



gradual integration of wind and solar, and our careful work studying that topic, upcoming EPA rules are expected to quickly remove, or “dis-integrate,” significant amounts of coal power from the power grid.

For this reason, I am interested in receiving evidence on the following topics at our upcoming reliability conference:

1. Can the Commission agree that upcoming EPA rules, if enacted, would present a reliability problem? What evidence supports the assertion of a reliability problem? What evidence mitigates concerns about reliability? Some view the recent study by FERC staff as “informal” or as “irrelevant” --- but to the extent that staff’s study is informal or irrelevant, then what other evidence available at this time can FERC rely upon to consider reliability issues?

2. Are the current tools and authority of the North American Electric Reliability Corporation (NERC) sufficient to assess and act upon reliability issues raised by upcoming EPA rules and regulations? What other resources does NERC need to fulfill its oversight role for reliability?

3. In general, are NERC’s mandatory reliability standards sufficient? Should any new standards be considered under the NERC process as a result of EPA rules?

4. Will financial issues create risks of “mothballing” power plants that would otherwise be retrofitted to comply with upcoming EPA regulations? In particular, are market prices for energy and capacity sufficient at this time to attract investors to risk their capital on projects designed to meet EPA standards? Has the economy recovered sufficiently for investors to consider an investment in power plants as a good long-term investment? To what extent would reliability be impacted if power plants are “mothballed”?

5. Will it make more sense for investors to “mothball” power plants until the full scope of the upcoming EPA regulations is known? In other words, will significant numbers of investors prefer to retire power plants now, as a means to lower the risk that investments into pollution controls will be stranded by future EPA regulations? More broadly, do investors perceive regulators at either EPA or FERC as increasing or decreasing their investment risk? To what extent would reliability be impacted if power plants are “mothballed”?

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wind and solar can be integrated into the power grid at the same time that coal and older fuel sources are retired. As stated in a press release issued by FERC on January 20, 2011, "[t]his study is valuable in that it gives us the tools to help determine how to manage operation and expansion of the grid, regardless of which resources the electric industry uses to generate power."

6. Given the findings in the recent report that was issued by FERC staff on the “frequency response” of the power grid, are the NERC standards related to frequency response sufficient to ensure adequate voltage support given the expected retirements of coal plants across the power grid?

7. Will the loss of the system inertia that is supplied by coal plants impact the power grid in unforeseen ways? Does the topic of inertia require further study?

8. Because “blackstart” power plants are needed to re-start the power grid after a blackout, will blackstart standards and planning require further study before the retirement of blackstart units?

9. Are the NERC modeling and planning standards robust enough to ensure that the nation understands how simultaneous retirements of longstanding power plants will impact the power grid?

10. Are the models used for contingency planning capable of accommodating the different types of power plants that are expected to remain on the power grid after small coal plants are retired? That is, do the models need to be modified to handle the bigger contingencies that would be expected if the remaining power plants tend to be larger plants? Do the contingency models need to be modified because of the differing reliability characteristics of a resource base with more renewable power?

11. To the extent that the operating characteristics at power plants change as a result of EPA rules, how would changes in those characteristics impact how the operators of the system dispatch power plants? In particular, how would changes to start-up and malfunction procedures at generating plants impact operational decisions?

12. Do any policies in the Commission’s recent Order No. 1000 merit further consideration with respect to how planners of the transmission grid should work together with those who are investing in generation resources? Specifically, since modifying the transmission network can impact whether a power plant should retire, and since modifying which power plants retire can impact whether to invest in certain transmission assets, are the planning approaches in Order No. 1000 sufficient to address the simultaneous retirement of large numbers of power plants?

13. What knowledge do the regional operators of the power system, including Regional Transmission Organizations (RTOs), need so that they can make decisions on whether to invest in transmission assets? Would they be helped if they had more advance notice of a decision to retire a power plant?

14. What knowledge do the owners of generation plants need so that they can make decisions on whether to retire a power plant? Would they be helped if they had more advance notice of a decision to invest in new transmission?

15. What existing legal and policy obstacles prevent generators and transmission owners from coordinating their work more closely? Given the interdependence of decisions to invest in generation with decisions to invest in transmission, does a “safety-valve” approach help or hinder the needed coordination of investment?

16. With respect to ramping the system up or down after many smaller coal-powered generators are retired, how should ramping procedures change to reflect larger sizes of operating units?

17. Should NERC consider any new standards with respect to minimum voltage? What is the expected impact of EPA rules on voltage support?

18. Given the economic weakness over the past several years, how would the demand for electricity differ under a rapidly growing economy? That is, if the economy begins to recover over the next few years, can the generation fleet serve demand if significant numbers of existing power plants are retired?

19. The EPA apparently made statements that appear to question whether “fracking” of natural gas will be permitted in the future,<sup>3</sup> which raises the question of whether future regulatory requirements imposed on fracking will allow access to sufficient quantities of natural gas to replace coal. Does this issue present a reliability concern?

20. Do investors and managers who are expecting to replace coal plants with new gas-powered plants believe that natural gas pipelines can be authorized and built in a manner that will allow new gas plants to enter service when needed for reliability? Has this matter been studied sufficiently?

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<sup>3</sup> See a 41-page document identified as EPA-HQ-OAR-2009-0234- 3003.2, a “Response to 03/04/11 Interagency Comments” and a 7-page document identified as EPA-HQ-OAR-2009-0234-3025.1, “Response to 03/09/11 Interagency Comments”. These documents contain the following two statements, apparently made by EPA:

*“EPA could remove this from the justification for the rejecting the beyond-the-floor analysis if FERC believes there is sufficient gas for all coal- and oil-fired electric generation to be replaced by natural gas without the use of hydraulic fracturing.”*

*“We presented the discussion in addition to our concerns with the costs of fuel switching and about the available supply of natural gas (which FERC contests).”*

21. Are any regions of this nation expecting particularly harsh impacts from the retirement of generating plants? That is, are some parts of the nation largely served by one or two critical power plants, which if retired, would present reliability problems that impose extreme hardship on the economic vitality of a community or region?

22. Should the Commission consider any other evidence related to EPA matters?

To the extent that the public has evidence to offer for the record on these issues, please file that evidence, together with any comments, in the above-listed dockets and in accordance with usual FERC procedures. In addition, please send a courtesy copy to my office:

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