Questions for the Record and Responses for Mr. Robert Powelson
June 1, 2017

Questions from Ranking Member Maria Cantwell

Question 1: Chairman Murkowski and I tried to enact energy legislation last Congress that included reforms to hydroelectric licensing at FERC.

45 percent of FERC-licensed projects accounting for one-third of licensed capacity will begin pre-filing for new licenses by 2030. For many of these projects, it will be the first time they will participate in the licensing process Congress in 1986 amended the Federal Power Act directing FERC to given equal consideration to environmental factors.

I believe that, rather waiting for Congress to Act, FERC can, on its own, could make several changes that would improve interagency cooperation in the licensing process. For example, FERC could adjust how it implements its *ex parte* rules to encourage more of its sister federal agencies to accept cooperating agency status under the National Environmental Policy Act. FERC could also accept more requests from its sister agencies for studies likely to be required in any event under other federal statutes (e.g., the Endangered Species Act) at a later stage.

- If confirmed, will you help identify and reduce barriers to interagency cooperation within FERC's existing statutory authority?

Answer: It is my understanding that the current hydropower licensing process is complex and involves not only input from numerous stakeholders but also gives mandatory conditioning authority to multiple agencies. If I am confirmed I look forward to working with my colleagues to identify and address barriers to interagency coordination with regard to the hydroelectric licensing process.

Question 2: Under its existing policy, FERC only considers investments in a project on a forward-looking basis as part of the licensing process. This creates a perverse incentive to delay potential investments that could benefit the environment and ratepayers.

The Commission recently asked for comments on whether it should revise its current policy with respect to establishing the length of new license terms for hydroelectric projects.

I have supported legislation to require the Commission to treat project investments by licensees under existing licenses (beyond those already required by the license) the same way it treats investments made under new licenses. This provision has been referred to as the "early action" provision. While accounting for prior investments may complicate the Commission's determination of an appropriate length license term, changing this policy could accelerate improvements in fish passage, turbine efficiency, and other project upgrades.

- Will you commit to considering changing the Commission's current policy with respect to establishing the length of hydroelectric license terms by removing the perverse incentive to delay investments under current licenses?

Answer: As you indicate, the Commission has issued a notice of inquiry soliciting comments on its policy for setting new license terms for hydropower projects. Currently, the Federal Power Act requires these license terms to be between 30 and 50 years. The Commission's current policy bases license terms on the amount of developmental and environmental measures required by a new license. In the notice of inquiry, the Commission asked for comments on whether it should: retain the existing license-term policy; consider measures implemented during a prior license term; establish a 50-year default license term; include a more quantitative cost-based analysis; and establish license terms based on negotiated settlement agreements when appropriate. If confirmed, I will fully consider all of the responses to the notice and I look forward to addressing this issue with my colleagues.

Question 3: Unlike the Commodity Futures Trading Commission and the Securities and Exchange Commission, FERC cannot license or ban individual traders from trading in jurisdictional markets. It is estimated that more than 2,500 firms and thousands of individual traders participate in physical electricity and natural gas markets. Little is publicly known about which banks, hedge funds, utilities, and marketers are active players.

Furthermore, a repeat offender previously fined by FERC can continue to trade. A trader convicted of criminal fraud, or a former securities or commodities trader who had their securities or commodities trading license revoked would still be permitted to trade over FERC markets.

- Do you think that FERC should explore adopting a registry to keep track of repeat violators of market manipulation restrictions?

- Do you think FERC should explore a licensing regime to, among other things, keep those convicted of market manipulation in other markets from participating in FERC-regulated markets?

Answer: I believe in a strong enforcement of the Commission's rules and regulations. Ensuring that markets are free from fraud and manipulation is an important element of the FERC's work. To help protect the energy markets from manipulation, it would be useful to track repeat violators and those found to have engaged in manipulation in other markets. If confirmed, I look forward to discussing this issue with my colleagues and determining whether additional tools are needed. It is my understanding that legislation may be necessary if Congress wishes to develop a trader licensing regime.

Question 4: The Federal Power Act (FPA) limits FERC's jurisdiction with respect to certain utilities and FERC's authority to require participation in organized markets. Governmental entities and non-public utilities, including federal power marketing agencies, municipal utilities, rural electric cooperatives, and public utility districts, are exempt from most regulatory oversight by the Commission.

- What is your understanding of the limitations on FERC's authority with respect to the Bonneville Power Administration?

- What is your understanding about FERC's authority to require utilities to participate in organized markets?

- Will you abide by these limitations if confirmed?

Answer: I recognize the importance of the Bonneville Power Administration to the Pacific Northwest. I am also aware that, FERC's authority over Bonneville is more limited than its authority over traditional public utilities. For example, pursuant to the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act), FERC's review of Bonneville's regional power and transmission rates is limited to whether Bonneville's rates meet the three specific requirements: (i) whether the rates are sufficient to assure repayment of the Federal investment in the Federal Columbia River Power System over a reasonable number of years after first meeting other costs; (ii) they must be based upon the Administrator's total system costs; and (iii) whether insofar as transmission rates are concerned, they must equitably allocate the costs of the Federal transmission system between Federal and non-Federal power. Separately, FERC has limited authority with respect to Bonneville under provisions of the Federal Power Act, such as with respect to reliability standards adopted pursuant to section 215 of that statute.

Additionally, I am aware that it is a voluntary decision on the part of an entity whether to join a regional transmission organization or independent system operator, the bodies that operate organized markets in various parts of the country.

The limitations I address in this response are based in law, whether statute or prior FERC decisions. If confirmed, I would abide by those limitations, unless the law is changed.

Question 5: Just before resigning Commissioner Bay wrote a Concurring Opinion to an order granting a natural gas pipeline certificate in which he suggested that the Commission should reconsider its use of precedent agreements between pipelines and potential future customers to assess whether a proposed new pipeline is needed. In particular, Commissioner Bay argued that precedent agreements involving pipeline affiliates are particularly suspect.

- Do you agree with Commissioner Bay that the Commission should reexamine its policies for assessing whether a new pipeline is necessary? If not, why not?

Answer: It is my understanding that the basic tenants employed by the Commission to determine whether a company has demonstrated that its proposed project is needed were established in 1999. If confirmed, I will work with my colleagues to review the Commission's policies for reviewing pipeline applications to ensure the Commission gives appropriate weight to all relevant factors.

Question 6: Just before resigning Commissioner Bay wrote a Concurring Opinion to an order granting a natural gas pipeline certificate in which he suggested that the Commission should engage in a broad regional assessment of the environmental impacts of the Marcellus and Utica shale gas development activities.

- Do you agree with this recommendation? If not, why not?

Answer: I respectfully disagree with that recommendation. As a Pennsylvania state regulator who served on Governor Corbett's Marcellus Shale Commission and Governor's Wolf Pipeline Infrastructure Task Force, I believe that this issue would be better addressed at the state level. State environmental regulators and state public utility commissions are closer to the issues of shale gas development and are better equipped than the federal government to undertake such an assessment.

Question 7: When FERC grants a Certificate of Public Convenience and Necessity to a proposed interstate natural gas pipeline, the developer is also granted eminent domain authority. Sometimes the eminent domain authority is used before the Commission has acted on a Request for Rehearing of its initial order and before a party to the proceeding has had an opportunity to seek judicial review of the order.

- Do you believe that a pipeline should have the opportunity to utilize eminent domain authority if it remains possible that the Commission, pursuant to a Rehearing Order, or an appellate court, can still issue an order reversing FERC's decision to grant the Certificate? Please explain.

Answer: It is my understanding that the Natural Gas Act confers on a pipeline company the ability to exercise the right of eminent domain once a Certificate of Public Convenience and Necessity is issued. However, if confirmed, I will work with my colleagues to review matters related to the concerns of landowners affected by infrastructure projects. In my view, it is critically important for FERC to engage stakeholders in a collaborative manner and provide the highest level of transparency throughout the certification process.

Question 8: Both the Federal Power Act and the Natural Gas Act require that a rate or tariff change proposed by a jurisdictional utility or interstate natural gas pipeline goes into effect if the Commission fails to act within 60 days of the proposal. There have been instances in which a rate increase has been permitted to go into effect because a tie vote prevented the Commission from acting. An appellate court has ruled that, in those circumstances, a party opposing the rate increase has no standing to challenge the rate change in court because FERC never issued an order on the matter.

- Senator Markey has proposed legislation that would enable opponents of a rate or tariff change to seek judicial review even if the Commission fails to issue an order due to a tie vote. Do you support this legislation?

Answer: I believe this is an issue that is best addressed by Congress, as the situation described in the question results from FERC's authorizing statutes. However, as a general practice, I believe that it is appropriate for parties to a FERC proceeding who are adversely affected by a rate or tariff change to have the opportunity to seek relief in court.

Question 9: FERC Order No. 1000, which among other things, requires regional transmission planning, has received mixed reviews in part because it has not led to the development of transmission lines connecting separate energy planning regions, which would help access remotely located renewable electricity resources, such as wind and solar.

- What do you believe FERC should do, if anything, to encourage interregional transmission planning?

Answer: In Order No. 1000, FERC required public utility transmission providers to, among other things, develop and implement interregional coordination procedures with the public utility transmission providers in neighboring transmission planning regions for sharing information regarding the respective transmission needs of each region and for identifying and jointly evaluating potential interregional transmission solutions to those needs.

I am a strong advocate for interregional transmission planning and, in my view, the Commission's implementation Order No. 1000 is a work in progress. In 2016, FERC convened a technical conference on Order No. 1000 that considered a number of issues, including interregional transmission coordination. I believe that the technical conference was a step in the right direction and that an ongoing dialogue on interregional transmission development is important. If confirmed, I will continue to pursue a review of Order No. 1000 to determine what is working and what needs improvement.

Question 10: Last year the Senate Energy and Natural Resources Committee held a hearing on natural gas pipelines. We heard testimony that, in some instances, existing natural gas pipelines are not being fully utilized. For instance, several interstate pipelines serving the northeast were not fully utilized during the Polar Vortex.

- Do you believe we should explore how to use existing natural gas pipeline capacity more efficiently before the Commission grants new Certificates to build additional pipeline capacity in the same region?

Answer: Making efficient use of existing capacity ensures that consumers benefit fully from previous investment in this type of infrastructure. I believe that it is important to make efficient use of existing natural gas pipeline capacity and that our nation is likely to need additional natural gas pipeline infrastructure. I also recognize, however, that investment in new pipelines can offer consumers greater opportunity to benefit economically from the emergence of shale gas. Such investment also may have the benefit of enhancing the resilience of the gas pipeline.

Question 11: I am concerned that sophisticated energy traders can engage in schemes designed to manipulate energy markets without actually being in violation of a tariff on file with FERC. These traders argue that FERC's anti-manipulation authority does not apply if there is no specific tariff violation?

- Don't you believe that FERC's market manipulation authority can apply even if there is not a specific tariff violation?

Answer: Yes, I believe the Commission has made it clear in numerous orders that a tariff violation is not required in order to violate FERC's Anti-Manipulation rule. I understand that the prohibition against market manipulation stands separate from tariff provisions and other regulations which also must be followed.

Question 12: 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).

- Given the increased dependence on natural gas for power generation for many of FERC regulated utilities, don't you agree that there should be a mandatory standards regime for gas pipeline cybersecurity, just as there is for electric utility cybersecurity?

Answer: I certainly agree that there is not a more critical and complex issue facing our country than ensuring that our nation's energy infrastructure is safe from cyber-attacks. However, with respect to the issue raised in your question, it is the Transportation Security Administration (TSA), and not FERC, that currently has the authority to establish mandatory cybersecurity regulations for natural gas pipelines. As such, Congress and the TSA are in the best position to evaluate TSA's current natural gas pipeline security authority to determine if natural gas pipelines should be subject to additional or mandatory cybersecurity standards. Although I am unaware of any mandatory measures being planned by TSA, I understand that the agency is reviewing its voluntary cybersecurity guidelines for pipelines and FERC staff has offered to assist with this initiative.

Question 13: The 2000-2001 western energy crisis did a lot of damage to my constituents and the economy throughout the region. It became clear to me in the aftermath that FERC did not have sufficient authority to prevent market manipulation and punish those engaged in these acts. Through the Energy Policy Act of 2005 we gave FERC the authority it needed. The Commission has since investigated more than 100 cases of alleged manipulation, 32 of which have been settled. The Commission has imposed approximately $547 million in civil penalties. I understand that the industry thinks FERC's Enforcement Office has been too aggressive and that the new Trump Administration provides a golden opportunity to weaken the anti-manipulation program.

- I need your commitment that you will support a strong Office of Enforcement that acts as "the cop on the beat" to prevent utilities and marketers from taking advantage of consumers. Will you give that commitment?

Answer: Yes, I am committed to maintaining a strong FERC Office of Enforcement. If confirmed, I will bring to FERC the same enforcement discipline that I employed as a Pennsylvania state commissioner over the past 8½ years. My track record is very clear that I am not afraid to punish bad actors in the marketplace.

Question 14: 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 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 any 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: I am aware of those studies and value the work of all of our National Laboratories. I also believe that we as a nation should seek to rely on all forms of energy resources, including renewable resources. However, it is also important to be mindful of grid reliability.

Question 15: There is a growing tension between state energy policies and Federally regulated electricity markets. Low wholesale electricity prices are benefiting consumers and challenging the economics of coal and nuclear power plants. The revolution in natural gas is the main cause. Commissioner Powelson, you in particular, have been a big booster of the benefits of the Marcellus Shale.

Meanwhile, states continue to exercise their authority to encourage particular types of generation – especially zero emissions technologies. These policies have taken different forms, including: renewable portfolio standards (29 states), carbon caps (the Northeast and California), and direct payments to nuclear power plants (New York and Illinois).

Last year, the Supreme Court made clear that the Power Act prohibits state policies that directly intervene in wholesale markets. But the Court left clear room for states to continue to preferring some resources over others. Given these facts, I worry about FERC rushing to judgment based on an outdated or ideological view of the grid.

- Do you agree that FERC should not intervene and use the Federal Power Act to preempt state clean energy policies?

Answer: As a member of a state regulatory commission, I have a great appreciation for the need for FERC and the states to respect each other's boundaries. As you note, the Supreme Court found that a specific Maryland program impermissibly encroached on FERC-jurisdictional wholesale markets, and therefore is preempted. However, I understand that the Court also acknowledged that states may regulate within their domain even when their laws may have an incidental effect on areas within FERC's domain. I am aware that on May 1-2, 2017, the Commission held a technical conference on the interplay of state policy goals and the wholesale energy and capacity markets, and I believe this was a good first step in addressing the issue. At the conference, FERC Commissioners and state commissioners engaged in a discussion of potential options for solutions to reconcile the competitive market framework with the policy interests of states. I look forward to further examining this issue and reading the post-technical conference comments to determine if any next steps are necessary.

Question 16: Since 1978, Section 210 of the Public Utility Regulatory Policies Act (PURPA) has required monopoly utilities to purchase competitive renewable energy from independent producers. While Congress has relaxed this requirement for utilities in organized electric markets, PURPA remains a key driver of renewable energy and competitive prices in the West and the Southeast.

Last June, FERC held a technical conference on the implementation of PURPA. Utilities used the technical conference to argue for greater FERC intervention to limit opportunities for small renewable energy developers. I believe state commissions already have many ways to tailor the must-purchase requirement to address local concerns. I am deeply skeptical about utilities running to Congress and FERC when they don't get their way with their own regulators.

- Do you agree that regulators in traditional monopoly states have powerful ways to adjust the "must-purchase" requirement under PURPA?

- Given the states' own authority under PURPA, why would FERC need to intervene to limit one of the only federal mechanisms that encourage independent power production in those states?

Answer: PURPA sets forth specific roles for both FERC and the states. As I mentioned during my confirmation hearing, since the enactment of PURPA the resource mix has and is continuing to change. PURPA was developed at time when the U.S. was facing severe scarcity in its power resources. Today, our country is approaching energy independence. I respect the established roles given to FERC and the states and if confirmed, I will review this matter with my colleagues to understand what is and is not working with respect to the Commission's implementation of PURPA. But as I also noted at my confirmation hearing, I believe it would make sense to make PURPA review a part of a future energy bill. Given the major shift in our country's energy landscape, I would support Congressional action to modernize PURPA to reflect the new energy landscape which includes combined heat and power (CHP), clean tech investment, distributed energy resources, just to name a few.

Question 17: Would you continue FERC's encouragement of a holistic approach to transmission planning that incorporates non-wires alternatives, high-voltage transmission lines,

and advanced transmission technologies (such as high-capacity and high-efficiency conductors, compact transmission towers, and variable frequency transformers)?

Answer: FERC, through Order Nos. 890 and 1000, placed requirements on public utility transmission providers to have open, transparent transmission planning processes that, among other things, identify a variety of solutions that may resolve the transmission planning region's needs more efficiently or cost-effectively. I support these efforts.

Question 18: FERC is responsible for protecting against corporate affiliate abuse in a variety of transactions, including power sales and facility acquisition. Transactions between a public utility and a merchant affiliate can expose the utility's captive customers to cross-subsidizing the affiliate and its shareholders.

- Are you familiar with the provisions of the Federal Power Act that prohibit public utilities from inappropriately cross-subsidizing non-utility corporate affiliates?

- Will you commit to enforcing existing FERC standards applied to reviewing market rate contracts between corporate affiliates?

- Do you agree that the transfer of facilities subject to FERC jurisdiction between a public utility and its merchant affiliate must always be scrutinized for cross-subsidization?

Answer: Yes, I am familiar with the provision in section 203 of the Federal Power Act that prohibits transactions subject to the Commission's jurisdiction that will result in cross-subsidization of a non-utility associate company or the pledge or encumbrance of utility assets for the benefit of an associate company absent Commission approval. I am also familiar with the Commission's policies under the section 205 of the Federal Power Act that protect customers from prohibited sales between a public utility and its market regulated power sales affiliates.

I am familiar with FERC's standards that apply to market rate contracts between a public utility and its market regulated power sales affiliate, and if confirmed, I will, as with all of the Commission's rules and regulation, ensure compliance with them.

Question 19: In 2013, Congress passed the Hydropower Regulatory Efficiency Act, directing FERC to investigate the feasibility of issuing a license for hydropower development at non-powered dams and closed loop pumped storage projects during a two-year period. FERC implemented a pilot program, ultimately applied to one non-powered dam project in Kentucky, and issued a license for the project within two years. Members of this committee look forward to FERC's report, required under the 2013 law, on this process, following a workshop held by the Commission this spring.

- If confirmed, how would you approach the challenge of reducing disincentives in the licensing process and potentially inadequate compensation in the wholesale markets to the development of hydropower at existing non-powered multi-purpose dams and at appropriately sited and designed pumped storage projects?

Answer: I understand that on May 25, 2017, Commission staff submitted to Congress the report required by the 2013 law, and that Commission staff stated in that report that hydropower licenses have been and can be issued in two years or less under the right circumstances. At the hearing, I mentioned that I believe that we should be able to rely on all forms of energy resources, including hydroelectric resources. If confirmed, I look forward to working with my colleagues to explore how the Commission could further reduce possible disincentives to the development of hydroelectric resources in appropriate circumstances.

Questions from Senator Ron Wyden

Question 1: It appears that the White House has thrown its support behind the Jordan Cove liquefied natural gas project, being discussed in my home state of Oregon. Should you be confirmed as FERC commissioner, will you commit to avoiding any step that could be interpreted as political interference from the White House in FERC's deliberative permitting process in Oregon and nationwide? And will you commit to leading a thorough and transparent stakeholder process, where all community voices in Oregon -- including tribal community voices -- can be heard?

Answer: As a sitting public utility commissioner, I understand the need for both independence and public engagement in making decisions regarding infrastructure that serves the public interest. As I noted at the hearing, public input has to be part of the equation. An agency's decisions need to be based on established, transparent policies and sound technical analysis. If confirmed, I will work with my colleagues to issue decisions based on the record before us.

Question 2: As you know, FERC has authority under the Natural Gas Act to review gas pipeline applications. What factors would lead you to deny approval for a new or expanded pipeline? Does that calculation change if there are customers for the proposed pipeline's capacity?

Answer: I understand that pursuant to its responsibilities under the Natural Gas Act, FERC conducts both a non-environmental and an environmental review of proposed natural gas pipelines. The non-environmental review focuses on the engineering design, rate, and tariff considerations. The environmental review involves coordination with multiple agencies to ensure the project can be completed in an environmentally safe and responsible manner. Should a proposed pipeline project fail to meet the requirements in the statute, that would warrant denying approval of the project.

Question 3: Former Chairman Bay made comments before he left FERC noting that it is "inefficient to build pipelines that may not be needed over the long term and that become stranded assets." He also suggested that simply considering precedent agreements may not be an adequate measure of need. How would you define need for a gas pipeline? Is having customers for the pipeline's capacity enough? How is that decision-making changed if those customers are the same entities-- or affiliates of those entities--involved in seeking approval for the pipeline?

Answer: There are many factors that must be considered in determining whether, as required by the Natural Gas Act, construction of a proposed pipeline is in the public interest. The standards

in place today were developed in 1999. If confirmed, I will work with my colleagues to ensure that the Commission considers all relevant factors in reviewing a project.

Question 4: As commissioner, what steps would you take to promote public participation, transparency, and confidence in FERC's pipeline certification process by incorporating community, landowner and scientific inputs?

Answer: As a state commissioner I appreciate the importance of public participation in an agency's proceeding. A full record that reflects comments on all sides of an issue enhances an agency's ability to make appropriate decisions. I am aware that, in order to satisfy the Commission's obligations under the National Environmental Policy Act, the agency has many long-standing practices for promoting public participation. The Commission also makes the project docket available to the public through its website, and solicits comments from any interested stakeholder. If confirmed, I will consider with my colleagues any additional steps that might be taken to increase public participation and confidence in the Commission's proceedings.

Question 5: Also in his departing comments from FERC, former chairman Bay noted that it is "in light of the heightened public interest and in the interests of good government, I believe the Commission should analyze the environmental effects of increased regional gas production from the Marcellus and Utica." As Commissioner, if confirmed, can you commit to directing Commission staff to conduct such studies on new and expanded pipelines?

Answer: I respectfully disagree with Chairman Bay's statement. This work is already being done by the states. In my home state of Pennsylvania, the Department of Environmental Protection (DEP) is effectively handling this responsibility. Given the states' expertise and closeness to the issues surrounding the production of natural gas, I believe they are better equipped than the federal government to undertake any such assessment.

Question 6: Chairman Bay also noted that "where it is possible to do so, the Commission should also be open to analyzing the downstream impacts of the use of natural gas and to performing a life-cycle greenhouse gas emissions study." It is my opinion that FERC should incorporate climate considerations into their evaluation of the environmental impacts of proposed natural gas pipelines and liquefied natural gas export facilities, as required under the National Environmental Policy Act. As Commissioner, if confirmed, can you commit to including climate change considerations and analysis in the environmental review conducted on new and expanded pipelines?

Answer: I understand that this issue has been raised in many of the pipeline cases recently before the Commission. I also understand that the Commission's environmental documents contain a section describing impacts potentially related to climate change for regions in which a project is located. If confirmed, I will review this matter with my colleagues to determine how the Commission may best factor such information into its decisions.

Question 7: I am concerned about abuse of eminent domain by the natural gas and pipeline industries in recent years, aided and abetted by premature and improper FERC authorization of eminent domain. A review of FERC's approval process is needed, because of the ramifications of

the certificate, which grants the holder the ability to exercise eminent domain. If confirmed, will you take steps to review, and revise if necessary, the eminent domain proceedings at FERC? Also, can you commit to holding an evidentiary hearing, as articulated in FERC's official policy, when a significant amount of eminent domain is implicated in a project?

Answer: It is my understanding that the Natural Gas Act confers on a pipeline company the ability to exercise the right of eminent domain once a Certificate of Public Convenience and Necessity is issued. However, if confirmed, I will review with my colleagues how concerns of landowners affected by infrastructure projects are addressed by the Commission, including whether it would be appropriate to implement any process changes. In my view, it is critically important for FERC to engage stakeholders in a collaborative manner and provide the highest level of transparency throughout the certification process.

Question 8: Mr. Powelson, I was encouraged to see in your January 19 letter to the administration, that you support the rights of states to create their own energy policies, such as renewable portfolio standards. A broad coalition in Oregon, including consumer advocates, electric utilities and environmental groups, championed recent legislation to increase the renewable portfolio standard to 50% for our state. The state legislature made that decision and the governor signed that into law. Now, in some FERC-supervised markets, this sort of democratic process is under attack. FERC recently held a technical conference to explore those assaults on state authority. Do you support the federal government trampling states' rights to pursue state energy policies, such as renewable portfolio standards? Or do you think states should have the authority to establish their own energy policy through their constitutional rights?

Answer: I do not support the federal government trampling states' rights to pursue energy policies and I agree that states have jurisdiction over the resource mix in their individual states. However, from time-to-time the state policies and FERC-jurisdictional wholesale electricity market rules intersect in a way that may burden the wholesale markets and the Commission's ability to ensure that wholesale electricity rates are just and reasonable. FERC is already considering these important issues and recently held a technical conference exploring these state-FERC issues. If confirmed, I will carefully consider all comments in record and look forward to working with my colleagues on these important issues going forward.

Question 9: Energy storage is one of the most rapidly growing energy technologies out there, and it can provide multiple benefits to the grid. To get my vote, I'm going to need to see you commit to removing unfair barriers to energy storage--and other emerging technologies, like distributed energy resources--in the wholesale electricity markets. Do you agree FERC should be promoting technology-neutral competitive markets? More specifically, do you think energy storage assets--and "distributed energy resources"--should be able to compete in wholesale electricity markets?

Answer: As I mentioned at my confirmation hearing, I believe the Commission should ensure that new technologies, such as storage and distributed generation, are not discriminated against in the markets. Energy storage has the potential to be a game changer for the bulk power system, in that it has the potential to supply substantial economic and reliability benefits to the grid. As a

member of the Electric Power Research Institute Advisory Board (EPRI), I am aware and encouraged by the exciting research underway on battery storage as a distributed resource.

Last November, the Commission issued a notice of proposed rulemaking proposing to require RTOs and ISOs to establish market rules that accommodate the participation of electric storage resources in the RTO/ISO markets and allow aggregations of distributed energy resources to participate directly in the organized wholesale electric markets. The Commission stated that it is proposing these reforms to remove barriers to the participation of electric storage resources and distributed energy resource aggregations in the organized wholesale electric markets. If confirmed, I look forward to participating in rulemaking and reviewing this issue with my colleagues.

Question 10: In your view, should FERC have a significantly different process for its certification of gas pipelines than it does for interstate transmission lines?

Answer: There may be similarities in how a gas pipeline and an interstate transmission line should be sited. I understand that the Energy Policy Act of 2005 established backstop electric transmission line authority for the Commission, and the Commission subsequently issued regulations to implement that authority. However, appellate court decisions have limited the Commission's ability to use that authority and the sufficiency of the Department of Energy's designation of national interest transmission corridors.

Question 11: Given that FERC has endorsed markets and competition for energy and ancillary services, is it your opinion that this approach can be successfully used for any and all providers of all reliability-related services?

Answer: Ancillary services are obtained through different mechanisms in various regions of the country. For those regions that choose to participate in organized markets, I believe that those markets bring benefits to the consumers in them. But organized markets are voluntary, and I believe they should continue to be voluntary to allow other parts of the country to rely on their own approaches to procuring resources.

Question 12: Inter-regional, and economically beneficial electricity transmission is often neglected by the utility industry because of divisions in service areas, state's boundaries, and preferences of utilities to take narrow view of economic benefits. How will you support infrastructure investments, specifically electricity transmission, that bring lower energy costs to consumers?

Answer: There are multiple ways that, if confirmed, I would support electric transmission infrastructure investment. Near the top of the list would be to provide regulatory certainty to industry by working with my colleagues to act as expeditiously as possible on the many cases pending before the Commission, including those on transmission planning, cost allocation, and rate matters. I would also work with my colleagues at the FERC and state commissions to continue the discussion the Commission started last year on regional transmission planning and interregional transmission coordination.

Question 13: Do you believe there's been a lack of development of interregional transmission facilities, and if so, are there actions the Commission should take to facilitate such development?

Answer: The Commission has been considering the issue of interregional transmission development for a number of years now. In 2011, the Commission issued Order No. 1000, which required improved coordination between neighboring transmission planning regions for new interregional transmission facilities and that each public utility transmission provider participate in a regional transmission planning process that has an interregional cost allocation method. In the years following the issuance of Order No. 1000, the Commission has issued further orders establishing interregional transmission coordination procedures for all the pairs of neighboring transmission planning regions. The Commission has continued to consider the issue of interregional transmission development as the regions have worked to implement their interregional transmission coordination procedures. I support this continued review.

In June 2016, the Commission convened a technical conference on competitive transmission development, including interregional transmission coordination. At the technical conference, several speakers and FERC Commissioners raised questions regarding the state of interregional transmission development and, in particular, whether there is more that the Commission can—and should—do to facilitate the development of interregional transmission projects. The Commission also requested post-technical conference comments on several issues related to interregional transmission development. If confirmed, I will review the record on this matter with my colleagues.

Question 14: How will you facilitate the development of interregional transmission projects shown to provide more efficient or cost-effective solutions to regional needs?

Answer: As I stated in my response to the preceding question, the Commission is currently considering this issue after its June 2016 technical conference. Through the technical conference proceeding, the Commission has developed a record reflecting a wide range of parties' concerns with existing interregional transmission coordination requirements and ideas for facilitating more efficient or cost-effective interregional transmission development. If confirmed, I will review the record on this matter with my colleagues.

Question 15: How will you promote joint and coordinated planning between regional transmission planners for needed inter-regional transmission?

Answer: As noted in response to your previous questions, the issue of joint and coordinated planning for interregional transmission facilities was addressed at the June 2016 technical conference and the subject of many post-technical conference comments. If confirmed, I will review this record with my colleagues.

Question 16: Will you ensure interregional transmission project proposals have the opportunity to be studied by each affected Regional Transmission Organization?

Answer: Order No. 1000, which the Commission issued in 2011, requires that to be eligible for interregional cost allocation, an interregional transmission project must be selected in each

region's regional transmission plan for purposes of cost allocation. Thus, all potential interregional transmission projects must be considered through each transmission planning region's regional transmission planning process before they are eligible for interregional cost allocation under Order No. 1000. This is the case in both those regions in which the Regional Transmission Organization is the regional transmission planner and in those regions without Regional Transmission Organizations.

Question 17: How will you ensure that interregional evaluation processes and cost allocation methods encompass the full range of benefits (e.g., reliability, resilience, security, facilitating state policies, and congestion/planning reserve margin reduction) provided by interregional projects?

Answer: As I stated in my response to Question 13, the Commission convened a technical conference last year to address issues relating to competitive transmission development, including interregional transmission development. The issues of the evaluation processes and interregional cost allocation methods that apply to interregional transmission facilities were discussed both at this technical conference and in the post-technical conference comments. If confirmed, I will review this record with my colleagues.

Questions from Senator Bernard Sanders

Climate change

Question 1: President Trump has suggested in the past that climate change is a hoax. Is the President correct? Is climate change a hoax?

Answer: As I stated in my confirmation hearing, I am not a climate change denier. I have seen first-hand the impacts of storms like Super Storm Sandy and other weather related events and their impact on our state and region. So, I would not use the word hoax to describe climate change and the science behind it.

Question 2: 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: Yes, I agree that climate change is real and that we need to develop strategies to address climate change that include energy efficiency, clean technology investment, renewables, new nuclear, clean coal and natural gas.

Question 3: Do you agree with the vast majority of scientists that the combustion of fossil fuels contributes to climate change?

Answer: Yes, I agree with that statement.

Question 4: Do you believe that FERC has a role in reducing the extraction and use of fossil fuels?

Answer: It is my understanding that FERC's policies are resource- and fuel-neutral. The Commission relies on competitive markets to provide just and reasonable rates and reliable service for consumers, and to send appropriate investment signals for developers. Moreover, the Natural Gas Act does not give the Commission the authority to regulate natural gas extraction or use.

Question 5: If confirmed, how will you work to address climate change?

Answer: If confirmed, I will support the market-based policies that have driven the reduction in carbon dioxide emissions that we are seeing in the power sector today in the United States.

Energy system transformations

Question 6: In 2015, you advocated for on-bill financing so that customers can more easily finance energy-saving home measures. I am also a fan of on-bill financing. You also said it will be difficult for electric utilities to buy into on-bill financing without cutting the link between electricity sales and profits. "Personally I think Pennsylvania needs to come out of the stone ages here," were your exact words. Do you still support decoupling of electricity sales and profits? If confirmed, how will you consider proposals to decouple wholesale electric rates?

Answer: As evidenced by my time at the Pennsylvania Public Utility Commission, I have been a progressive regulator with respect to encouraging new and innovative technologies in the electricity markets. I strongly support decoupling on the retail side, as empirical evidence shows that it brings about more sustainable investment in energy efficiency and conservation measures at the state level. On the wholesale side, I supported FERC's efforts in Order No. 745, which were eventually affirmed by the U.S. Supreme Court.

Question 7: What do you believe are the best ways to achieve a sustainable, carbon-free energy future?

Answer: In my view, the best way to achieve a sustainable, carbon-free future is to support a 21st Century energy policy that encourages innovation in the way we generate, transmit and distribute power. Thanks to these market-based efforts, we are already seeing improvements in the reduction of carbon dioxide emissions in the U.S. According to the EPA, greenhouse gas emissions in 2012 were 10 percent below 2005 levels. In my home state of Pennsylvania, carbon dioxide emissions have fallen over 30 percent since 2005. Moreover, according to the Energy Information Administration, this past year the U.S. power sector emitted less carbon dioxide than the nation's transportation sector. I believe the market is driving these changes and that we need to support that going forward.

Question 8: What ways can FERC prevent economic harm to low-income Americans during transformations of the energy system?

Answer: FERC has always remained diligent in ensuring that wholesale market participants adhere to market rules. In addition, the FERC's core responsibility is to ensure just and reasonable wholesale electricity rates and natural gas transmission rates. These roles are critical to protecting customers. If confirmed, I will not waver in my commitment to ensuring that FERC continues to adhere to these principles.

Question 9: What role do you see FERC has in increasing the reliability of the electric grid to increasingly extreme weather while ensuring generation is sustainable and low-carbon?

Answer: Under section 215 of the Federal Power Act, the Commission reviews reliability standards for approval and enforces those standards. Under certain circumstances, FERC may require NERC to develop a reliability standard to address a matter. The reliability standards are largely resource neutral. My understanding is that FERC looks to the Electric Reliability Organization to perform event analysis for extreme weather events on an interconnection wide basis; such analysis considers the use/performance of all resources to assess the risks to reliability during the extreme weather. If confirmed, I will work with my colleagues and engage relevant stakeholders on such matters.

Question 10: If confirmed, what steps will you take at FERC to help the U.S. transform its energy system as quickly as possible from one based on carbon-intensive fuels to one based on clean, sustainable fuels?

Answer: My understanding is that FERC's policies are resource- and fuel-neutral. The Commission relies on competitive markets to provide just and reasonable rates and reliable service for consumers, and to send appropriate investment signals for developers. However, on May 1-2, 2017, FERC held a technical conference to explore the interplay between wholesale markets and policy goals of states, including their support of particular resource attributes or externalities. If confirmed, I expect to further evaluate the interaction of the Commission's and state policy goals.

Question 11: Energy prices impact all American families. Yet climate change poses catastrophic economic, environmental and social threats to all Americans. Delaying action on climate change has severe long-term costs. Moreover, renewable energy sources like wind and solar are the cheapest available, and aren't subject to the sorts of wild price fluctuations that we see with fossil fuels. When combined with aggressive energy efficiency, they can provide cheaper energy over the long term than dirty fossil fuels.

If confirmed, what steps will you take at FERC to help the U.S. transform its energy system, as quickly as possible, from one based on carbon-intensive fuels to one based on clean, sustainable fuels?

Answer: If confirmed, I will refrain from picking "winners and losers" in the energy marketplace, as that is not FERC's role. Please see my response to your Question 10 above.

Question 12: In Vermont, energy efficiency investments have saved $279 million in avoided regional transmission system upgrades. What additional steps can FERC take to aggressively

promote the use of energy efficiency and other strategies to avoid unnecessary expensive new transmission lines and new baseload power plants?

Answer: I support state initiatives on energy efficiency. Vermont and Pennsylvania are national success stories on the adoption of energy efficiency investments. In Pennsylvania, I oversaw the successful implementation of Act 129, which is Pennsylvania's energy efficiency and conservation law. Utilities spent close to $1 billion in energy efficiency measures, which resulted in customers receiving net benefit of close to $1.8 billion. Those programs are working.

FERC has a different role with respect to energy efficiency. With respect to transmission planning, the Commission requires that public utility transmission providers allow consideration of non-transmission alternatives in both their local and regional transmission planning processes. In addition, two of the wholesale markets that the Commission regulates, PJM and ISO-NE, provide a mechanism for energy efficiency investments to participate in and receive compensation for their capacity value from the wholesale capacity market. Additionally, FERC should remain vigilant in making sure that demand side resources are adequately compensated for the benefits that they provide. The success of Order No. 745 is a prime example of that effort.

Question 13: What steps can FERC take to prioritize dispatching clean distributed renewable energy before dispatching fossil fuel generation?

Answer: It is not FERC's role to pick one resource over another. However, with strong market rules, I am confident that investments in clean technology will continue well into the future. Moreover, my understanding is that the RTO/ISO markets dispatch the least cost resources to meet demand, subject to reliability constraints. Resources offer their supply into the markets based on their marginal cost of production. Many renewable energy resources have no fuel costs, and have low or zero marginal costs, and thus are economic to dispatch whenever they are available. They are fully dispatched by the RTO/ISO markets unless transmission lines become overloaded or other reliability constraints prevent their full dispatch. Most renewable energy resources that are connected to the retail distribution system are not dispatched by the RTO/ISO markets, but those also typically generate when they are available. They displace the higher marginal cost resources that the RTO/ISO would otherwise need to operate to meet load.

Question 14: If confirmed, will you commit to encouraging utilities around the country to dramatically expand rooftop solar and other types of distributed generation?

Answer: To date, the increasing penetration of rooftop solar has been driven by state policy choices, and other drivers that are not directly under the control of the Commission. Nonetheless, FERC has sought to remove barriers to participation by various types of resources in the markets it oversees. For example, FERC has approved rules that allow market operators like ISO-NE to recognize distributed generation capacity when establishing its capacity requirement so that states get the capacity benefit of actions designed to encourage rooftop solar and other distributed generation. In addition, the Notice of Proposed Rulemaking on Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators that the Commission issued in November 2016 included a

proposal to address potential barriers to the participation of aggregations of distributed energy resources in the organized wholesale electric markets. The Commission is currently considering comments on this issue, and if confirmed, I will review this input and look forward to working with my colleagues on these important issues.

Question 15: Grid reliability is an important priority for FERC, but opponents of renewable energy often use this "reliability" argument as an excuse for dismissing or undervaluing renewable energy. What steps will you take to ensure that FERC can protect the reliability of the grid while also transforming our energy system?

Answer: Our nation's energy resource fuel mix is going through a transition. One component of this transition is identifying the types and levels of essential reliability services needed for reliable operation. If confirmed, I would work collaboratively with my colleagues to consider whether and how renewable energy resources can and should provide such essential reliability services, where technically capable of doing so.

It is clear to me that clean energy is good business. When you look across the U.S. today, renewable energy makes up almost 15 percent of the energy portfolio and that percentage is growing. FERC will need to work with states, industry, and other stakeholders to promote system modernization and develop sound regulatory policies.

Question 16: Are reforms needed to the wholesale market structures to support distributed energy resources? If not, do you commit to ensuring that wholesale markets continue to support distributed energy resources? If so, what could be done to ensure wholesale markets better support distributed energy resources?

Answer: Removing barriers to the participation of new technologies such as distributed energy resources in the markets that FERC oversees can bring benefits to consumers. As I have noted, this issue is currently under consideration at the Commission. In November 2016, the Commission issued a Notice of Proposed Rulemaking on Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators in which it proposed a number of reforms to remove potential barriers to the participation of electric storage resources and distributed energy resource aggregations in the organized wholesale electric markets. Specifically, the Commission proposed to require each Regional Transmission Organization and Independent System Operator to revise its tariff to allow distributed energy resource aggregators to participate directly in the organized wholesale electric markets. The Commission received a significant number of comments in response to this proposal. If confirmed, I look forward to reviewing this matter with my colleagues.

Question 17: If confirmed, what steps will you take to move the American grid to a distributed, interconnected system?

Answer: As noted, in November 2016, the Commission issued a Notice of Proposed Rulemaking on Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators. The Commission proposed to remove barriers to the participation of aggregations of distributed energy resources in the organized wholesale electric markets. If confirmed, I will review the record in this proceeding with my colleagues.

Question 18: If confirmed, will you support the development of large and small-scale storage, which will make our grid more resilient and encourage the buildout of renewable energy technology?

Answer: My view is that we should be able to call on all types of energy resources to serve the nation's needs, which includes renewable and electric storage resources. Barriers that keep otherwise competitive resources out of the market interfere with being able to rely on all types of resources. Potential barriers to the participation of electric storage resources in the organized wholesale electric markets is an issue that the Commission is currently considering.

In addition, in December 2016, FERC proposed revisions to its rules governing generator interconnection that would specifically include storages resources in the definition of generating facilitating, thereby allowing storage resources to use these generator interconnection processes to interconnect with the grid. The proposal included revisions that would help leverage existing assets in the interconnection process, which would help storage interconnect more quickly.

If confirmed, I will review these matters and look forward to working with my colleagues on these important issues.

Question 19: Do you see a role for FERC in encouraging ancillary and reliability services markets to ensure all generators can compete to provide services to maintain grid reliability and get compensated for those services?

Answer: FERC has identified ancillary services that are necessary to maintain reliable operation of the grid. As noted in my response to your Question 15, one component of the transition in our nation's energy fuel mix is identifying the types and levels of essential reliability services needed for reliable operation. In both of these contexts, offering opportunities for resources that are technically capable of providing these services to do so can benefit consumers.

Question 20: The 2017 Infrastructure Report Card produced by the American Society of Civil Engineers rates our nation's energy infrastructure as a D+. Most electric transmission and distribution infrastructure was built in the 1950s and 1960s with a 50-year life expectancy and the over 640,000 miles of backbone transmission infrastructure is at full capacity. How will you facilitate the transmission infrastructure investment needed to modernize and expand our grid, particularly on an interstate basis?

Answer: There is no doubt that our nation's bulk transmission system is aging and needs modernization so that we can continue to move towards a clean energy future. There are several ways FERC can promote investment in the transmission infrastructure that is needed to maintain and modernize our grid. One is to provide the regulatory incentives to make these investments viable over the next decade. I believe that FERC can use its ratemaking tools to promote investment, while also ensuring that rates are just and reasonable. In addition, I understand that FERC has taken steps for regional transmission planning processes that are intended to identify and then remove barriers to development of more efficient or cost-effective transmission.

Question 21: The Public Utility Regulatory Policy Act (PURPA) allows industrial companies to build and operate combined heat and power (CHP) and waste heat to power (WHP) facilities that can simultaneously produce economical steam and electricity with energy efficiencies up to 80 percent. Do you support maintaining PURPA as currently enacted?

Answer: PURPA was developed at time when the U.S. was facing severe scarcity in its power resources. Today, our country is approaching energy independence. Given the major shift in in our country's energy landscape, I would support Congressional action to modernize PURPA to reflect the new energy landscape which includes CHP, clean tech investment, distributed energy resources, just to name a few.

Supporting the policy goals of individual states

Question 22: Given your stated dedication to state rights to dictate in-state energy policies, how will you ensure that states retain control of policies that incentivize distributed generation?

Answer: In FERC's proposal to allow for aggregated distributed resources to participate in the organized markets, the centralized wholesale markets must coordinate this participation with the operation of the distribution system. In additions, the Commission recently conducted a technical conference to specifically explore how the competitive wholesale markets supervised by FERC can select resources of interest to state policy makers—including those to incentivize distributed resources—while preserving the benefits of regional markets and economic resource selection. If confirmed, I look work with my fellow commissioners on these important issues.

Question 23: Approximately 30 states have passed renewable portfolio standards. States are enacting these policies for a wide variety of reasons including fuel diversity, environmental benefits, and economic development. If confirmed, how would you act to protect states' rights to decide their own energy policy?

Answer: States may determine their individual resource mix within their jurisdiction. State policies sometimes interact with FERC-jurisdictional wholesale electricity markets. If confirmed, I will make every effort to respect state jurisdiction over their resource mixes while carrying out FERC's core responsibility of ensuring that wholesale electricity rates are just and reasonable.

Question 24: While recognizing that FERC must place a premium on system reliability, many states have established aggressive energy policy goals. Vermont, for instance, is committed to reducing greenhouse gas emissions by 90% by 2050. Should you be confirmed, what steps will you take to give more weight to the policy goals of individual states?

Answer: Congress has tasked FERC with ensuring that the bulk power system remains reliable and that wholesale electricity rates are just and reasonable. I recognize states' rights and the importance of state energy policy goals. If confirmed, I will make every effort to respect those state energy decisions while carrying out my responsibilities under federal law.

Stakeholder influence and FERC management

Question 25: What specific issues in FERC regulation of energy markets cause you concern?

Answer: During my experience as a state regulator, I have come to believe that it is important to "do the boring well." If given the opportunity to serve as a Commissioner at FERC, that will mean ensuring that the agency abides by its core mission of ensuring just and reasonable rates for wholesale electric and natural gas providers. It is my understanding that because FERC has been operating without a quorum for the past few months, there is a lot of work to be done to address the backlog of issues that have built up without a full complement of Commissioners. If confirmed, my first order of business will be to address the outstanding issues that are pending before the Commission and get the agency back up to speed.

Beyond that, if confirmed, I look forward to reviewing the post-technical conference comments regarding Order No. 1000 and examining the success of the Commission's efforts to encourage transmission planning. The issue of state policies and their impacts on organized markets is another important topic that I look forward to examining given the widespread implications it has for the future of markets.

Question 26: If confirmed, how will you work to prevent undue influence on FERC by the fossil fuel industry?

Answer: I believe in the importance of robust and transparent participation of all interested parties in matters before FERC. To be an effective regulator, you must be able to call the balls and strikes, and if confirmed, I intend to do that in an unbiased and transparent fashion. During my 8 ½ years as a state utility regulator in Pennsylvania, I have learned the value of considering all points of view before making a decision and if confirmed, I will continue that practice that approach at FERC.

Question 27: As a result of the Enron scandal, Congress changed FERC's enforcement and civil penalty authority under the Energy Policy Act of 2005. What lessons does the Enron scandal still have for FERC?

Answer: In my view, the Enron scandal serves as a stark reminder that, notwithstanding the Commission's best efforts to design and implement well-functioning competitive markets, FERC must be vigilant in its oversight of the energy markets. Products and technology are constantly evolving, so FERC's monitoring must constantly evolve as well. I understand that FERC has developed a surveillance program to detect potential manipulation and, if confirmed, I look forward to learning more about that program and doing what I can to assure that it continues to keep up with changes in the markets.

Question 28: One of FERC's most important responsibilities is to investigate and enforce against market manipulation. Is FERC devoting adequate resources to these enforcement activities? Are the fines sufficient? If confirmed, what steps will you take to sustain and improve on FERC's enforcement capacity and success?

Answer: I believe that the penalties provided in the Energy Policy Act of 2005 are sufficient to deter and penalize market manipulation. I understand that FERC has significantly enhanced its investigatory and enforcement capabilities over the decade since enactment of that statute. If confirmed, I look forward to learning more about these capabilities in an effort to improve further FERC's enforcement program.

Question 29: After the 2003 electricity blackout, Congress included federal backstop siting provisions for interstate transmission lines in the Energy Policy Act of 2005. These included Section 1221 for National Interest Electric Transmission Corridors, which has never been implemented effectively. Would you support FERC taking on the responsibilities of the corridor designation authority if the Department of Energy was willing to delegate its role to FERC, which would consolidate the designation authority with the backstop siting authority FERC already has under the Energy Policy Act?

Answer: I appreciate that although it would be a decision for the Department of Energy (DOE) to decide whether to delegate the corridor designation authority to the Commission, I would comply with whatever authority that the DOE chose to delegate to the Commission. If confirmed, and such authority is delegated by DOE, I will review this matter with my colleagues and with DOE, as appropriate, to determine the most efficient and effective way to implement the delegated authority.

Question 30: FERC is incredibly complicated, and the barrier to entry for someone to simply understand FERC proceedings, much less to participate, is extremely high. Stakeholders with considerable financial resources can participate, but everyone else is effectively excluded. How can FERC do a better job of ensuring all interested parties can meaningfully participate in FERC processes?

Answer: While some of the issues within FERC's purview can be complex, FERC proceedings are on the record and open to any interested party. In addition, FERC's website provides a wide variety of information both the substance of FERC's policies as well as the process for participating in its proceedings. FERC should continue to maintain as much transparency as possible into its work in order to ensure that both industry and the public can meaningfully participate in Commission proceedings.

Question 31: If confirmed, would you support the creation of a "consumer advocate" office at FERC?

Answer: I do not believe that the creation of such an office at FERC is necessary. In my view, the public comment process at FERC provides all interested parties with the ability to participate in the process and express their positions on issues. Moreover, each RTO and ISO has an independent market monitor that oversees and reports on activities within the market to FERC. In addition, FERC has a very robust investigative and enforcement unit that can adequately address any problems it identifies within the wholesale markets. Given the safeguards already in place at FERC, I do not believe there is a need for such an office at this time.

Conflicts of interests

Question 32: The Edison Electric Institute (EEI) represents all U.S. investor-owned electric utilities. As President of the National Association of Regulatory Utility Commissioners (NARUC), you may know that in the 1980s, NARUC conducted a 20-month investigation into EEI's misuse of money collected from ratepayers for lobbying and public relations. One of the final audits from NARUC revealed that 50% of EEI's expenditures went to pay for these political activities. Yet, NARUC stopped auditing EEI data in the early-2000s. If confirmed, will you commit to ensuring that rate-payers are protected from paying for lobbying that seeks to protect or improve private profits?

Answer: Under FPA sections 205 and 206, FERC ensures that the rates, terms and conditions of sales for resale of electric energy and transmission service in interstate commerce by public utilities are just, reasonable, and not unduly discriminatory or preferential. The Commission's Uniform System of Accounts Account No. 426.4 captures expenditures related to lobbying and other activities. Clarity of expenses included in this Account allows for scrutiny in a rate proceeding. In addition, the Commission has held that the portion of expenses used for lobbying activities may not, under any circumstances, be included in the utility's cost of service. Finally, I would note that the Commission may investigate and address any accounting impropriety that may develop.

FERC abuses of power in reviewing and approving pipeline infrastructure

Question 33: While instilling important powers in the federal government, the Clean Water Act also ensures the protection and respect of states' rights. Section 401 of the Act explicitly states that no [federal] license or permit shall be granted until the certification required by this section has been granted or waived. Similarly, the U.S. Supreme Court has said Section 401 requires States to provide a water quality certification before a federal license or permit can be issued and without [Section 401] certification, FERC lacks authority to issue a license.

Given the language of the Clean Water Act and its interpretation by the Courts, do you think it appropriate that FERC is routinely issuing its Certificates of Public Convenience and Necessity for pipeline projects prior to all affected states rendering their decisions on Section 401 certification? If confirmed, will you commit to ensuring all relevant state level permits are granted prior to issuing a Certificate of Public Convenience and Necessity for any pipeline project?

Answer: I understand that it has been Commission policy to issue conditional certificates of public convenience and necessity for natural gas pipeline projects which preclude natural gas companies from commencing construction until they have obtained all necessary authorizations under federal law, including Clean Water Act certification. It is also my understanding that the U.S. Court of Appeals for the District of Columbia Circuit recently held that a certificate conditioned on the receipt of state water quality certification did not authorize a discharge into the navigable waters of the United States and so did not violate the Clean Water Act. If confirmed, I will work with my colleagues to ensure that all Commission decisions regarding natural gas pipeline projects are consistent with law.

Question 34: Under federal law, a private party is not allowed to legally challenge FERC approval of a pipeline project until they have first submitted a rehearing request to FERC, and FERC has affirmatively granted or denied that request. Rather than do one or the other, FERC's practice has been to issue a tolling order in response to such requests, which puts the request under further consideration. The result is that communities are put into legal limbo, unable to challenge the FERC decision until a final grant or denial is issued from the agency. Routinely FERC leaves people in that legal limbo for months, and sometimes over a year, while it allows the applicant to exercise the power of eminent domain and advance construction.

Do you see the use of tolling orders as an abuse of power by FERC? If confirmed, will you commit to either affirmatively grant or deny a rehearing request?

Answer: Under the NGA and the FPA, Congress gave FERC 30 days to address rehearing requests that parties file with FERC. My understanding is that Federal courts have upheld FERC's use of tolling orders in this situation. The use of tolling orders provides more time for FERC to conduct a thorough review of rehearing requests, which often involve complex issues, and to ensure that all arguments are considered and addressed.

I appreciate that in some instances this process places a burden on those affected by a FERC order. While I cannot prejudge how I will act on rehearing requests, if I am confirmed I commit to work to ensure the FERC's processes on filings are as efficient as possible.

Future of nuclear power

Question 35: What do you envision as the future of nuclear power?

Answer: As I noted at my confirmation hearing, I believe that the nation should rely on all forms of energy resources, which includes nuclear energy. Nuclear generation plays a critical role in our nation's resource mix. However, I am aware that certain nuclear resources are being displaced because they are unable to recover their costs in the wholesale power markets. The relatively low cost of natural gas has helped drive down energy prices. In addition, policies that impose new environmental requirements and seek to procure specific resource types have challenged nuclear resources. Finally, the emergence of new competitive technologies has also challenged nuclear resources.

Although I believe that FERC policies should focus on nondiscriminatory and resource-neutral rules, I also believe that it is critically important that the Commission take a look at this issue, especially if we want to maintain a diverse resource mix.

In June 2014 in Docket No. AD14-14, FERC initiated a proceeding to evaluate issues regarding price formation in the energy and ancillary services markets operated by RTOs/ISOs. This ongoing effort strives to improve the accuracy of energy prices for all resources, including nuclear. Also, the Commission recently convened a technical conference on state policies and wholesale markets that may shed some light on this issue. If confirmed, I will carefully review these matters with my colleagues.

Question 36: What do you believe is the proper role of FERC in the future direction of nuclear power in the United States?

Answer: Please see my response to your Question 35 above.

Also, FERC has taken steps to better understand the challenges facing nuclear power. FERC has participated in joint meetings with NRC to discuss the reliability of the bulk power system, nuclear power safety and security, and market factors influencing nuclear power economics.

Question 37: Do you think any market reforms are needed to support the future direction of nuclear power in the United States?

Answer: Please see my response to your Question 36 above.

IMAPP and regional initiatives

Question 38: New England has a regional Independent System Operator (ISO), and over the past several years consumer costs have skyrocketed as the ISO has implemented and tweaked its forward capacity market. In the regional process known as IMAPP – integrating markets and public policy – the ISO and FERC are beginning to acknowledge these administrative markets are in conflict with some of the objectives states have with regard to energy policy.

If confirmed, would you support efforts, such as in New England, to develop fixes to wholesale markets to better implement state policy goals in wholesale markets?

Answer: The Commission recently held a technical conference on this issue of the interplay of state policy goals and the wholesale energy and capacity markets. At the conference, FERC and state commissioners engaged in a discussion of potential options for solutions to harmonize the competitive market framework with the state policies. If confirmed, I will review this issue with my colleagues.

Question 39: Energy markets do not accurately reflect environmental costs, including the social costs of carbon pollution. Do you believe that FERC and wholesale market operators should continue to explore how to better integrate the real cost of carbon pollution into our energy markets?

Answer: FERC's policies are resource and fuel neutral. However, the Commission has recently convened a technical conference to explore ways to accommodate state policy efforts while retaining competitive market frameworks.

Where states or regions have taken steps to incorporate a carbon price, the wholesale markets have been able to incorporate that carbon price into the centralized wholesale energy market.

Question 40: Are you open to allowing ISO-New England to walk back from the capacity market model and return to a structure that allows load-serving entities to meet their needs through bilateral contracts with a residual market for capacity not otherwise procured through such bilateral contracts?

If confirmed, will you commit to just and reasonable rates for consumers, not just for market participants?

Answer: I am not aware of any ongoing efforts from ISO-New England to abandon its current capacity market as a tool to ensure resource adequacy in the region. However, I am not opposed to bilateral contracting by load-serving-entities.

Question 41: Earlier this month, FERC held a technical conference to examine how to better incorporate states' environmental policy objectives into wholesale markets. Stakeholders are working to address challenges in these markets, particularly as it relates to price formation like carbon pricing. More active leadership from FERC, however, may be necessary to direct wholesale market operators to develop solutions to address these price formation challenges.

If confirmed, would you help FERC take a more active role to assist state and market operator efforts to resolve price formation issues associated with states' environmental policies?

Answer: Although I am reluctant to speculate on any next steps that may come out of the technical conference, if confirmed, I will work with my colleagues to address the issues explored at the technical conference regarding the interplay between state policy goals and wholesale markets.

Question 42: Do you think there are ways to account for environmental costs in price algorithms that appropriately value the benefits of carbon free generation?

Answer: RTO/ISO markets do not independently determine environmental costs but I understand that such costs can be and in some cases are incorporated in price algorithms if those costs are known.

Question 43: New England is making considerable progress implementing renewable portfolio standards, renewable energy standards, and the Regional Greenhouse Gas Initiative. These reforms will be an enduring aspect of the region's energy strategy.

If confirmed, will you commit to work with ISO-New England to ensure that wholesale market rules complement state policies and regional agreements?

Answer: As a state regulator, I understand the importance of ensuring that wholesale markets and state and regional policies complement, rather than conflict, with each other. FERC recently held a technical conference on the complex and important issue of the interplay of state policy goals and the wholesale energy and capacity markets. During that conference, FERC Commissioners and state commissioners engaged in a discussion of potential options for regional solutions. If confirmed, I will review this issue with my colleagues.

Forward capacity auctions

Question 44: The New England region saw considerable price increases in the region's forward

capacity auctions (FCAs) in 2014. In recent auctions, costs have come down, while the region has been able to secure sufficient resources to maintain system reliability. Part of the reason why auction prices came down is because ISO-New England included more renewable energy in its installed capacity requirement (ICR). ISO-New England has continued to improve its inclusion of renewable energy in the ICR calculation, but could do better.

How can ISO-New England's consideration of energy, efficiency, renewable generation, and improved metrics in the forward capacity auctions that value the benefits of carbon-free generation help reduce system costs and improve system reliability?

Answer: As you note, ISO-New England revised the calculation of its ICR for FCA 10 (associated with the 2019/2020 delivery year) to reflect the forecast penetration of behind-the-meter solar photovoltaic resources. It is my understanding that this revision had the effect of reducing the ICR for FCA 10 by almost 400 MW. I am supportive of market innovations that reduce costs without impacting system reliability.

Question 45: Carbon-free generation currently faces a large barrier for bidding into the FCAs because of upfront costs. If confirmed, will you commit to working with our ISOs to continue reducing the barriers to including more renewables into the ICR and for bidding into our energy auctions?

Answer: I understand that all new capacity resources in New England face a minimum offer price in order to prevent the exercise of buyer-side market power in the FCA. However, in recognition of certain public policy choices by the New England states, there is an annual exemption from the minimum offer price rule of 200 MW, with a potential three year carry-over of up to 600 MW for certain renewable resources. As I previously noted, I support a diverse fuel mix that supports a safe and reliable grid, and I support the elimination of barriers to new resources.

Hydro relicensing

Question 46: As states implement policies to address climate change it is becoming increasingly clear that hydroelectric generation will continue to be a central component of the U.S. energy portfolio. Yet the licensing process for hydroelectric facilities can last a decade or more, cost hundreds of thousands of dollars, and often results in decreased electric production due to water quality concerns. What do you see as steps FERC can take to streamline this process, and how would you ensure state and federal environmental and water quality concerns are maintained?

Answer: I support the notion that the country should rely on all forms of resources, including hydroelectric resources. The hydroelectric licensing process, however, is complex and involves multiple agencies. If confirmed, I will work with my colleagues to determine what steps FERC can take to streamline the hydropower licensing process, while ensuring that federal and state environmental and water quality concerns are appropriately addressed.

Natural gas infrastructure

Question 47: Natural gas and pipeline advocates vocally hailed your nomination as a sign that future and pending fossil fuel infrastructure will be rubber stamped on your watch. What will you do to demonstrate your independence from fossil fuel special interest groups?

Answer: If confirmed, you have my steadfast commitment that I will review the record in each case with an open mind and with the aim of understanding the points of view of all participants to the case. I believe in the importance of robust and transparent participation of all interested parties in matters before FERC. To be an effective regulator, you must be able to call the balls and strikes, and if confirmed, I intend to do that in an unbiased and transparent fashion. During my 8 ½ years as a state utility regulator in Pennsylvania, I have learned the value of considering all points of view before making a decision and if confirmed, I will continue that practice at FERC.

Question 48: How will you evaluate climate impacts during the review of applications for the construction and operation of natural gas pipelines?

Answer: I understand that this issue has been raised in many of the pipeline cases recently before the Commission. I am aware that the Commission's environmental documents contain a section describing impacts potentially related to climate change for regions in which a project is located. If confirmed, I will review this matter with my colleagues to determine how the Commission may best address such information in its decisions.

The Holman Rule

Question 49: 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 no position on the Holman Rule.

Question 50: If confirmed, will you support or oppose Congressional passage of an amendment under the Holman Rule that targets one of your employees?

Answer: It is within the purview of Congress to decide whether or how to implement the Holman Rule.

Question 51: If confirmed, do you believe that you will be better able to recruit and retain top talent at FERC if Congress is able to individually target employees based on political criteria?

Answer: I was very pleased to hear that the Partnership for Public Service ranked FERC as the fourth best place to work among midsize federal agencies, based on the Federal Employee Viewpoint Survey conducted by the U.S. Office of Personnel Management. In my estimation, FERC is filled with talented employees and I am optimistic that the agency will continue to recruit such talent.

Question 52: Do you support or oppose Congress targeting and altering the salaries of individuals at FERC?

Answer: As I stated previously, it is within the purview of Congress to decide whether or how to implement the Holman Rule.

Question 53: How would you describe the division of responsibility and authority between Congress and FERC on agency personnel issues?

Answer: FERC is an independent agency funded by assessments on the utilities it regulates. As a general matter, I believe individual agencies are best suited to deal with their own personnel issues. However, if confirmed, I am aware that I am bound to act within the authority delegated to FERC by Congress.

Questions from Senator Al Franken

Question 1: 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? And furthermore, do you think that FERC should be able to coerce states into changing energy policies?

Answer: As a member of a state regulatory commission, I have a great appreciation for the need for FERC and the states to respect each other's boundaries. I am also aware that on May 1-2, 2017, the Commission held a technical conference on the interplay of state policy goals and the wholesale energy and capacity markets, and I believe this was a good first step in addressing the issue. At the conference, FERC Commissioners and state commissioners engaged in a discussion of potential options for solutions to reconcile the competitive market framework with the policy interests of states. If confirmed, I look forward to further examining this issue and reading the post-technical conference comments to determine if any next steps are necessary.

Question 2: As Senator Cortez Masto mentioned in the hearing, late last year, FERC started a process to "remove barriers to the participation of electric storage resources and distributed energy resource aggregations in the capacity, energy, and ancillary service markets."

- **a.** What role do you see energy storage playing in the future in the organized wholesale electricity markets and transmission system?
- **b.** And how can FERC help ensure that energy storage is receiving proper compensation for the multiple benefits it provides to the grid?

Answer: As I mentioned at my confirmation hearing, I believe that we should seek to rely on all types of energy resources to meet the nation's needs, which includes electric storage resources. Participation of electric storage resources is the subject of an ongoing proceeding at the Commission in which the Commission proposed a number of reforms to remove barriers to the participation of electric storage resources and distributed energy resource aggregations in the organized wholesale electric markets. In addition, the Commission also issued a Notice of

Proposed Rulemaking on the Reform of Generator Interconnection Procedures and Agreements in December 2016 in which it proposed a number of reforms designed to improve certainty, promote more informed interconnection, and enhance interconnection processes for all resources interconnecting to the transmission system, including new electric storage resources. If confirmed, I look forward to reviewing this matter with my colleagues.

I understand that the Commission has taken several actions to ensure adequate compensation for resources, including electric storage resources. For example, in Order No. 755, FERC provided for compensation of fast-acting resources, such as storage, to provide frequency regulation service. Similarly, FERC's price formation effort has identified opportunities to improve energy market price signals. Actions like a change in the settlement interval and the requirement to trigger shortage pricing any time a physical shortage occurs should provide more accurate price signals for flexible resources like energy storage. Further, in January, FERC issued a policy statement providing guidance to storage resources seeking compensation for both cost-based and market-based services.

Question 3: FERC Order 1000 was intended to help identify such transmission needs and solicit competitive transmission projects by requiring regional transmission planning and interregional coordination.

- **a.** Do you support FERC order 1000?
- **b.** What are the barriers to interregional transmission lines and what can FERC do to remove those barriers?

Answer: My understanding is that Order No. 1000 is intended to promote the identification of more efficient or cost-effective transmission facilities and to remove certain obstacles to the development of those facilities. I support those goals. I also support continued review of Order No. 1000 to ensure that it is functioning as intended and to explore whether there are further steps that the Commission to advance the goals of Order No. 1000. To that end, the Commission convened a technical conference in June 2016 on competitive transmission development and requested post-technical conference comments on several issues, including issues related to regional transmission planning and competitive transmission development. If confirmed, I will review this record with my colleagues.

Question 4: A few years ago during the severe winter polar vortex, coal stockpiles at utilities in Minnesota repeatedly dropped to dangerously low levels, due to inadequate rail delivery of coal. At least four coal power plants in Minnesota were shut down, so that their stockpiles could be built back up before the cold winter months. And in the end, the cost of this unreliable rail service was passed on to the public, as they paid for the more expensive replacement power that was purchased to make up for lost generation.

During this time period, I sent a letter to FERC highlighting my concerns about Minnesota utilities' low coal stockpiles, and asking FERC to work with all other stakeholders to find a solution to this ongoing issue.

- **a.** What do you think FERC should do to mitigate the problems with rail delivery issues,

since these issues impact the electricity markets?

b. Last Congress I introduced the Emergency Fuel Supply Coordination Act, which would require coordination among key federal agencies when a fuel emergency is declared. Do you think this coordination is a good idea, and in what ways could FERC support such an effort?

Answer: I understand that the Commission's authority over this matter is limited. Although the Commission does not have authority over the shipment of coal over the nations' rail lines, if confirmed, I would be willing to meet with utilities or the rail regulators to assess what type of assistance the Commission may provide under the circumstances at the time. I believe that coordination among key regulators when a fuel emergency is declared is a prudent step to take.

Question 5: 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 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. Does FERC have a role to play here in making sure we are not unnecessarily increasing the cost of energy for Americans?

Answer: Section 3 of the NGA addresses imports and exports of liquefied natural gas (LNG). Jurisdiction under section 3 is shared between DOE and the Commission. Although the Commission authorizes the construction of facilities, it is DOE that has jurisdiction over the import or export of the natural gas commodity.

Question 6: 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. Since FERC is tasked with ensuring the reliability of the grid, do you share Secretary Perry's concerns about increasing integration of renewables?

Answer: It is my understanding that the study referenced in your question is aimed at reviewing the value of baseload resources in organized markets to make sure these resources are being adequately compensated for their attributes. FERC clearly has a role to play in this discussion as it is FERC's responsibility under the Federal Power Act to ensure the reliability of the bulk power system. In fulfilling that responsibility, FERC works closely with the North American Electric Reliability Corporation, which FERC has certified as the Electric Reliability Organization, as well as with the industry and other interested stakeholders. In the midst of a transition in our nation's energy resource fuel mix, it is important to maintain our commitment to ensuring grid reliability.

Question 7: As you know, FERC's approval process for natural gas pipelines has gained national attention. Former Chairman Norman Bay released a statement on his last day

recognizing the increased public interest surrounding the approval process and encouraging the agency to change how it determines whether approving a pipeline is within the national interest. Traditionally, FERC has relied on a contract with potential shippers to show market demand and therefore demonstrate that a project is in the national interest. But, this is fairly myopic view and Mr. Bay suggests that more comprehensive cost-benefit analysis may be necessary. Mr. Bay also recommended that FERC consider the environmental impacts of increasing gas production allowed by pipeline construction as well as an assessment of lifecycle greenhouse gas emissions. Do you agree with the former Chairman's assessment? If not, why not, and if so, what changes would you suggest?

Answer: The Natural Gas Act requires the Commission to determine that proposed pipeline projects are consistent with the public convenience and necessity. Whether the pipeline is "needed" is part of that determination. If confirmed, I look forward to working with my colleagues to review the Commission's policies for pipeline applications to ensure that all relevant factors are appropriately considered in the Commission's review process.

It also is my understanding that the Commission's analysis of environmental issues for a proposed natural gas pipeline includes greenhouse gas emissions associated with the construction and operation of the project, as well as impacts potentially resulting from climate change over the region in which the project is located. If confirmed, I look forward to working with my colleagues in determining how information regarding climate impacts may be addressed appropriately in such proceedings

Question 8: Senator Shaheen and I recently reintroduced legislation, the Public Engagement at FERC Act (S. 1240), that will improve public involvement at the FERC and facilitate advocacy at the agency on behalf of residential and small commercial energy consumers. Specifically, the Public Engagement at FERC Act would build off existing language in the Public Utility Regulatory Policy Act (PURPA) and establish an Office of Public Participation and Consumer Advocacy to ensure the public has a strong role in shaping our nation's energy future. It is important that anyone who assumes the role of a FERC Commissioner understands how their decisions are directly or even indirectly impacting private citizens. When FERC evaluates whether a project or agreement is "in the public interest" it is vital that the Commission indeed consult the public.

a. Do you agree that public engagement should be prioritized during the various proceedings administered by FERC?
b. If confirmed, what steps will you take to make commission proceedings and processes more accessible to the public?
c. While I'm not asking you to weigh in on the legislation directly, do you agree with allowing more public participation in the agency through the creations of a dedicated office?

Answer: I agree that public engagement is important to FERC proceedings. Development of a record that reflects comments from all sides of an issue enhances FERC's ability to make appropriate decisions.

I understand that there are already a number of ways for members of the public, individually or as a group, to be heard at FERC. For example, they may intervene and actively participate in FERC proceedings and they may file comments on rules and regulations that FERC proposes in Notices of Proposed Rulemakings. In addition, it is common for state utility commissions, who seek to protect the interests of retail and residential customers, to intervene directly in FERC cases and comment on FERC's proposed rules and regulations. If confirmed, I will work with my colleagues to identify further steps that FERC could take to make its proceedings and processes more accessible to the public.

Question 9: In 2006, FERC started requiring wholesale generators to file Form 556 Certificate of Qualifying Facility (QF) Status for a small power production facility. I'm concerned that some small, community wind facilities across the country may have missed this change. These projects went through an extensive study process to facilitate interconnection of their wind projects with the transmission grid. These interconnections were ultimately approved by FERC as exempt wholesale generators and have been operating safely. However, in 2006 FERC established a filing requirement for all facilities larger than 1MW, but some missed this change. The filing requires announcing the total electricity generated by the QF.

In one case, a company MinWind failed to start filing with FERC, and subsequently sought a waiver from FERC for the Form 556 filing arguing that they did not know about the rule. But, the waiver was denied and the company was assessed a substantial repayment obligation equivalent to the interest that they have been unfairly accruing since 2006. The amount was large enough that they were forced to file for bankruptcy. While I do not know the specifics of this case, in general, this seems like an onerous requirement that if not handled appropriately could drive more companies into bankruptcy. Will you commit to working with me to find a solution to this issue?

Answer: I appreciate your concern and agree that FERC-regulated entities must have adequate notice of regulatory requirements. If confirmed, I would be pleased to work with you and I commit to understanding the issue more fully to review this matter with my colleagues.

Question from Senator Steve Daines

Question: Your experience as a utility commissioner in Pennsylvania will be invaluable to your role at FERC. However, as you know, the energy markets in Montana are regulated much differently than they are in Pennsylvania. As commissioner, will you take into consideration the makeup of different regions when making decisions at FERC?

Answer: As I mentioned at my confirmation hearing, I appreciate that regions of the country have chosen differing paths for providing energy services to customers. I respect these differences and can assure you that I will take them into consideration, if I am confirmed.

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: Senator, West Virginia is a power production state just like Pennsylvania. Without electrons coming from West Virginia, Pennsylvania, and Ohio, there would be serious power reliability issues in the PJM marketplace. We would not have adequate power flows or meet grid reliability standards without the contributions of West Virginia’s power fleet as part of the grid interconnect.

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 committed 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 again 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: I understand that FERC provides assistance to pipeline operators with identification and application of best practices for cybersecurity measures. As examples, FERC and Transportation Security Administration (TSA) staff have developed a joint, voluntary assessment program to conduct in-depth cybersecurity reviews of pipeline entities, and FERC has established a similar program with the U.S. Coast Guard for LNG terminals. In addition, I understand that TSA is reviewing its voluntary cybersecurity guidelines for pipelines and that FERC has offered to assist them with this initiative.

I also understand that through the work of Joe McClelland and the Office of Energy Infrastructure Security (OEIS), FERC assists states in better understanding cybersecurity threats to pipelines. For example, in conjunction with other federal agencies, FERC has facilitated both unclassified and classified security briefings to state regulators. OEIS has also played a key role in helping state regulators better understand the cyber security facing the energy industry. More recently, the FERC has promoted the adoption of best practices by providing voluntary architectural reviews of the control systems of numerous electric and gas utilities in the U.S.

In addition, per its authority under the Natural Gas Act, FERC could explore whether further steps are appropriate to alleviate potential industry concerns about recovery of costs for cybersecurity measures.

Question 3: One of the major criticisms that pipeline opponents in state is that FERC does not allow for enough public engagement and is "abusing" their power. You have expressed support for the importance of public engagement in the siting of pipelines. As you know, there are several major pipelines being developed in the mid-Atlantic and Northeast. I support the environmentally responsible development of energy infrastructure as long as that development includes public engagement – particularly for landowners along the pipeline route – so that their voices are heard.

Can you explain how you will support public engagement at FERC?

Answer: As a sitting public utility commissioner, I understand the need for, and value of, public engagement in making decisions regarding infrastructure. The public needs to have peace of mind that we can build out our energy infrastructure safely and with a steadfast commitment to the environment. From my Pennsylvania experience, it is critically important that pipeline developers engage stakeholders in a transparent and collaborative process to achieve a world-class pipeline system. If confirmed, I will review the Commission's public engagement process with my colleagues to best determine ways for effective public engagement, particularly with those whose lands may be crossed by a proposed pipeline route.

Question 4: In 2011, FERC issued an Order – Number 1000 – which asserted agency jurisdiction over transmission planning in areas that were previously thought to be a state's responsibility. It's my understanding that – while intended to make transmission planning easier – it has bogged down the process more. Former FERC Commissioner Tony Clark expressed concern that "there is so much process built into Order 1000," that each step of that process "becomes an opportunity for litigation and delay." Andy Ott, the CEO of PJM, concluded that Order No. 1000 "was almost like a solution in search of a problem. … It's actually creating more challenges to investment." Nick Brown, the CEO of SPP, stated that Order No. 1000 has "created more overhead and uncertainty at a time we didn't need more overhead in order to invest in transmission." We need transmission planning to work efficiently, and we need costs to be allocated where they belong.

Will you work with the Committee on ways to improve transmission planning and cost allocation?

Answer: If confirmed, I will look forward to working with both my colleagues at the Commission and with the Committee on issues related to transmission planning and cost allocation.

The Commission issued Order No. 1000 in 2011. I note that as the transmission planning regions have implemented their Order No. 1000-compliant regional transmission planning processes and interregional transmission coordination procedures, the Commission has continued to consider the issue of transmission planning and cost allocation. I support this continued

review. Specifically, the Commission convened a technical conference in June 2016 on competitive transmission development and requested post-technical conference comments on several issues, including issues related to competitive transmission development, interregional transmission coordination, and regional transmission planning.

Questions from Senator Lamar Alexander

Question 1: In the past five years, six nuclear reactors have shut down prematurely due in part to financial concerns. Analysts have warned dozens of additional nuclear reactors could potentially shut down over the next 10 years due to market challenges. New York and Illinois have taken steps to help keep the nuclear reactors within their borders operating. These states recognize the importance of reliable nuclear power, which provides 60% of our country's carbon-free electricity. What can the Federal Energy Regulatory Commission do to help keep existing nuclear reactors operating and preserve low-cost, reliable, and clean nuclear power for the United States?

Answer: Senator, let me begin by applauding you for your leadership on behalf of nuclear generation in the U.S. The issues facing the nuclear industry are daunting at so many levels.

Although the Commission's policies are resource- and fuel-neutral, I do believe that we should seek to develop and rely on all types of resources to ensure competitively priced and reliable energy supplies. In addition, I believe that resources should be fairly compensated for the value they provide the system.

FERC has taken several steps to address this issue. For example, FERC held a technical conference on May 1-2, 2017, to discuss the interplay between state policy goals and wholesale markets. FERC also has an ongoing price formation effort in exploring whether energy and ancillary service prices appropriately reflect the costs to serve load. FERC's price formation initiative, which commenced in 2014, has gathered input from stakeholders and market experts to find areas for potential reform in the RTO/ISO energy and ancillary services markets. In addition, FERC has approved final rules reforming shortage pricing, settlement intervals, and offer caps in RTO/ISO markets.

If confirmed, I look forward to evaluating the issues explored at the technical conference and the Commission's other proceedings on this issue.

Question 2: The federal wind production tax credit (PTC) has been in place for twenty-five years and has been extended by Congress ten times. The most recent extension in 2015 will cost taxpayers more than $20 billion over ten years. The wind PTC not only costs the taxpayers billions, it also distorts the price of electricity. The subsidy to Big Wind is so generous that, in some markets, wind producers can literally give their electricity away and still make a profit. This phenomenon is called negative pricing. What can the Federal Energy Regulatory Commission do to minimize the unfair impact that negative pricing has on reliable generation like coal, natural gas, and nuclear?

Answer: Senator, as I understand it, Congress has agreed to phase-out of the federal wind production tax credit (PTC), so we may see a transition in this situation shortly. However, currently RTO/ISO market dispatch rules are designed to find the lowest cost of dispatching resources, based on their bids, to serve load while respecting transmission system limitations. During the May 1-2 technical conference, I understand that several panelists suggested that the centralized wholesale market operators should explore whether negative pricing continues to meet the goals of finding the lowest cost of dispatching resources. If confirmed, I look forward to evaluating the issue.

Questions from Senator John Hoeven

Question 1: Electric reliability is a critical issue, especially as it relates baseload power and ensuring our country has the assets needed to maintain low-cost electricity.

For example, the previous Administration's EPA has promulgated substantial new regulations on electricity producers that would have subjected them to unachievable mandates and artificial compliance schedules. Together, the EPA's unwarranted attempts to reduce emissions would have driven up electricity rates for customers and potentially compromise the reliability of our power grid.

In another example, the Aliso Canyon natural gas storage facility provides electricity for southern California. However, state regulators have shut down the facility and now the Energy Department has registered concerns about having a sufficient baseload for summer energy demand.

- How will you approach reliability issues going forward?
- How do fossil fuels play a role in ensuring electric reliability and baseload power?

Answer: The reliability of the nation's electric grid is paramount because it is essential to a robust and growing economy. I recognize the importance of FERC's responsibilities under the Federal Power Act with respect to the reliability of the bulk power system.

In fulfilling those responsibilities, FERC works closely with the North American Electric Reliability Corporation, which FERC has certified as the Electric Reliability Organization, as well as with the industry and other interested stakeholders. In the midst of a transition in our nation's energy resource fuel mix, it is important to maintain our commitment to ensuring grid reliability. I believe that a resource portfolio that includes the use of fuels that support the provision of baseload power makes an important contribution toward that goal.

Question 2: In order to become truly North American energy secure, we need the infrastructure to deliver our energy resources from producers to consumers. I have sponsored the North American Energy Infrastructure Act that would require FERC to approve natural gas import or export applications to Canada or Mexico within 30 days of filing.

- What is your view on the increased need for energy infrastructure?
- What is FERC's role in ensuring adequate pipeline capacity?

- Do you support efforts to increase our energy infrastructure network with Canada and Mexico?

Answer: I agree that we need to ensure there is adequate infrastructure to best assure the availability of reliable and reasonably priced energy. Under the Natural Gas Act, the Commission is required to approve proposed natural gas pipeline projects that are required by the public convenience and necessity, which may include facilities for import and export.

Question 3: In North Dakota, rural electric co-ops ensure that over 350,000 consumers have access to reliable and affordable electricity. The Federal Power Act exempts rural electric co-ops from FERC jurisdiction and this statutory exemption contributes to the state's affordable electricity rates.

- Do you plan to adhere to the Federal Power Act and continue to exempt rural electric co-ops from FERC jurisdiction?

Answer: Section 201(f) of the Federal Power Act exempts electric cooperatives that receive a certain type of financing or that sell less than a certain amount of electricity per year from certain provisions of the Federal Power Act. If confirmed, I commit to adhere to the provisions in the Federal Power Act regarding jurisdiction over electric cooperatives.

Question 4: Two of the industries FERC regulates – electricity and natural gas – are growing closer together as gas increases its share in electricity markets. This ties together the reliability of natural gas supply and the reliability of electricity supply like never before. This makes it all the more important that gas pipelines get sited timely when they are needed and not get bogged down in environmental reviews that, in the name of being thorough, lose all common sense. We have had projects delayed, for example, by consideration of greenhouse gas emissions. Fortunately the guidance requiring consideration of GHGs was rescinded in April.

Both Congress and the Administration have made it plain in law and by executive action that they want infrastructure reviews to be accelerated.

- Will you work to ensure that gas infrastructure is sited promptly and not unnecessarily delayed by overly bureaucratic reviews?

Answer: I agree that we need adequate pipeline infrastructure to allow for the delivery of reliable and reasonably priced gas supplies to consumers. However, as a regulator, I also need to make sure that gas pipelines go through a review required by law. If confirmed, I will work with my colleagues to ensure that we strike that right balance to ensure all relevant factors are considered.

Questions from Senator Angus S. King, Jr.

Question 1: How do you view the relationship between state energy policies, such as Renewable Portfolio Standards, and the wholesale electricity markets? Do you believe there is a

conflict present between state goals and the operation of those wholesale markets? How do you think that conflicts that arise can and should be addressed by FERC?

Answer: As a state regulator, I appreciate the role that states must continue to play in setting state energy policies. However, the Commission has a statutory responsibility to both promote adequate investment in needed energy infrastructure and ensure that the rates subject to the Commission's jurisdiction are just and reasonable. I understand the Commission recently held a technical conference with the objective of further exploring how the competitive wholesale markets can incorporate resources promoted by state energy policies while ensuring that wholesale electricity rates remain just and reasonable and that the reliability of the bulk power system is maintained. If confirmed, I look forward to working with my colleagues on this matter.

Question 2: Do you believe that the competitive wholesale electricity markets are adequately incentivizing the development of renewable energy? If not, what market mechanisms can be put into place to do so?

Answer: I understand that the Commission has long supported the development of competitive wholesale power markets that support investment and are fair to all types of technologies and sources of power, including renewable energy. I believe that the Commission should continue to assess our competitive power markets in the upcoming years to, among other things, ensure they properly value the contributions of all types of resources.

Question 3: Do you believe FERC has a role to play in supporting and helping to manage the increase of distributed energy resources connected to the grid? If so, what is that role?

Answer: I support efforts by FERC to remove barriers to the participation of new technologies such as distributed energy resources in the markets it oversees. In November 2016, the Commission issued a Notice of Proposed Rulemaking on Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators, in which, among other things it proposed a number of reforms to remove barriers to the participation of distributed energy resource aggregations in the organized wholesale electric markets. If confirmed, I look forward to reviewing the record on this matter and considering these important questions with my colleagues.

Question 4: FERC has held that the costs of transmission infrastructure built to fulfill a reliability need can be recovered regionally from all beneficiaries. If a resource other than traditional transmission infrastructure, such as energy storage or a combination of other resources, is proposed and can meet the same reliability need, should the cost of that project be recovered in the same manner?

Answer: In Order Nos. 890 and 1000, the Commission allowed consideration of non-transmission alternatives, including demand response resources, energy efficiency measures, and generation resources, as part of the transmission planning process. In addition, the Commission recently issued a policy statement on cost recovery by electric storage resources, clarifying its precedent and providing guidance regarding electric storage resources' ability to receive cost-

based rate recovery for certain services while also receiving market-based revenues for providing market-based rate services. If confirmed, I will review this matter with my colleagues.

Question 5: New England currently pays by far the highest costs for transmission in all of the organized markets, and yet billions of dollars in additional investment in transmission will be needed in order to unlock new renewable resources in the region. What will you do to keep transmission costs under control for consumers in New England?

Answer: Transmission plays a key role in reliably serving customers by providing access to energy sources. ISO-NE recently implemented an Order No. 1000-compliant regional transmission planning process, which is designed to select the more efficient or cost effective transmission facilities that satisfy the identified need. The Commission, in June 2016, also held a technical conference to explore issues related to the competitive transmission development processes that were established to comply with Order No. 1000, including matters of cost containment. As I stated during my confirmation hearing, if confirmed, I will bring a steadfast commitment to upholding FERC's mission to ensure that the rates and terms of service by which utilities operate are just and reasonable. This includes transmission rates.

Question from Senator Bill Cassidy

Question: If confirmed, one of your key responsibilities as a Commissioner will be to ensure grid reliability. I want to bring your attention to the worrisome decision by the California Public Utilities Commission regarding the shutdown of the Alison Canyon underground gas storage facility. The Department of Energy and SoCalGas have both written letters to the commission warning of possible blackouts and supply disruptions due to the Aliso Canyon decision, which I would like to submit for the record. This appears to be a significant problem waiting to happen.

Will you commit to studying this issue and ensure that the FERC does everything in their authority to protect the reliability of the grid for potentially effected consumers all along the transmission line?

Answer: Because, as you note, grid reliability is a critical aspect of the Commission's mission, if confirmed, I will work with my colleagues to best ensure the reliability of the grid.

Questions from Senator Tammy Duckworth

Question 1: With respect to concerns for our aging energy infrastructure, how do you view the need to balance what consumers can afford with the tremendous expense to upgrade existing facilities and/or to add new infrastructure?

Answer: The Commission's statutory responsibility is to both promote investment in energy infrastructure and ensure rates subject to the Commission's jurisdiction are just and reasonable. A record that includes wide stakeholder input, including input from consumers, helps the Commission to strike the right balance between these critical interests.

Question 2: Just and reasonable cost allocations for electric transmission projects have been a subject for discussion at FERC. As I'm sure you are aware, FERC Order 1000 established the "roughly commensurate" criteria for costs and benefits of transmission. How would you define "roughly commensurate"? Is that a standard that you believe is appropriate for all infrastructure costs?

Answer: I am aware that FERC, in light of a decision from the U.S. Court of Appeals for the Seventh Circuit, has required that the costs of certain regional and inter-regional transmission facilities be allocated in a manner that is "roughly commensurate" with their benefits. Thus, FERC has held that entities that receive no benefit from transmission facilities should not be involuntarily allocated any of the costs. I see the standard as setting forth a useful general principle, but I cannot now say whether it would necessarily be appropriate for all types of infrastructure costs.

Question 3: Regional Transmission Organizations (or RTOs/ISOs) typically build or upgrade new infrastructure to remedy reliability violations. What role, in your view, should cost play in the selection of transmission projects under order 1000 and as planned by RTOs?

Answer: In 2011, the Commission issued Order No. 1000, which established new requirements with respect to transmission planning and cost allocation. My understanding is that Order No. 1000 is intended to promote the identification of more efficient or cost-effective transmission facilities and to remove certain obstacles to the development of those facilities. Consistent with those goals, Regional Transmission Organizations and Independent System Operators consider costs in their regional transmission planning processes.

I note that as the transmission planning regions have implemented their Order No. 1000-compliant regional transmission planning processes and interregional transmission coordination procedures, the Commission has continued to consider the issue of transmission planning and cost allocation. I support this continued review. Specifically, the Commission convened a technical conference in June 2016 on competitive transmission development and requested post-technical conference comments on several issues, including issues related to competitive transmission development, interregional transmission coordination, and regional transmission planning. If confirmed, I will review this record with my colleagues.

Question 4: FERC Order 1000 provided opportunity for competitive transmission investments by independent transmission companies. What, if any, transmission investments do you feel should be exempted from the order 1000 competitive transmission process?

Answer: There are some existing limits to the transmission projects that are subject to competitive transmission development processes pursuant to Order No. 1000. In Order No. 1000, the Commission only required competitive transmission development processes for transmission facilities selected in the regional transmission plan for purposes of cost allocation and, in its orders on compliance, allowed certain transmission planning regions to exempt from their competitive transmission development processes transmission facilities needed in the near-term to address reliability concerns. In addition, the requirement in Order No. 1000 to eliminate a federal right of first refusal does not apply to local transmission facilities, which are defined as

transmission facilities located solely within a public utility transmission provider's retail distribution service territory or footprint that are not selected in the regional transmission plan for purposes of cost allocation. This requirement also does not apply to the right of an incumbent transmission provider to build, own, and recover costs for upgrades to its own transmission facilities, regardless of whether an upgrade has been selected in the regional transmission plan for purposes of cost allocation.

In June 2016, the Commission convened a technical conference on competitive transmission development, at which the speakers discussed exemptions from the competitive transmission development process. In its post-technical conference request for comments, the Commission included questions on whether the Commission should broaden or narrow the type of transmission facilities that must be selected through competitive transmission development processes. If confirmed, I will review this record with my colleagues.

Question 5: FERC's use of RTOs to plan and manage competitive markets has recently come under fire from various public interest groups. They point out that public interest has an extremely limited voice in RTO Stakeholder discussions and RTO actions taken behind closed doors seem to be condoned by FERC. Do you believe this is a valid concern and if so how would you address it? If not, where and how do you see public interest being considered at FERC?

Answer: FERC has taken a number of actions over the years to enhance the transparency and responsiveness of RTOs. For example, Order No. 719 required RTOs and ISOs to demonstrate how they meet four criteria for responsiveness to their customers and other stakeholders: inclusiveness, fairness in balancing diverse interests, representation of minority positions, and ongoing responsiveness. I support these actions and believe that FERC should continue to work to ensure that the RTO and ISO processes are open and transparent.

Question 6: What role should FERC play in any attempts to work toward a cleaner environment?

Answer: FERC policies focus on ensuring that the rules that govern organized and bilateral wholesale electric markets promote the delivery of reliable power in a manner that is nondiscriminatory and resource-neutral, resulting in efficient price signals that market participants can rely on to make investment decisions. Although the drivers of power supply changes are largely outside of the Commission's jurisdiction, we must be aware of, and adapt to, these developments in order to carry out our statutory responsibilities to ensure just and reasonable rates, a reliable power grid, and fair and efficient markets.

Question 7: The recent "Wannacry" ransomware incident has once again brought cybersecurity to the forefront. Should FERC do more to ensure best practices are shared among utilities regarding detecting and preventing cybersecurity threats? How much information should be shared with state regulators? What role do you see at FERC for cybersecurity issues?

Answer: My understanding is that FERC currently provides leadership, expertise, and assistance in identifying, communicating, and seeking comprehensive solutions to significant

potential cybersecurity risks to FERC-jurisdictional energy infrastructure. Among other efforts, FERC collaborates with the Electricity Subsector Coordinating Council, which serves as the principal liaison between leadership in the Federal government and in the electric power sector, with the mission of coordinating efforts to prepare for national-level incidents or threats to critical infrastructure. I support FERC's continued work on these issues, in coordination with Federal and state government partners, as well as industry stakeholders.

Specific to the electric sector, FERC is promoting development and implementation of best practices. This work complements the mandatory reliability standards adopted pursuant to section 215 of the Federal Power Act that provide a good foundation for protecting the bulk power system from cybersecurity threats. FERC's best practices efforts include conducting analysis and outreach to share threat information and best practices for defensive and recovery measures to help mitigate risk.

Moreover, considering the interconnectivity of the utility systems as well as the nature of cybersecurity threats, I believe it is important to work closely with the states to share threat information and help implement best practices. In support of this goal, FERC has been assisting the states to better understand the cybersecurity threats to pipelines and has facilitated numerous information and training sessions with state utility commissions. In addition, FERC has coordinated with other federal agencies to facilitate both unclassified and classified security briefings to state regulators.

Question 8: States that are split into two RTOs are encountering issues where generating resources have been separated from the loads that they were built or contracted to serve. How should proximity to resources, actual power flows, and pre-existing transmission rights be considered in RTO modeling?

Answer: I am aware that the Commission has several open proceedings regarding inter-RTO coordination, so I cannot comment on them. If confirmed, I will review this matter with my colleagues.

Questions from Senator Rob Portman

Question 1: During the 114th Congress, Sen. McCaskill and I co-sponsored legislation that became Title 41 of the FAST Act, 42 U.S.C. § 4370m ("FAST-41"). FAST-41 created a new process to streamline permitting for significant infrastructure projects designated as "covered projects." Would it be beneficial for the FERC permitting and licensing process to operate within this new regulatory construct?

Answer: I understand that the Commission and its staff have been actively involved with the Steering Council and the Executive Director created under Title 41 of the Fast Act since the statute was enacted in December 2015. If confirmed, I will review these efforts with my colleagues to determine how an independent regulatory agency like the Commission can best support FAST-41's goals of transparency and accountability.

Question 2: Do you support designating FERC as the lead agency in the licensing and permitting process, including the ability to set schedules for the review, comment, and permitting activities of other federal agencies?

Answer: I understand that, under both the Natural Gas Act and the Federal Power Act, the Commission is the lead agency responsible for the environmental review for interstate natural gas pipeline infrastructure as well as for non-federal hydropower. However, the permitting requirements established by federal law are complex and a decision on a project does not rest with any single agency. If confirmed, I will review with my colleagues the issue of streamlining the Commission's permitting process while satisfying other agency obligations and concerns.

Question 3: Do you believe the current hydropower licensing process is well functioning? If not, what changes do you recommend?

Answer: Senator, I have heard a number of concerns regarding FERC's hydropower licensing process. It is my understanding that the current hydropower licensing process is complex and involves not only input from numerous stakeholders but also gives mandatory conditioning authority to multiple agencies. If confirmed, I will review the licensing process with my colleagues to determine what is causing the delays and consider ways to further improve the licensing process.

Question 4: What are your views on how RTO-administered capacity markets are working? Specifically, are these markets supporting the development of a diverse array of electric generating facilities in light of past and pending coal plant retirements, while minimizing adverse impacts on consumers? If not, what steps would you take to improve or modify them?

Answer: I believe that RTO-administered capacity markets have achieved their objectives in procuring adequate resources to meet their reliability criteria. Let me start off by giving you a few good facts to consider. Since 2008, in the PJM footprint, wholesale power prices have dropped over 56 percent. In my state of Pennsylvania, natural gas has increased its share of Pennsylvania's power generation over 30 percent. In turn, total carbon dioxide emissions in Pennsylvania have fallen over 30 percent. Ohio and Pennsylvania are seeing new investments coming from Utica and Marcellus Shale producers. Examples include: new ethylene cracker facilities, increased refinery investments, short line rail upgrades and new tubular steel production opportunities. Cheap power prices are making Ohio and Pennsylvania attractive places to open new manufacturing facilities. And yes, we are seeing a huge shift in our generation fleets with new state of the art combined cycle gas plants being build. This is truly a national success story when you consider where the U.S. was in 2005.

However, I am also aware that certain resources are retiring and that additional generation facilities may be needed to meet electricity demand. Plus, it may not be prudent to have one generation resource dominate the power mix in our markets. Simply put, we need fuel diversity and FERC is working hard to examine these issues to make sure capacity markets are providing appropriate price signals. Additional changes may need to be made to centralized capacity markets to support the development of electric generating facilities needed to meet system needs.

If confirmed, I will work with my colleagues to ensure that the organized capacity markets operate as intended.

Question 5: I represent a state that choose to deregulate its electricity sector and leverage free market principles to deliver safe and reliable electricity to Ohio consumers. I am one of the few members on this committee who represents a state that has deregulated its electricity market. The rapid adoption of new technologies, low natural gas prices, and out-of-market subsidies have been distressing competitive wholesale electricity markets. If confirmed, will you support FERC taking a leadership role in protecting wholesale electricity markets in order to ensure that electricity in these markets continues to be delivered safely and reliably?

Answer: One of FERC's core responsibilities is to ensure that electricity is delivered reliably and that wholesale electricity rates are just and reasonable. If confirmed as a FERC commissioner, I commit to work with my colleagues to ensure the Commission fulfills its role under the Federal Power Act.

Question 6: The Federal Power Act directs FERC to ensure that wholesale power rates are "just and reasonable." How do you believe that mandate applies today in the world of RTOs?

Answer: RTOs administer day-ahead and real-time energy markets that harness the forces of competition to ensure least-cost, reliable energy supplies. FERC ensures the justness and reasonableness of RTO wholesale power rates by ensuring that the market rules are not unduly discriminatory, foster competition, and are based on principles of economic efficiency while ensuring reliability of service.

Question 7: In Ohio, rural electric co-ops ensure that over 885,000 consumers have access to reliable and affordable electricity. The Federal Power Act exempts rural electric co-ops from FERC jurisdiction and this statutory exemption contributes to the state's affordable electricity rates. Do you plan to adhere to the Federal Power Act and continue to exempt rural electric co-ops from FERC jurisdiction?

Answer: Section 201(f) of the Federal Power Act exempts electric cooperatives that receive a certain type of financing or that sell less than a certain amount of electricity per year from certain provisions of the Federal Power Act. If confirmed, I commit to adhere to the provisions in the Federal Power Act regarding jurisdiction over electric cooperatives.

Question 8: On May 1st and 2nd of this year, FERC held a technical conference on the potential conflicts between state policies and electricity grid operators. If confirmed, will you commit to reviewing the findings of the technical conference?

Answer: Yes, if confirmed I will review the findings of the technical conference and work with my colleagues on these important issues.

Questions from Senator Catherine Cortez Masto

Question 1: In late 2016, FERC issued a proposed rule that would eliminate barriers to the participation of renewable energy and electric storage in wholesale markets. Will you support approval of the proposed rule? What changes, if any, would you support before issuing a final rule?

Answer: I have not had the opportunity to review the record on this matter and, therefore, I am reluctant to address any possible changes. If confirmed, I look forward to reviewing the record and determining the next steps on this proposed rule with my colleagues.

Question 2: Do you support removing market barriers so that renewable energy and electric storage resources can provide services in wholesale markets?

Answer: Yes. My view is that we should be able to call on all types of energy resources to serve the nation's needs, which includes renewable and electric storage resources. Barriers that keep otherwise competitive resources out of the market interferes with being able to rely on all types of resources.

Question 3: What additional actions could FERC take to allow distributed energy resources access to wholesale electricity markets?

Answer: The Commission recently issued a Notice of Proposed Rulemaking to remove potential barriers to the participation of electric storage resources in the organized wholesale electric markets. The Notice of Proposed Rulemaking set forth a proposal that would require each Regional Transmission Organization and Independent System Operator to revise its tariff to allow distributed energy resource aggregators to participate directly in the organized wholesale electric markets. If confirmed I will review the comments on these issues to determine any next steps.

Question 4: In the state of Nevada, we have a successful renewable portfolio standard and have made great strides in creating a clean energy economy. Do you agree that states have the authority to establish the resource mix that best serves their customers?

Answer: I agree that states have the ability to determine the resource mix within their jurisdiction.

Question 5: If yes: How would you protect that authority?

Answer: From time to time, state and Commission authority intersect. To the extent that state policies impact wholesale electricity markets, we need to ensure that rates are just and reasonable while respecting state jurisdiction and policies. The Commission has initiated a process to seek to address certain of those intersections. The Commission's May 1-2 technical conference is exploring these state-FERC issues. If confirmed, I will carefully consider all comments in record and look forward to working with my colleagues on these important issues.

Question 6: If no: Why not?

Answer: Please see my response to your Question 5 above.

Question 7: Different regions of the country are reliably integrating renewable energy resources into the grid at very high levels. Numerous studies have shown that the grid can integrate far higher total levels of renewable energy on the grid than exist today. Do you agree that the evidence shows that solar and wind power can be reliably integrated into the power grid?

Answer: I believe that we should seek to rely on all forms of resources to ensure reliable and reasonably priced energy, including reliance on solar and wind power. Those resources are playing an ever increasing part in our energy mix and we need to find a way to make sure those resources can be reliably integrated. Thus, while I am aware of some studies that show certain levels of integration can be achieved, my focus if confirmed will be on what the Commission can do to get resources integrated in a reliable and cost-effective manner.

Question 8: As levels of wind and solar energy resources expand, how important will regional coordination be in ensuring that these and other variable energy resources are cost-effectively integrated into the power grid?

Answer: Regional coordination can help cost effectively and reliably integrate all resources into the electric grid, including variable energy resources such as wind and solar. By taking advantage of a larger pool of geographically-diverse resources, such as wind and solar which may be located far from each other and far from load centers, regional coordination can also help balance power supplies, enhance grid reliability, and reduce power costs for customers.

Question 9: What can FERC do to facilitate this integration?

Answer: FERC can facilitate the integration of variable energy resources through regional coordination by fostering continued market development within and across state lines. Apart from regional coordination, FERC also sought to remove barriers to the integration of variable energy resources in its regulations. In Order No. 764, FERC required each public utility transmission provider to: (1) offer intra-hourly transmission scheduling; and, (2) incorporate provisions into the pro forma Large Generator Interconnection Agreement requiring interconnection customers whose generating facilities are variable energy resources to provide meteorological and forced outage data to the public utility transmission provider for the purpose of power production forecasting. If confirmed, I look forward to exploring other opportunities to ensure cost-effective integration of all resources including renewable energy resources.

Question 10: What are the main barriers to identifying transmission needs and getting these projects built?

Answer: While barriers to the identification and development of needed transmission remain, the Commission has been working to address these barriers for quite some time. In 2011, the Commission issued Order No. 1000 to reform public utility transmission providers' transmission planning processes and cost allocation mechanisms. While monitoring closely implementation of Order No. 1000, the Commission also has continued to consider a range of issues related to transmission planning and cost allocation. In June 2016, the Commission convened a technical conference on competitive transmission development and requested post-technical conference

comments on several issues, including issues related to competitive transmission development, interregional transmission coordination, and regional transmission planning. If confirmed, I will review this record with my colleagues.

Question 11: How will you promote joint and coordinated planning among regional transmission planners for necessary interregional transmission?

Answer: The Commission has been considering the issue of interregional transmission development for a number of years now. Among other actions, Order No. 1000 required improved coordination between neighboring transmission planning regions for new interregional transmission facilities and that each public utility transmission provider participate in a regional transmission planning process that has an interregional cost allocation method. In the years following the issuance of Order No. 1000, the Commission has issued final orders on the compliance filings establishing interregional transmission coordination procedures for all the pairs of neighboring transmission planning regions. In addition, the June 2016 technical conference on competitive transmission development – discussed in my response to the preceding question – featured a discussion of interregional transmission coordination, including joint and coordinated interregional transmission planning. At the technical conference, several speakers and FERC Commissioners raised questions regarding the state of interregional transmission development and, in particular, whether there is more that the Commission can—and should—do to facilitate the development of interregional transmission projects. The Commission also requested post-technical conference comments on several issues related to interregional transmission development. If confirmed, I will review the record on this matter with my colleagues.

Question 12: The lack of transmission is a barrier to transporting solar and wind energy to population centers. FERC Order No. 1000, requiring regional transmission planning and interregional coordination, was supposed to help identify transmission needs and solicit competitive transmission projects. Do you think that Order No. 1000's requirements for regional transmission planning were a step in the right direction towards facilitating necessary transmission infrastructure?

Answer: Order No. 1000 included a requirement that each public utility transmission provider amend its tariff to describe procedures that provide for the consideration of transmission needs driven by public policy requirements. This requirement applied to both local transmission planning processes and regional transmission planning processes. Specifically, the Commission required that each public utility transmission provider establish procedures through which it will identify transmission needs driven by public policy requirements in its local and regional transmission planning processes and evaluate potential solutions to those identified transmission needs.

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Question 13: Should FERC consider the underutilization of current pipelines when considering the need for a new pipeline?

Answer: It is my understanding that this factor may currently be considered under the Commission's existing policy. In any event, if confirmed l look forward to reviewing the Commission's policies with my colleagues to ensure that all relevant factors are given appropriate consideration in the Commission's review of pipeline proposals.

Question 14: Should FERC consider long-term stranded cost risk in examining the need for new pipelines?

Answer: The Commission issued a Policy Statement in 1999 that provides the analytical framework that it uses to evaluate the economic aspects of proposals for certificating new interstate natural gas infrastructure. Under the Policy Statement, the threshold requirement for pipelines proposing new projects is that the pipeline must be prepared to financially support the project without relying on subsidization from its existing customers. This approach appears to

place the risk of long-term stranded costs on the pipeline applicant and not on existing customers.

Question 15: Who should be responsible for the costs of any wasteful overbuilding?

Answer: As I noted above, the Commission's approach to evaluating the need for new pipelines appears to place the financial risk of overbuilding on the pipeline applicant. I believe the Commission should be mindful of the potential for overbuilding and the impact on the market and customers.