



THE COMMITTEE ON ENERGY AND COMMERCE

INTERNAL MEMORANDUM

September 12, 2011

TO: Members, Subcommittee on Energy and Power

FROM: Committee Staff

RE: Hearing on “The American Energy Initiative”

On Wednesday, September 14, 2011, at 9:00 a.m. in room 2322 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold the twelfth day of its hearing on “The American Energy Initiative.” This day of the hearing will focus on the potential cumulative impacts of the Environmental Protection Agency’s new and proposed power sector regulations on the reliability of the electric grid.

I. WITNESSES

Panel I

The Honorable Jon Wellinghoff
Chairman
Federal Energy Regulatory Commission

The Honorable Philip D. Moeller
Commissioner
Federal Energy Regulatory Commission

The Honorable Marc Spitzer
Commissioner
Federal Energy Regulatory Commission

The Honorable John R. Norris
Commissioner
Federal Energy Regulatory Commission

The Honorable Cheryl A. LaFleur
Commissioner
Federal Energy Regulatory Commission

Panel II

The Honorable Jeff Davis
Commissioner
Missouri Public Service Commission

The Honorable Jon W. McKinney
Commissioner
West Virginia Public Service Commission

The Honorable Stan Wise
Commissioner
Georgia Public Service Commission

Mr. H.B. “Trip” Doggett
President and CEO
Electric Reliability Council of Texas

The Honorable Mark Shurtleff
Attorney General of Utah

Mr. John Hanger
President and CEO
Hanger Consulting, LLC

Ms. Sue Tierney
Managing Principal
Analysis Group

II. BACKGROUND

A. Understanding Electricity Delivery and Reliability

Electricity is generated from a variety of different energy sources, moved to substations by large, high-voltage transmission lines, and then ultimately delivered to consumers over smaller, low-voltage distribution lines. Thousands of miles of transmission lines and distribution lines function together to form the “electric grid” – a vast network of interconnected transmission lines, local distribution systems, generation facilities, and related communications systems, with more than 800,000 megawatts of installed capacity, and serving more than 300 million people.

Unlike other commodities, electricity cannot be economically stored and thus it must be generated as it is needed, and supply must be kept in near constant balance with demand. This means generation and transmission operations must be monitored and controlled at all times to ensure a consistent flow of electricity – a complex process requiring the coordination and cooperation of hundreds of electricity industry participants. Deviations from this constant balancing of supply and demand can impair the “reliability” of the electric grid, resulting in a failure of electric power being delivered to customers.

Reliability can be understood as the “ability to meet the electricity needs of end-use customers, even when unexpected equipment failures or other factors reduce the amount of available electricity.”¹ As such, reliability of electrical service is a function of adequate generation resources and consistent transmission capability. Reliability is therefore compromised if there is too little electricity generated, or if too little transmission capacity exists to carry it to the customer.

As evidenced by recent reliability events – the August 2003 Northeast Blackout, the February 2011 Southwest Blackout, and the September 2011 power outage in parts of Southern California, Arizona, and Mexico – impaired reliability can have drastic economic, national security, public health, and safety consequences. Disruptions to adequate energy supply can cut off power to homes, hospitals, schools, offices, and farms, and commerce can come to a standstill, as airports, factories, and businesses sit idle. Moreover, defense facilities and military installations rely predominantly on power from the commercial electric grid and thus a loss of power supply can have serious national defense implications.

These concerns led Congress to establish a greater federal role in ensuring the reliability of the electric grid in the Energy Policy Act of 2005. Section 215 of the Federal Power Act

¹ North American Electric Reliability Corporation (NERC): “Reliability Terminology,” available at: <http://www.nerc.com/page.php?cid=11151122>.

charged the Federal Energy Regulatory Commission (FERC) with oversight of the reliability of the nation's bulk power system and enforcement of reliability standards developed by the North American Electric Reliability Corporation (NERC). The Department of Energy's (DOE) Office of Electricity Delivery and Energy Reliability also shares responsibility for ensuring the reliability of grid infrastructure, particularly in emergency situations.

B. EPA's Power Sector Regulations Impacting Electric Reliability

The Environmental Protection Agency (EPA) has adopted and is planning to adopt regulations affecting the electric utility industry that could have an extremely negative impact on the reliability of the electric grid. These regulations include the following:

- Cross-State Air Pollution Rule (final rule published August 8, 2011);
- Utility MACT Rule (proposed rule published May 3, 2011, with final rule expected November 16, 2011);
- Coal Combustion Residuals (proposed rule published June 21, 2010);
- Standards for Power Plant Cooling Water Intake Structures under Section 316(b) of the Clean Water Act (proposed rule published April 20, 2011); and,
- New Source Performance Standards for Greenhouse Gas Emissions for Electric Generating Units under 111(b) and (d) of the Clean Air Act (proposed rule expected fall 2011, with final rule expected May 26, 2012).

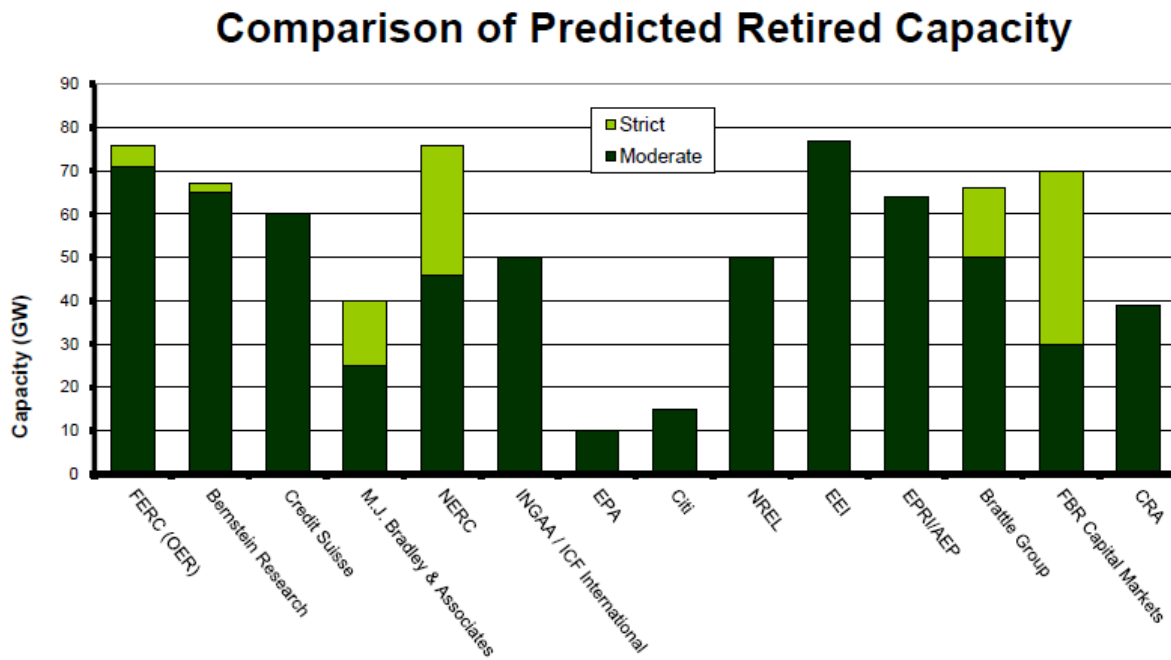
The cumulative impact of these rules will greatly accelerate the retirement of a significant number of fossil fuel-fired power plants, particularly coal plants. Indeed, as described below and detailed in the comparison chart on page 4 below, numerous studies and assessments suggest significant amounts of coal-fired generation will be retired and substantial impacts to reliability will result should EPA's rules be implemented in the manner presently proposed and within EPA's proposed timeframes.

To learn more about the potential reliability impacts and the extent to which EPA has analyzed and sought to mitigate these concerns, on May 9, 2011, the Committee sent letters to DOE and FERC to determine the extent to which EPA has coordinated and consulted with these agencies as it relates to the impacts of EPA's power sector rulemakings. The DOE and FERC responses show that there has been no formal coordination between the agencies to evaluate how EPA's regulations will impact generation capacity and electric reliability. Further, the information provided to the Committee by FERC suggests that EPA has not completed a cumulative analysis evaluating how its suite of power sector regulations will have an impact on reliability.

Chairman Wellinghoff has informed the Committee that a "preliminary" FERC staff analysis concluded that "40 GW [gigawatts] of coal-fired generating capacity [is] 'likely' to retire, with another 41 GW 'very likely' to retire" over the next several years. This amount is

8% of all electric generating capacity in the United States and 25% of the coal-fired fleet, which provides the majority of the nation’s most reliable and affordable source of baseload power. Further, this combined 81 GW that is “likely” or “very likely” to retire far exceeds any of EPA’s projections.² Indeed, EPA’s analysis of the Cross-State Air Pollution Rule and the Utility MACT Rule concludes that only 1 GW and 9 GW, respectively, of electric generation capacity will retire.

FERC’s 40-81 GW of at risk capacity closely aligns to the 33-78 GW of generation capacity determined to be at risk by NERC.³ Notably, the reliability assessments completed by FERC and NERC – the two organizations responsible for ensuring the reliability of the bulk power system – produced results far exceeding not only EPA’s projections, but also forecasts made by financial institutions, consulting groups, and industry groups. The following chart, provided by FERC to the Committee, compares various reports and studies assessing the impact of EPA’s power sector rules on generation capacity.



The information provided by FERC also demonstrates that FERC staff questioned whether EPA’s compliance deadlines were realistic. FERC appears to recognize that, in order to

² FERC’s assessment also cited an additional 50 GW of capacity that is “somewhat likely” to retire as a result of EPA’s regulations, meaning potentially 131 GW of coal-fired capacity may be at risk. The information provided by FERC also included a similar preliminary assessment providing a figure of 72 GW “likely” or “very likely” to retire; however, Chairman Wellinghoff, in a July 27th letter to the Committee, cited to the assessment with the 81 GW figure, not the assessment reflecting 72 GW of at risk capacity.

³ See “NERC 2010 Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S. Environmental Regulations” (October 2010).

maintain reliability, implementation of the EPA rules must allow sufficient time to construct new capacity or retrofit existing capacity. Specifically, “in discussing, whether there is enough time for new generation to come online by 2018 to offset coal retirements, Commission staff identified several factors that can extend the project build horizon . . . [including] the long lead time needed for some equipment, potential protests against pipeline siting and construction, transmission siting and construction issues, and environmental issues.” Thus, it appears FERC remains skeptical as to whether sufficient replacement capacity can be added in a timely manner to replace the generation capacity that is retired or lost because of the short compliance timeline EPA has proposed for its power sector rules.

III. ISSUES

The following issues will be examined at the hearing:

- The cumulative impact of EPA’s final and forthcoming power sector regulations on electric grid reliability, including resource adequacy and regional and local reliability.
- Whether EPA has analyzed the cumulative impacts its power sector rules will have on the reliability of the electric grid.
- The extent to which, if at all, EPA has consulted and coordinated with the agencies and organizations responsible for overseeing the reliability of the grid, including DOE, FERC, and NERC.
- The extent to which EPA has coordinated with regional planning entities in developing its regulations impacting the electric power sector.
- The potential impacts of EPA’s power sector rules on individual States and the extent to which EPA has coordinated with State public utility commissions and other local stakeholders in developing its regulations.

IV. STAFF CONTACTS

If you have any questions regarding this hearing, please contact Patrick Currier or Maryam Brown at 5-2927.