

**Responses of Commissioner John Norris
To Committee on Energy & Commerce
Subcommittee on Energy & Power
Preliminary Questions for the Federal Energy Regulatory Commission
July 29, 2014**

The following questions relate to the U.S. Environmental Protection Agency's ("EPA") recently proposed "Clean Power Plan." *See* Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34830 (June 18, 2014), referred to herein as the "Proposal" or "Clean Power Plan."

Interagency and State Coordination

1. During an Energy & Power Subcommittee hearing on June 19, 2014, EPA Acting Air Administrator Janet McCabe testified that electric reliability "was paramount in our minds as we worked through the proposal" and that EPA "consulted with FERC and DOE and other agencies that have this as a chief responsibility." She stated that "I or my staff have consulted with staff at FERC. They are part of the interagency review process that we always go through, and so they have given us their input on electric reliability."

a. Describe each consultation you have had with EPA regarding the Proposal, including where it occurred, the date(s) on which it occurred, with whom it occurred and identify any other participating agencies. Also provide details of the outcome of those consultations and relevant materials relating to those consultations.

Answer: To date, I have not consulted with EPA regarding the Proposal.

b. Did EPA request that FERC provide written advice or an analysis regarding the potential impacts of the Proposal on the reliability of the electric grid? If yes, provide a copy of the request and any resulting advice or analysis.

Answer: Please see Chairman Cheryl LaFleur's response.

c. Are you aware of any outreach by EPA to the North American Electric Reliability Corporation (NERC) regarding reliability impacts prior to issuing the Proposal? If yes, to your knowledge what was the nature of that outreach?

Answer: I am not aware whether or not there has been outreach by EPA to NERC.

2. The Proposal includes a Technical Support Document entitled "Resource Adequacy and Reliability Analysis." *See* EPA-HQ-OAR-2013-0602-0368.

a. Did FERC prepare this analysis?

Answer: Please see Chairman Cheryl LaFleur's response.

b. To your knowledge, did NERC prepare this analysis?

Answer: To my knowledge, NERC did not prepare this analysis.

- c. **To your knowledge, did FERC or NERC assist in the preparation of this analysis or consult with EPA regarding its preparation or its results? Please provide relevant details and materials.**

Answer: It is my understanding that FERC staff had discussions with EPA regarding the proposal. Please see Chairman Cheryl LaFleur's response for more detail.

- d. **Did FERC have an opportunity to review this analysis before the Proposal was announced?**

Answer: Please see Chairman Cheryl LaFleur's response.

- e. **Has FERC independently reviewed this analysis? Does FERC agree with EPA's conclusion that the "proposed rule will not raise significant concerns over regional resource adequacy or raise the potential for interregional grid problems"? See 79 Fed. Reg. at p. 34899.**

Answer: Please see Chairman Cheryl LaFleur's response.

3. **The Proposal states that the "EPA and other federal entities, including . . . the Federal Energy Regulatory Commission (FERC) . . . are committed to sharing expertise with interested states as they develop and implement their plans." Please explain when and in what manner FERC expressly "committed" to sharing its expertise with States. Please provide relevant details and materials.**

Answer: Please see Chairman Cheryl LaFleur's response.

Clean Power Plan Impacts on Fuel Diversity and Electric Reliability

1. **Has FERC independently analyzed EPA's Clean Power Plan to determine the impact it could have on generating unit retirements and potential impacts on fuel diversity and electric reliability? If yes, what were the results of this evaluation? If not, does FERC intend to independently analyze the Proposal to evaluate potential impacts on fuel diversity and electric reliability?**

Answer: Please see Chairman Cheryl LaFleur's response.

2. **EPA projects nearly 180 gigawatts of generation capacity will retire between 2010 and 2020 in response to the Clean Power Plan and other factors, such as EPA's previously finalized Mercury and Air Toxics (MATS) rule. EPA's Option 1 model specifically identifies each electric generating unit expected to retire by 2020 by name, location, and capacity. See EPA-HQ-OAR-2013-0602-0368 and EPA-HQ-OAR-2013-0602-0220.**

- a. **Does FERC staff possess the expertise to complete an independent reliability assessment that (i) geographically plots each of the specific units identified in EPA's model for retirement and each unit that has already retired or announced retirement; and (ii) evaluates the potential regional, state, and local reliability impacts resulting from such retirements?**

Answer: I believe that FERC staff possesses the expertise to complete an independent reliability assessment. I am open to FERC staff performing an independent reliability assessment, but question whether a study would be sufficiently informative. EPA's Clean Power Plan provides for a significant amount of flexibility for states to comply using a variety of tools. This creates considerable uncertainty in predicting future outcomes and makes it difficult to establish the assumptions necessary to create an accurate system for modeling that might be

helpful to planners and policymakers. But, I believe that such flexibility has the added benefit of allowing states to identify compliance approaches that limit reliability impacts. When faced with the need to respond to EPA's MATS rule, system planners including RTOs and utilities have been working with state and federal representatives to share needed information and analyze the possible impact regarding potential retirements. I expect that such collaboration would continue in response to EPA's proposal, and that system planners will appropriately consider potential retirements and plan accordingly.

- b. Will you commit to having FERC staff complete such an independent assessment prior to October 1, 2014, so that the public may understand the potential impacts on reliability prior to submitting comments on the Proposal, due on October 16, 2014? If not, why not?**

Answer: Please see Chairman Cheryl LaFleur's response.

Clean Power Plan Impacts on Electricity Markets

- 1. Would existing organized wholesale electricity markets have to be redesigned to implement EPA's Proposal? For example, are Regional Transmission Organizations (RTOs) prepared to transition from economic to environmental dispatch? Did EPA consult with FERC regarding the feasibility of switching from economic to environmental dispatch? What RTO implementation challenges would environmental dispatch present?**

Answer: Existing organized wholesale electricity markets are constantly being evaluated to determine whether rule modifications are necessary as the dynamics of our electric grid change. For example, over half of the states have implemented an RPS standard or goal, and the Commission has incorporated market rule changes to appropriately account for those state policy goals. With the influx of wind and solar resources, the Commission issued a final rule on variable energy resources to better accommodate the scheduling of such resources in a manner that ensures reliability. More recently, the industry and FERC are grappling with potential market changes needed to accommodate the dramatic increase in reliance upon natural gas as a fuel source for producing electricity. In sum, we will continue to evaluate our market design and rules to accommodate the changing resource mixes in the different regions of the United States that have been brought on by moderate natural gas prices, state RPS goals and environmental regulations like EPA's MATS rule. I am not aware of any proposals from the RTOs or EPA to switch from economic to environmental dispatch and cannot comment on the feasibility of or challenges to environmental dispatch.

- 2. EPA's Proposal wrongly assumes States dispatch electricity. Given that electricity is actually dispatched by RTOs or other market operators on the basis of competitive market results, how would State compliance plans be implemented in electricity markets?**

Answer: Please see my answers below.

- a. Would a State Implementation Plan (SIP) take priority over market dispatch performed by an RTO?**

Answer: State Implementation Plans can be designed to work together with RTO market dispatch to avoid the need for prioritization. The market structures in regions with RTOs provide opportunities for states to include market-based mechanisms for controlling carbon such as a cap-and-trade program or a carbon tax. For example, California has implemented a cap-and-trade program that has been integrated into the California ISO's market dispatch. If, however, there is a need for prioritization, RTOs have considerable experience accommodating resource operational restrictions into the market dispatch.

b. Would a SIP take priority over bilateral contracts between a buyer of power in one State and a seller of power in another? If so, how, and what is the authority for this?

Answer: I believe we will be unable to determine whether a State Implementation Plan takes priority over bilateral contracts until the plans are finalized and implemented. Even then, I think that such a finding would require a review of not only the individual State Implementation Plans, but also the specific terms of individual bilateral contracts, and applicable law.

c. Would a State have authority to compel the continued operation of existing nuclear power plants if those plants are not being dispatched in wholesale electricity markets because their bid costs are too high compared to other generation?

Answer: While the U.S. Department of Energy has authority under Federal Power Act section 202(c) to direct the operation of electric generation plants in order to maintain reliability during an emergency, I am unaware as to whether states have similar authority to compel the continued operation of existing nuclear power plants based on the circumstances described above.

d. How would RTOs reconcile conflicting SIPs within a region?

Answer: RTOs have significant experience reconciling policies developed by individual states within their footprint that are not necessarily aligned. For example, RTOs have successfully established and met system resource adequacy requirements despite the fact that their individual states have different reserve margin targets. RTOs have also accommodated states with different RPS goals, including those states with no RPS whatsoever. Regional state committees – such as the Organization of MISO States on which I served– are instrumental in working with RTOs to manage and resolve differences in state policies.

3. EPA’s Proposal is silent on the treatment of purchase power agreements and interaction of energy markets for States that are net importers versus exporters. Do you believe that EPA’s Proposal adequately addresses interstate power flows?

Answer: Concurrently with the issuance of the proposed rule, EPA released a technical support document entitled “Resource Adequacy and Reliability Analysis” that models and examines interstate power flows under EPA’s proposal. It is my understanding that EPA’s analysis is similar to methods used by industry to evaluate resource adequacy, and I have no basis to conclude that the analysis is inadequate. However, I believe this issue highlights the benefits of a regional approach to compliance, which I strongly encourage states to consider.

4. Do you believe that EPA’s Proposal could result in stranded financial investments for units that have been retrofitted with emissions controls for other programs, such as EPA’s MATS rule? What impacts could this have on the owners of stranded assets, wholesale energy markets and consumer electricity costs?

Answer: It is my understanding that the EPA proposal allows for significant flexibility and long compliance timelines for states to best meet the EPA’s goals, which should minimize the potential for stranded financial investments. I expect that states would consider the potential for stranded financial investments when they develop and implement their State Implementation Plans.

Increased Reliance on Natural Gas, Renewables and Energy Efficiency

1. EPA's Clean Power Plan contemplates natural gas combined cycle (NGCC) plants running at a 70% capacity factor to displace a significant amount of coal-fired generation. EPA's regulatory impact analysis projects pipeline capacity increases of 4-8% beyond base case projections by 2020.

- a. Has FERC analyzed whether the natural gas infrastructure exists to reliably serve NGCC plant needs while preserving reliable gas service for non-power generation use?**

Answer: Please see Chairman Cheryl LaFleur's response.

- b. Did EPA consult with FERC regarding the adequacy of natural gas infrastructure prior to publishing its Proposal?**

Answer: Please see Chairman Cheryl LaFleur's response.

- c. Given the challenges of gas supply in the most recent winter, and continued concerns about gas deliverability to certain parts of the country, do you agree with EPA that its modeled capacity increases are feasible by the initial compliance date of 2020?**

Answer: My understanding is that EPA's modeled capacity increases in natural gas infrastructure are challenging but not impossible to achieve. The issue of additional natural gas infrastructure needed to support increased natural-gas fired generation is an area of concern that FERC has and will continue to address. There already has been a dramatic increase in reliance upon natural gas to produce electricity in recent years. This has led to concerns over the last several years, particularly in the Northeast, as to whether there is sufficient natural gas infrastructure to serve natural gas-fired generation facilities and ensure reliability. These concerns predate EPA's Clean Power Plan and would be something the country needs to address regardless. My understanding is that there are regional initiatives to add gas infrastructure that are being developed. Additionally, I believe that one way to ensure that we have sufficient infrastructure where needed is to maximize the use of existing gas pipeline facilities. In that respect, the Commission has been responsive by issuing rules addressing gas scheduling, and communications to facilitate a more efficient use of our existing infrastructure.

2. Has FERC completed any electric transmission system capability and reliability analysis that demonstrates that the increases in NGCC plant utilization that EPA assumes in its Proposal 4 could replace retired coal-fired generation are practicable, taking into account the location of the coal plants being retired and the location of existing NGCC plants?

Answer: Please see Chairman Cheryl LaFleur's response.

3. Has FERC analyzed the integration issues (e.g., voltage control, natural gas backup power, etc.) associated with a substantial expansion and deployment of intermittent renewable energy resources, as contemplated by EPA's Clean Power Plan? Did EPA consult with FERC regarding these integration issues?

Answer: Please see Chairman Cheryl LaFleur's response.

4. Has FERC studied whether under the EPA Proposal additional transmission lines would need to be built to integrate more renewables, where the lines may be built, and how long it may take to site,

permit and build these lines? Has FERC estimated the cost of transmission necessary to supply increased renewable resources under EPA's Proposal?

Answer: Please see Chairman Cheryl LaFleur's response.

5. The Clean Power Plan would facilitate the rapid expansion of renewable resources, particularly rooftop solar underwritten by long-term leases.

a. Has EPA requested, and has FERC conducted, an analysis of the potential reliability impacts associated with a rapid rise in the use of variable generating sources?

Answer: Please see Chairman Cheryl LaFleur's response.

b. Do you believe that rapid changes in the use of variable generation sources could pose challenges to electric reliability on a local or national basis?

Answer: Our energy infrastructure is in a time of incredible change and transition. One aspect of that change is the increased use of variable energy resources (VERs). These new resources have certainly posed challenges to the function of the grid. However, with technology improvements, and increased knowledge of how such resources operate, I believe this transition will happen in a way that is effective and efficient. FERC is trying to ensure that all resources can participate on a level playing field in order to ensure an efficient and reliable energy supply. For example, FERC recently issue a rulemaking on VERs by requiring transmission providers to offer customers the option of scheduling transmission service at 15-minute intervals and by requiring generators using VERs to provide transmission owners with certain data to support power production forecasting.

6. The Clean Power Plan contemplates significant increase in energy efficiency and demand-side management. How would the increased role of energy efficiency and demand-side resources impact wholesale energy markets? Reliability? Can FERC regulate such resources, particularly given the recent court ruling vacating FERC's Order No. 745?

Answer: Greater ability for load to consider and respond to price signals adds elasticity to the demand curve, and increases system efficiency. Demand response and energy efficiency have been valuable in allowing for such demand-side management. As you may be aware, the Commission recently asked for rehearing of the D.C. Circuit Court's decision regarding Order No. 745. In the meantime, the Commission is assessing the impact of the Court's ruling on our regulation of demand response. I believe that, regardless of a final court decision on the Commission's rehearing request and how the Commission would implement that final decision, these resources will continue to be essential to our energy future. Energy efficiency reduces the amount of investment that we need to make in energy infrastructure by lowering overall demand and demand response give consumers an opportunity to modify and reduce their consumption of electricity, and therefore how much they pay for electricity. This is good for consumers. It is also good for the reliability of the electricity grid. During the recent polar vortex events of this past winter, demand response was an essential resource to meeting system needs.