overall national economic, environmental and social goals.” I believe that DOE’s goals, as written by Congress into the DOE Organization Act, are critical and I will support the enacted funding levels to carry out these roles.

Question 2: As one of the most isolated island chains in the world, the state of Hawaii has had to rely on imported fossil fuels for over 90 percent of our energy production. Research, technical assistance, and grants, particularly the Department of Energy’s State Energy Program have been key to supporting Hawaii’s shift towards locally produced renewable energy. In 2014, the DOE renewed a memorandum of understanding with Hawaii to provide technical assistance and collaborate on the Hawaii’s goals of energy technology innovation and eliminating the state’s reliance on imported oil. Hawaii has increased local, renewable electricity production to 23% in 2015 steady progress towards the state’s ambitious goal of 100% renewable energy by 2045.

- a) Do you believe the Department of Energy has a role to play in providing technical assistance to States to advance their respective energy initiatives?

Answer: I support the President’s FY 2018 budget request and believe that providing and sharing information is an important role of the Department of Energy.

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- b) I am troubled by the President's budget proposal which terminates the State Energy Program. This program is very helpful to Hawaii. If confirmed, will you commit to saving the program from termination? What assurances can you give me that you will help to save the State Energy Program?

Answer: I support the President FY 2018 Budget proposal. I believe Congress and the President will come to an agreement and I will carry out the laws passed by Congress.

Question 3: During Secretary Perry's confirmation hearing earlier this year, he and I discussed how the Department of Energy under his leadership would be able to effectively pursue an all-of-the-above energy strategy – as he testified the Department would do – if the Trump Administration held true to its threat to completely eliminate a core program like the Office of Energy Efficiency and Renewable Energy (EERE) which focuses on transitioning to a cleaner, renewable energy economy. Secretary Perry said, “Well, Senator, maybe they'll have the same experience I had and forget that they said that.”

While this was a humorous response, I was hopeful once Governor Perry became Secretary he would take this effort seriously. We now know that the Trump Administration did not forget. The President's budget proposes to cut the EERE program by 70 percent. The program was funded at \$2.1 billion in FY 2017 and is proposed to be funded at \$636 million in FY 2018.

- a) How can the Department lead an all-of-the-above energy strategy if so much of the Department's all-of-the-above capabilities are being eliminated or marginalized through drastic funding cuts? Do you support these cuts?

Answer: I support the President's FY 2018 budget proposal. DOE and EERE can achieve great things at lower funding levels.

Question 4: You noted in your testimony the important of ensuring the reliability of our electric grid. The state of Hawaii is unique in that each of the Hawaiian Islands operates as its own isolated grid. Consequently, the State faces a number of unique challenges as it seeks to incorporate more intermittent renewable energy into its power supply. Last Congress, I introduced a number of bills that would improve upon the Department of Energy's ability to spur grid modernization and energy storage. In recent years, the Department has also been a key partner with the State as it seeks to modernize its electric grid.

- a) What steps will you take at DOE to help to modernize and improve the electric grid, and can non-contiguous territories and states like Hawaii and Alaska count on DOE's continued support to improve electricity transmission and distribution?

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Answer: The Secretary has commissioned an agency-wide study on the electric grid, which is due shortly. If confirmed, I look forward to reviewing this study and engaging with you and your staff.

- b) Do you agree energy storage is a critical component of a resilient, reliable grid, and what steps will you take to move forward on energy storage if you are confirmed?

Answer: The Secretary has commissioned an agency-wide study on the electric grid, which is due shortly. If confirmed, I look forward to reviewing this study and engaging with you and your staff.

Question 5: The Department of Energy is a science-focused agency at its core, and there are several advisory boards and councils that provide the Secretary with advice and scientific recommendations. It has been reported in the press that the Secretary's Energy Advisory Board has remained dormant since all 19 advisors resigned on January 20.

- a) If confirmed, do you plan to extend the charters of the SEAB and the other advisory boards and councils, and what areas will you direct them to focus on?

Answer: If confirmed, I will review all advisory boards and councils to ensure they provide expertise on a wide range of scientific research issues and stakeholder input.

Questions from Senator John Hoeven

Question 1: North Dakota produces a lot of energy – from oil, coal, and gas, to wind and geothermal. We know the importance of having that cooperative relationship between stakeholders – states, industry, the federal government, and research institutions – to help leverage all our abundant natural resources, which provide jobs, economic growth, and improve our energy security.

I want to hear more about your energy philosophy and how you would help run the Energy Department.

- In broad terms, what does an “all-of-the-above” energy approach mean to you?

Answer: An “all-of-the above” approach means harnessing all energy resources available.

- And what role will traditional energy – oil, coal, natural gas – have in how you develop the Department's strategy going forward?

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Answer: For the foreseeable future, the traditional energy sources such as oil, coal, and natural gas will continue to provide the bulk of global energy. Going forward, the Department should strive to develop technology that allows for the extraction and use of these fuels in a safe, environmentally sound, and economically efficient manner.

Question 2: The University of North Dakota's Energy and Environmental Research Center (EERC) has an ongoing cooperative agreement funded through the Energy Department's Office of Fossil Energy and administered by the National Energy Technology Laboratory.

EERC is conducting fundamental and applied research that will assist industry in deploying and commercializing efficient, low-carbon, nonpolluting energy technologies that can compete effectively in meeting requirements for clean fuels, chemicals, electricity, and water resources. EERC secures a minimum overall 20 percent cost share from nonfederal partners.

The EERC leads the Plains CO₂ Reduction (PCOR) Partnership, a collaboration of more than 80 U.S. and Canadian stakeholders that are working to take CCS out of the lab and into the field.

- Will you work with us on continuing these important cooperative agreements with the Department?

Answer: If confirmed, I look forward to learning more about the PCOR project and engaging with you and your staff on this initiative.

Question 3: One of the projects North Dakota industry is working on is Project Tundra. It is about the near-term viability of coal. It's a CCS retrofit technology pilot project on an existing coal facility. The captured CO₂ will be used for enhanced oil recovery in North Dakota's oil fields, with an option to utilize CO₂ storage in geologically appropriate zones near the plant.

Project Tundra (455-MW) would scale-up the design optimization from the current Petra Nova project (240-MW) located near Houston, Texas. Instead of using natural gas (flue gas), Project Tundra would utilize low-rank coal, encounter different climate conditions, improve waste heat utilization and overall plant thermal efficiencies, and will leverage the experiences gained at Petra Nova.

In the Fiscal Year 2017 funding bill, I secured a \$6 million solicitation to help develop commercially viable carbon capture and sequestration.

- Do you support research and development of initiatives like Project Tundra to extend the use of existing power plants?

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Answer: I am not familiar with the details of this project. However, I understand the Department has been a strong supporter of sequestration and the Petra Nova project. I would expect this to be continued should I be confirmed.

Question 4: North Dakota industry is also trying to advance the Allam Cycle technology, which is a new supercritical CO₂ technology. This is next-generation CCS and about the long-term future of coal.

NET Power is finalizing a 50 megawatt pilot project in La Porte, Texas, funded with only private investment. If successful, there is an opportunity to advance to a larger demonstration phase at a new location.

Last August, North Dakota industry representatives met with the Energy Department to talk about North Dakota's initiatives and the importance of the Department to support demonstration-scale CO₂ capture projects on a range of sizes for coal-fueled generating units.

- Will you work with us to provide cost-share support to bring these technologies from technically feasible to commercially viable?

Answer: Yes, I look forward to working with you should I be confirmed.

- Will you be an advocate supporting public-private partnerships for fossil energy research and development?

Answer: If confirmed, I will advocate for public-private partnerships that have been the cornerstone of the Department's activities for many years.

Question from Senator Angus S. King, Jr.

Question: The DOE has invested significant time in recent years in reducing the barriers to the successful deployment of offshore wind here in the US, including in technology at the University of Maine. In your role as Deputy Secretary of Energy can you commit to continuing the DOE's support for offshore wind energy, including the Offshore Wind Advanced Technology Demonstration Program?

Answer: Congress and the President will arrive at a budget agreement, as they have in the past, and if confirmed I will work to ensure that it is executed to the letter. I look forward to learning more about the Offshore Wind Program.

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Questions from Senator Rob Portman

Question 1: On April 26, 2017 Secretary Perry updated, as mandated by law, the Secretarial Determination regarding the transfer of uranium from DOE stockpiles to the uranium market. This determination lowered the amount of uranium that is allowed to be bartered by 450 MTU. As you know, the cleanup of the former Portsmouth Gaseous Diffusion site in Piketon, Ohio receives both appropriated dollars and the proceeds of the barter to fund the decommissioning and decontamination work. Without proper coordination with Congress, lowering the barter limit could lead to job losses at the site and ultimately cost the federal government more in the long run to clean up the site. Will you commit to working with Congress and my office when the next Secretarial Determination is decided in May of 2019?

Answer: Yes, if confirmed, I look forward to working with you on this very important issue.

Question 2: For the first time since the Manhattan Project, the U.S. has no capability to enrich uranium for either national security or commercial purposes. In 2015 the Department of Energy made a conscious decision to delay the build-out of a domestic enrichment capacity for 23 years, meaning we will not be enriching uranium with U.S. made and owned machines until 2038. At the same time, the Department acknowledged that delaying this program so long will double or even triple the cost to the taxpayer, adding billions of dollars to the bottom line, making their decision inexplicable.

If confirmed, would you be willing to re-evaluate the Obama Administration's decision to end the domestic uranium enrichment demonstration program?

Answer: If confirmed, I look forward to learning more about the demonstration project to ensure our nation's future nuclear security needs will be met.

Question 3: If after your review you and the Secretary decide that the previous Administration made a mistake in shutting down the enrichment program, would you be willing to move forward with the build-out of a national security enrichment capacity?

Answer: If confirmed, I look forward to learning more about the demonstration project to ensure our nation's future nuclear security needs will be met.

Question 4: Another area within the Department of Energy that is also very important to me is energy efficiency. I have worked in a bipartisan way with my colleague, Senator Jeanne Shaheen from New Hampshire, on energy efficiency legislation that we first introduced in 2011. Called the Energy Savings and Industrial Competitiveness Act, this legislation is projected to reduce

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emissions by the equivalent of taking 22 million cars off the road, create more than 190,000 jobs, and save consumers \$16.2 billion per year – all by 2030.

If confirmed, will you support my efforts with Senator Shaheen on our efficiency legislation, and work with this committee on ways to improve our nation's energy efficiency?

Answer: If confirmed, look forward to being briefed on your legislation and I will work with the committee on improving energy efficiency in ways that help American families.

Question 5: Will you commit to working with me to advance building energy codes and provide states with the necessary resources and technical assistance needed to adopt model codes?

Answer: If confirmed, I look forward to being briefed on building codes and will work with you on the issue.

Question 6: In 2012, Congress passed the American Medical Isotope Production Act (AMIPA), with the goal of bringing domestic production of medical isotopes online as early as 2013. To date, none of the projects have come online and a number have been cancelled. We are now facing shut-downs of international facilities which will threaten the ability for our doctors to carry out 50,000 life-saving diagnostic tests every day in the United States, equaling 20,000,000 procedures a year involved in the early detection of heart disease, cancer, and dementia, among other illnesses.

A 2016 report issued by the National Academies of Sciences, Engineering and Medicine stated that: "Although the current supply of molybdenum-99 and technetium-99m - isotopes used worldwide in medical diagnostic imaging is sufficient to meet domestic and global demand, changes to the supply chain before year-end could lead to severe shortages and impact the delivery of medical care....The capacity to supply molybdenum-99 will be reduced substantially when the reactor in Canada stops production at the end of October 2016. Canada will then become a supplier of last resort - producing molybdenum-99 only in case of severe global shortages - until its reactor shuts down permanently at the end of March 2018."

According to a 2015 Report by the Nuclear Science Advisory Committee, Moly99 Subcommittee, there is no domestic production of medical isotopes despite the fact that the U.S. makes up 50% of world demand. Given the lack of domestic supply, and the impending shortage American medical professionals will face, are you committed to following through with the goals of AMIPA and establishing a domestic supply source?

Answer: While I have not been briefed on the issue of medical isotopes, if confirmed, I commit to following the law.

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Question 7: In order to increase domestic production of medical isotopes without the use of weapons grade, highly enriched uranium, AMIPA requires that project costs with non-federal partners be cost-shared through the NNSA up to 50% as set forth in the Section 988 of the Energy Policy Act of 2005. In the past administration, DOE and NNSA did not make available the full portion of the 50% cost-share by imposing a \$25 million cap on eligible projects, despite report language included in the FY 2016 Consolidated Appropriations Act (H.R. 2029) reminding NNSA to “fund eligible projects up to the full portion of the 50% cost-share of construction as allowed under AMIPA”. This has prevented innovative projects from moving forward, as the arbitrary gap is preventing private investment. Are you willing to closely examine the cap put in place by NNSA?

Answer: If confirmed, I commit to being briefed on the issue and will closely examine the cap.

Questions from Senator Catherine Cortez Masto

Question 1: The President’s full budget provides \$120 million to restart licensing activities for a Yucca Mountain nuclear waste repository. As you know, I am firmly in opposition to forcing a permanent repository against the will of the State especially when it would put our communities and economy at great risk. I appreciated your time the other day to discuss my concerns, so I want to follow up on your position. Are you in favor of siting the Nation’s nuclear waste at Yucca Mountain?

Answer: I am in favor of following the law and process as outlined in the Nuclear Waste Policy Act to determine whether Yucca Mountain is safe.

Question 2: Do you believe that sound science should govern the re-licensing process?

Answer: Yes, all scientific decisions related to Yucca Mountain should be based on sound science. If confirmed, I will ensure scientific decisions related to Yucca Mountain continue to be based on sound science.

Question 3: Nevada has submitted hundreds of contentions that objectively demonstrate that the site is unsafe. If the site is deemed scientifically unsafe, will you still support it?

Answer: Yes, all scientific decisions related to Yucca Mountain should be based on sound science. If confirmed, I will ensure scientific decisions related to Yucca Mountain continue to be based on sound science.

Question 4: Are you aware of the legislation I introduced with Senator Heller and the Nevada delegation requiring consent based siting for all repository host states, including Nevada, as

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recommended by the Blue Ribbon Commission. If confirmed, would you support the passage of this bill?

Answer: I am not familiar with the bill but, if confirmed, I look forward to learning more about the specifics of your legislation and engaging with you and your staff on this important issue.

Question 5: Do you support the Blue Ribbon Commission's recommendations?

Answer: If confirmed, I look forward to learning more about the recommendations of the Blue Ribbon Commission and working with you and your staff on this important issue. Nevertheless, as you know, the Department is obligated to adhere to existing law such as the Nuclear Waste Policy Act.

Question 6: Are you aware that DOE has estimated that \$15 billion has already been spent on Yucca and that DOE and the NRC would need \$2 billion more just to complete the re-licensing process?

Answer: I am not completely familiar with all of the past expenditures for the Yucca Mountain program, nor am I aware of the cost projections for the Nuclear Regulatory Commission for the licensing proceedings on Yucca Mountain. As an independent agency, the NRC is responsible for developing their own estimates of costs.

Question 7: Do you believe that is cost effective considering interim storage alternatives?

Answer: I support the President's FY 2018 Budget Request that includes funding for a robust interim storage program.

Question 8: Secretary Perry has stated that he believes a robust interim storage program should be a part of the solution—do you agree with that statement?

Answer: I support the President's FY 2018 Budget Request that includes funding for a robust interim storage program.

Question 9: Would you support the continuation of DOE's current work on consent-based siting for storage and disposal facilities?

Answer: I am not sufficiently familiar with DOE's past program to adequately respond; however, if confirmed, I do believe interim storage can play a role in helping to solve the nation's nuclear waste dilemma.

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Question 10: The National Academy of Sciences and Blue Ribbon Commission made recommendations for measures to manage the radiological and social impacts of spent nuclear fuel transportation. If you are confirmed as the Deputy Secretary, would you support the Academy's recommendation that the repository transportation program be removed from DOE?

Answer: Because of the remarkable safety record of the current transportation system, as acknowledged by both the National Academy of Sciences and the Blue Ribbon Commission, I would be careful about making changes to the current system. However, if confirmed, I will study the recommendations of these two organizations to determine if improvements should be made.

Question 11: Would you support the Commission's recommendation that repository shipments of spent nuclear fuel should be fully regulated by the Nuclear Regulatory Commission?

Answer: Currently, the NRC regulates the casks but various agencies besides the NRC, such as the US Department of Transportation, regulate other aspects of shipments of hazardous materials such as these. Because of the exemplary track record of safety for these shipments, if confirmed, I would want to be careful about making regulatory changes. Nevertheless, I am open to recommendations supported by facts and science that will improve the safety of the transportation of these materials.

Question 12: President Trump's full budget for the Department of Energy is extreme and cuts and eliminates many programs that foster renewable energy technologies, R&D, and commercialization. My state is leading the charge for a clean energy economy, so these drastic measures would threaten my state's economy and future growth. Is that your position and how would you address these concerns?

Answer: I support the President's FY 2018 budget and believe that it will produce economic growth for our nation.

Questions from Senator Luther Strange

Questions: A few years ago, the Center for Strategic and International Studies issued a report called "Restoring U.S. Leadership in Nuclear Energy: A National Security Imperative." The report notes the economic pressure on commercial nuclear power from low natural gas prices and subsidies for renewable power, and observes: "[A] contraction would have a significant impact beyond the commercial nuclear energy sector, affecting university physics and engineering programs, materials, science laboratories, manufacturers, labor programs for training nuclear welders, and much more. It would undoubtedly affect the defense establishment and our nuclear

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Navy's capabilities, as well as the United States' ability to shape global standards for safety, security, operations, emergency response and nonproliferation."

These impacts are not only domestic. There are currently about 60 nuclear power reactors being built in 14 countries. As the CSIS report concludes: "Without a strong commercial presence in new nuclear markets, America's ability to influence nonproliferation policies and nuclear safety behaviors worldwide is bound to diminish. In this context, federal action to reverse the U.S. nuclear industry's impending decline is a national security imperative."

Mr. Brouillette, do you understand that the health of the U.S. nuclear industry is not only an economic issue, and commit to incorporate these national security considerations in the Department's policies?

Answer: I believe that the United States must maintain its world leadership in the nuclear industry, including for economic and national security reasons. No mission is more important than the Department's commitment to nuclear security.

How important is it to our national security that the reactors currently under construction be completed?

Answer: While I cannot comment on specific projects, if confirmed, I can assure you that I recognize the critical importance of being able to construct and safely operate large-scale projects, such as nuclear reactors. Our strength abroad depends on our strength here at home.