



June 22, 2017

**UNITED STATES OF AMERICA BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

State Policies and Wholesale

Markets Operated by ISO New England.,

New York Independent System Operator.,

And PJM Interconnection, L.L.C.

Docket No. AD17-11-000

**RE: Post-Technical Conference Comments by ACCCE, on
Electricity State Policies and Wholesale Markets Operated
by ISO New England., New York Independent System
Operator, And PJM Interconnection, L.L.C.**

The American Coalition for Clean Coal Electricity (ACCCE) appreciates the opportunity to comment on topics discussed during the FERC technical conference on May 1-2, 2017, and on questions posed in the April 28 Supplemental Notice issued prior to the conference.

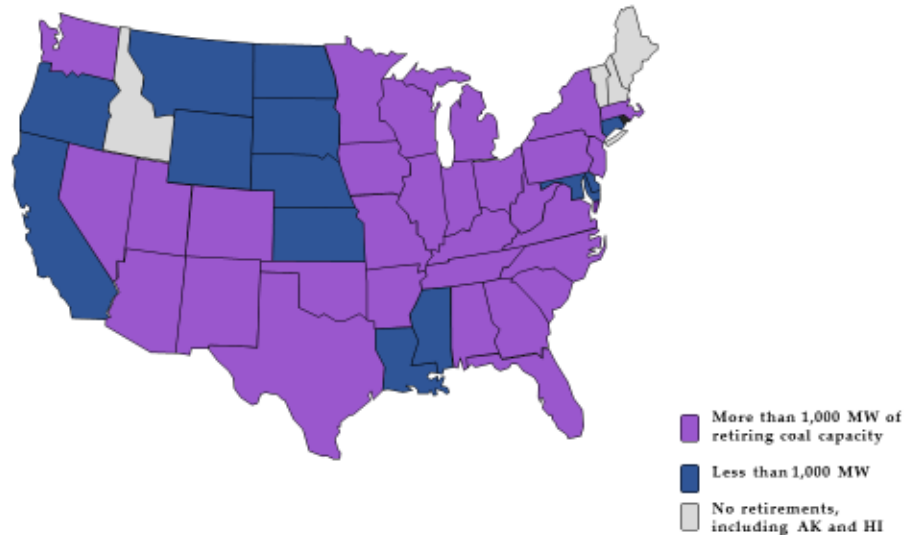
ACCCE is a national trade organization that represents coal fleet and coal-based electricity. Our members include electricity generators, coal producers, railroads, barges, and equipment manufacturers.

The Commission and other stakeholders recognize the enormous challenges facing wholesale electricity markets. The need to maintain sufficient baseload electric generating capacity is one of the biggest challenges. As Energy Secretary Perry said recently, "Baseload power is necessary to a well-functioning electric grid." We agree with Secretary Perry.

On the other hand, one-third of the coal fleet nationwide (some 101,000 megawatts as of the date of these comments) has either retired or announced plans to retire since 2010. The map below shows the geographic extent of

these retirements.

More than 100,000 MW of coal-fired electric generating capacity (586 electric generating units) in 43 states have shut down or plan to shut down over the period 2010 – 2030. Eighteen (18) states have more than 2,000 MW of coal retirements.



There are a variety of reasons for these coal retirements, but EPA regulations have played a major role. Regardless of the reasons, coal retirements are becoming a threat to grid reliability and resilience. The threat will increase unless the consequences of coal retirements are well understood and the reliability and resilience attributes of the coal fleet are properly reflected in electricity market prices.

Therefore, we urge FERC to take immediate near-term steps to avoid more coal retirements until their impacts on grid reliability and resilience can be thoroughly analyzed and understood. Such near-term steps would allow time to develop thoughtful and longer term solutions to the challenges associated with baseload electric generating capacity.

PJM’s Analysis — A Model for Other ISO/RTOs

“PJM’s Evolving Resource Mix and System Reliability” report was released in March. PJM analyzed 360 different portfolios of electricity resources and the effect of each of those portfolios on electric reliability in the 13-state PJM region. Each portfolio represented a different combination of coal, natural gas, nuclear, wind, solar, and other resources.ⁱ PJM determined that

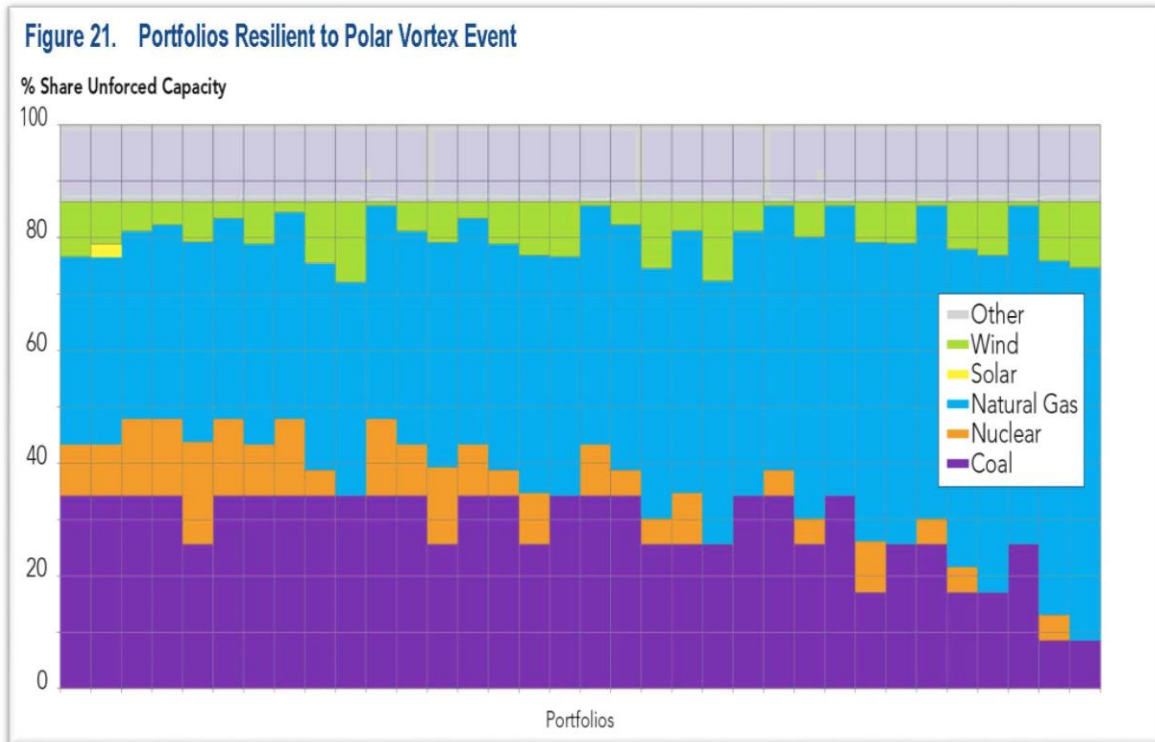
slightly more than one-fourth of these portfolios were “desirable” because they showed high levels of reliability.ⁱⁱ The chart below is taken from the PJM report and shows the percentage (vertical axis) of resources for each of the 98 desirable portfolios (horizontal axis). Purple represents coal.



Almost half the “desirable” portfolios were comprised of more than 30% coal-fired capacity.ⁱⁱⁱ For perspective, coal comprised 34% of PJM’s capacity mix last year.^{iv} However, the retirement of more coal-fired capacity is expected in PJM, and low capacity prices are threatening to reduce the size of the PJM coal fleet even further.^v

The chart above also shows that portfolios comprised of significant gas-fired generating capacity were “desirable.” However, PJM expressed concerns about “operational risks” associated with natural gas that were not considered in the analysis. These operational risks could result from “infrastructure, economics, policy, and resilience.”^{vi}

Because of these concerns, PJM also analyzed the effects of a polar vortex — only one of several possible high impact, low frequency (HILF) events^{vii} that could threaten grid resilience.^{viii} Under assumed polar vortex conditions, only one-third of the “desirable” portfolios (34 out of 98) were resilient.



The maximum percentage of gas-fired generating capacity in these polar vortex portfolios decreased due to “higher unavailability rates of natural gas under a polar vortex event.” On the other hand, the number of polar vortex scenarios with a high percentage of coal-fired generating capacity remained roughly the same, with coal-fired capacity exceeding 30% in slightly more than half of the resilient portfolios.^{ix}

The PJM analysis demonstrates at least three important points. The first point is that PJM needs significant coal-fired generating capacity to ensure the grid is resilient against at least one of many possible HILF events. The second point is that all grid operators should determine which mixes are resilient against all plausible HILF events, not just a polar vortex.

Recommendations

As we indicated at the Technical Conference, re-regulation by the states could be the most straightforward, long-term way to address many of the concerns about baseload sources of electricity. Alternatively, FERC could lead the way by —

- Establishing criteria for grid resilience.

- Requiring analysis by all ISO/RTOs to determine the most resilient resource portfolios.
- Better defining the respective roles of FERC, the grid operators, state regulators, utilities, NERC, and DOE in ensuring resilience and reliability.
- Adopting changes to electricity markets to properly value and compensate reliability and resilience attributes (on-site fuel, primary frequency response, inertia, etc.).
- Ensuring electricity market policies do not put the coal fleet at a disadvantage due to out-of-market subsidies for other resources.
- Coordinating closely with EPA so both agencies understand the consequences of environmental policies for the coal fleet.
- Streamlining grid operator stakeholder processes and ensure balance among different groups of stakeholders.
- Ensuring greater transparency regarding transmission investments and the implications for resilience and reliability.

Again, we urge FERC to take steps immediately to avoid more coal retirements until the steps above can be completed.

Sincerely,

/s/

Paul Bailey
President & CEO
American Coalition for Clean Coal Electricity

ⁱ Other resources are fixed amounts of demand response, hydroelectric power, and oil-fired generating capacity.

ⁱⁱ PJM determined that 98 portfolios were desirable because they showed high levels of reliability under four operational scenarios: normal peak conditions, light load, extremely hot weather, and extremely cold weather.

ⁱⁱⁱ Sixty-three desirable portfolios were comprised of at least 20% coal-fired generating capacity, and 43 portfolios were comprised of at least 30% coal-fired capacity.

^{iv} PJM RTO, "Capacity by Fuel Type," 2016. Gas comprised 34% of the region's generating capacity and nuclear 19%.

^v Over the period 2010 – 2017, 25,319 MW of coal-fired generating capacity within the PJM region had retired. An additional 6,966 MW have announced plans to retire.

^{vi} *PJM Report* page 32.

^{vii} *PJM Report* page 34. Such events include risks associated with cybersecurity, other extreme weather events, and increasing dependence on natural gas pipelines. Other experts have identified and analyzed additional potential risks such as extreme solar weather, pandemics, and detonation of a high-altitude nuclear device resulting in an electromagnetic pulse. However, these analyses were conducted before substantial coal retirements had begun and reliance on natural gas had increased significantly.

^{viii} PJM report, page 5, footnote 16, states that “[r]esilience, in the context of the bulk electric system, relates to preparing for, operating through and recovering from a high-impact, low-frequency event. Resilience is remaining reliable even during these events.” Other organizations have defined resilience in a similar manner. For example, NARUC defines resilience as “the robustness and recovery characteristics of utility infrastructure and operations, which avoid or minimize interruptions of service during an extraordinary and hazardous event.”

^{ix} Nineteen of 34 resilient polar vortex portfolios were comprised of at least 30% coal-fired generating capacity.