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Federal Energy Regulatory Commission
Secretary of the Commission
888 First Street, NE
Washington, DC 20426

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Attn: Docket ID No. RM18-1-000

Re: Grid Reliability and Resilience Pricing

The American Coal Council (ACC) appreciates the opportunity to submit these comments in response to the Federal Energy Regulatory Commission's (FERC) October 2, 2017 notice inviting comments on the September 28, 2017 proposed rule by Secretary of Energy Rick Perry directing FERC to promptly incorporate the value of grid resiliency into electricity markets pricing. The ACC has been in existence for 35 years and represents the collective business interests of the American coal industry. Our members include mining companies and suppliers, transportation companies and terminals, electric utilities and industrial coal consumers, and many industry support services providers. Since our member companies touch every aspect of turning one of America's most abundant resources into reliable and affordable electricity for the United States economy, our association has first-hand knowledge of the direct and indirect impacts of new coal-related regulations and a unique, "boots on the ground" perspective. Coal is also integral to the steel-making process and the industrial production of cement, chemicals, and paper. Our diverse membership base encompasses the entire coal supply chain, and it is from this broad perspective that we assess the impacts of new policies and regulations impacting coal supply and use. While ACC provides these comments from that broad perspective, individual member companies of ACC may submit separate comments on their own behalf that offer additional or other views.

Electricity Supply Trends and Consequences

Continuing changes in electricity supply are moving our nation toward a less diverse portfolio characterized by greater amounts of less efficient, intermittent sources of generation. The trend is not new and is the result of various electricity and environmental policy and regulatory initiatives, and to some extent market conditions. However, many changes often attributed to market conditions are actually due to the policy choices made.

State and federal policies to incentivize and mandate certain technologies, including the building and use of wind and solar resources, have caused some electricity market issues. With the extension of federal subsidies and higher renewables requirements being dictated by states, concern about the magnitude of these market issues is increasing. Exacerbated by the low, flat, or negative load growth conditions being experienced in various regions of the U.S., generation from traditional coal and nuclear plants is declining, and an increasing number of such plants are being shut down completely. These electricity market issues have also negatively impacted natural gas generation.

It is critically important that corrective actions be taken to address the impacts of existing policies and mitigate future risks. These risks include decreasing resource diversity, on-demand availability issues, and fuel supply risk. Preserving coal generating plants is essential to the continuing ability to provide a reliable, resilient, and cost effective power supply to American homes and businesses.

Several recent studies, including a DOE staff report to Secretary Perry, have assessed the reliability and resilience factors of our electric grid and identified the need for policy changes. The DOE report pointed out the importance of recognizing and compensating for resilience. Determining how best to value the attributes of what contributes to or detracts from resiliency must be addressed by FERC, the RTOs and ISOs.

There has been ongoing reference for years to both the reliability of the grid and the role coal plays in contributing to both 24/7 power availability and affordable electricity. For decades, coal has been the most economical and stably-priced fuel source for electric generation. The issues of reliability and affordability took on heightened visibility after the polar vortex of 2014, when it was “Coal to the Rescue” – see the New York Times article at <https://www.nytimes.com/2014/03/11/business/energy-environment/coal-to-the-rescue-this-time.html>. At that time, there were concerns about impacts to the grid of the loss of coal-fired power plants that were either in the process of being closed or planned to close, primarily due to EPA regulations. Further, there were concerns about the sharply higher electricity prices in many regions of the country during the polar vortex due to spiking natural gas prices. These concerns extended to potential grid failures and rolling blackouts if the nation experienced another winter like the polar vortex, and power sector leaders and

managers were among those expressing the concerns. They were joined by a host of elected officials, policymakers, regulators, industry, and consumers.

The value of resiliency is tied to the viability of the electric power system and its ability to meet demand even when confronted with supply constraints. Diversity of power generation resources is important. Coal power plants, in particular, allow for timely response to changes in generation demand because coal is stored onsite. This allows for quick reaction to changes in generation demand, or protection from real-time fuel supply. Coal is typically stored in significant quantities capable of meeting demand for extended periods of time.

Escalating Concerns about the Generation Mix

Time is of the essence in taking action to address these policy needs and stem the tide of coal plant closures. A recent announcement in Texas underscores the imperative to act. On October 6, 2017, Luminant announced plans to close its 1,800 megawatt Monticello plant in January 2018.¹ This was followed by an announcement on October 13, 2017 of its plans to close the Sandow and Big Brown Power plants by February 2018, though Luminant will explore a sales process for Big Brown.² Realistically, these announcements mean more than half of Luminant's 8,000 megawatts of coal generation will be shut down in just a few short months assuming ERCOT approves. Reasons cited by Luminant for the closures included "an oversupplied renewable generation market" and an "unprecedented low power price environment". While FERC does not have jurisdiction over ERCOT, these newly-announced closures and the market conditions provoking them highlight the urgency with which FERC must tackle such issues with the RTOs and ISOs in its jurisdiction.

For further evidence of the negative consequences of the changing power generation mix, California is a case study in the increasing risks being assumed by states and regions and the erosion of affordable, resilient, and reliable power supply. California's policy-based shift away from coal to natural gas and renewables has been occurring for many years and the cost of electricity has been rising. By 2015, California's average retail price of electricity was 15.42 cents per kWh while the U.S. average was 10.41 cents per kWh, according to the Energy Information Administration.³ Californians are paying almost a 50 percent premium for their electricity. This is in the state with the highest poverty rate in the nation.

¹ Luminant press release, October 6, 2017. Available at <https://www.luminant.com/luminant-announces-decision-retire-monticello-power-plant/>

² Luminant press release, October 13, 2017. Available at <https://www.luminant.com/luminant-close-two-texas-power-plants/>

³ Energy Information Administration, State Electricity Profiles, January 17, 2017. Available at <https://www.eia.gov/electricity/state/>

In addition to economic and social concerns about affordability, there are increasing reliability concerns as California continues to integrate ever-higher levels of renewables. In the summer of 2017, the California ISO (CAISO) experienced unanticipated generation shortages and took the step of issuing conservation alerts. ICF’s Judah Rose and Chris McCracken’s recent white paper titled “CAISO Reliability is Feeling the Heat” assessed what led to this situation and identified several reliability-related concerns, including CASIO overestimating the reliability contribution of solar by “nearly 100%”, CAISO not identifying any possibility of generation shortages in its summer forecast, and CAISO’s conservation alerts lasting until 10 pm – past the historic peak demand period of Hour Ending 5 pm.⁴ The California Public Utilities Commission subsequently made a determination to significantly lower solar’s contribution to reserve margin targets, “with adjustments to August alone from 80% to 41%, starting 2018” per the ICF report.⁵ ICF highlighted the importance of the reliability treatment of solar in California, since the state has the highest concentration of solar power in the country. Further, ICF referred to its earlier white paper in 2015 which suggested that much of the existing dispatchable capacity in California “is being paid too little for reliable performance”.⁶

Adding to these reliability concerns is the increasing dependence on natural gas generation. In May 2016, the North American Electric Reliability Corporation (NERC) released a “Short Term Special Assessment – Operational Risk Assessment with High Penetration for Natural Gas-Fired Generation” (Assessment). The Assessment focused on areas in the U.S. Bulk Power System (BPS) with heavier reliance on natural gas (over 40%) and the vulnerability to issues related to gas supply.

In the Assessment, NERC stated “As growth in natural gas demand increases from the electric sector, pipeline transportation constraints, storage limitation, and contingencies on gas infrastructure will have a greater impact on gas-fired generation. Overdependence on a single fuel type increases the risk of common-mode or single-point-of-failure disruptions as experienced during recent extreme weather events, like the 2014 Polar Vortex.”⁷ NERC’s Assessment pointed to the outage of the “operationally-critical” Aliso Canyon natural gas storage facility in California as an example of the increasing natural gas-related risks:

“The challenges faced in California represent a series of risks that have been layered into the system over the past decade: significant dependency on a single and just-in-

⁴ Judah L. Rose and Chris McCracken, ICF, “CAISO Reliability is Feeling the Heat”, p. 2-3. Available at <https://www.icf.com/resources/white-papers/2017/caiso-reliability-is-feeling-the-heat>

⁵ Judah L. Rose and Chris McCracken, ICF, “CAISO Reliability is Feeling the Heat”, p. 3.

⁶ *Ibid.*

⁷ North American Electric Reliability Corporation, “Short Term Special Assessment – Operational Risk Assessment with High Penetration for Natural Gas-Fired Generation”, May 2016, p. iv.

time delivery fuel source, specifically for ramping capability to meet load and generation variability; reduced amount of baseload and dispatchable resources; increasing amounts of variable and distributed resources; increasing need of system flexibility; gas system dependency on storage to maintain operating pressure; and a lack of clear understanding of natural gas operational characteristics and potential impacts on BPS operations.”⁸

The Value of a Diverse Fleet, and the Cost of Continued Inaction

A recent report by Lawrence Makovich and James Richards of IHS Markit titled “Ensuring Resilient and Efficient Electricity Generation” takes a deep dive into the value of a diversified generation fleet and the cost of policy inaction on market reforms to abate the loss of baseload generation. The report analyzed two cases, one based on the current generation fleet and the second based on a less-efficient, less-diverse fleet much more heavily dependent on intermittent generation sources and natural gas.⁹ The value of the current more diverse generation fleet is unambiguous. Its value proposition includes:¹⁰

- Lowering the cost of producing electricity by about \$114 billion/year and the average retail price by 27%
- Reducing the variability of monthly consumer electric bills by approximately 22%
- Mitigating an additional cost of \$75 billion /hour associated with more frequent power outages in the less diverse case
- Avoiding an annual loss of \$98 billion in consumer net benefits associated with changes in consumer electric consumption due to higher electricity prices in the less diverse case

The broader economic impacts of the 27% higher retail electricity prices in the less diverse case included had the following impacts:¹¹

- Decline in real U.S. GDP of \$158 billion
- Loss of one million jobs
- Reduction of real disposable income per household of \$845/year

⁸ *Ibid.*

⁹ Lawrence Makovich and James Richards, IHS Markit, “Ensuring Resilient and Efficient Electricity Generation”, September 2017. Available at <https://www.ihsmarkit.com/Info/0917/electricity-generation-special-report.html>

¹⁰ Lawrence Makovich and James Richards, IHS Markit, “Ensuring Resilient and Efficient Electricity Generation”, September 2017, p. 5.

¹¹ *Ibid.*

These results of the IHS Markit research report should assuage any concerns about the “cost” of taking action to address the trend toward a less-efficient, less-diverse fleet.

The report findings are dramatic but in many ways unsurprising. An earlier IHS Markit study in 2014 titled “The Value of U.S. Power Supply Diversity” addressed reliability concerns, the inadequate recognition of the value of the diverse and cost-effective fleet and fuel mix, the likelihood that market distortions would devalue the generation fleet and result in premature retirements of otherwise economic plants, and a concern about increased U.S. reliance on natural gas generation.¹²

The new IHS Markit report had this to say about the ensuing three years:

“In the past three years, the disharmony between public policies and market operations has worsened and devalued the US electric supply portfolio. Increasingly, the US electricity supply is being shaped by subsidies and mandates for favored technologies and fuel sources based on flawed cost assessments typically involving simple leveled cost analyses that ignore the power supply cost implications of balancing electricity demand and supply in real time. Consequently, US power supply continues to shift away from a reliable and cost-effective portfolio of generating technologies and fuel sources with the resilience to manage electricity production risk factors that enable the US power supply portfolio to provide US consumers with the grid-based electricity that they want and when they want it.”¹³

Conclusion

Without action by FERC, the U.S. will continue to default to the current scheme of electricity markets pricing. The absence of action will promote the path of reduced fleet and fuel diversity and is likely to expose consumers to higher electricity prices and diminished reliability and resilience. The examples ACC has provided in our comments about retiring additional coal generation in Texas and the most recent California ISO electricity supply and reliability concerns reinforce – in essentially real-time fashion – that the time to act is now. Secretary Perry has shown his willingness to engage and we urge FERC to act promptly. The recent research by DOE staff in their report to Secretary Perry, the new IHS Markit report, and other reports on the value of our nation’s existing coal generation fleet all provide additional data and analysis helpful to addressing the

¹² Lawrence Makovich and James Richards, IHS Markit, “Ensuring Resilient and Efficient Electricity Generation”, September 2017, p. 12.

¹³ Lawrence Makovich and James Richards, IHS Markit, “Ensuring Resilient and Efficient Electricity Generation”, September 2017, p. 12. Available at <https://www.ihs.com/Info/0917/electricity-generation-special-report.html>

imperative of under-recognized attributes and contributions from baseload power plants and maintaining a generation portfolio best equipped to meet 24/7 electricity demand.

Respectfully submitted,

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