U.S. House of Representatives, Committee on Energy and Commerce,
Subcommittee on Energy, Climate, and Grid Security

September 13, 2023 Hearing: *Keeping the Lights On:*
Enhancing Reliability and Efficiency to Power American Homes

Questions for the Record

Responded to by Dr. David Ortiz, Director, Office of Electric Reliability,
Federal Energy Regulatory Commission

Questions from Chairman Jeff Duncan

1. Your testimony indicated that the Office of Electric Reliability interacts periodically with EPA staff.

a. Describe and list the Office of Electric Reliability's interactions with EPA over the past three years, including which rules were the subject of your interactions, when those interactions took place, and the FERC and EPA offices involved.

Answer: Below is a list of meetings among Office of Electric Reliability (OER) staff and EPA staff for the past three years regarding EPA actions. Participation is noted for other FERC offices when relevant. I note that this list does not include communications regarding scheduling, general coordination, and other brief, non-substantive interactions.

- January 2022. Discussion with EPA Office of Land and Emergency Management regarding EPA transition to enforcement phase of coal combustion residuals (CCR) rule (OER).
- January 2022. Joint discussion with the EPA Office of Land and Energy, the Department of Energy, and FERC regarding proposed initial determinations in the EPA CCR rule (OER).
- January 2023. Discussion with EPA Office of Air and Radiation regarding the proposed Good Neighbor Plan (OER, OEPI, OGC).
- February 2023. Discussion with EPA Office of Air and Radiation regarding reliability assumptions in the proposed light- and medium duty vehicle rule (OER, OGC).
- March 2023. Discussion between DOE-FERC-EPA Office of Air and Radiation regarding EPA final rule addressing Regional Ozone Transport for the 2015 Ozone NAAQS (OER, OEPI).
- March 2023. Meeting with EPA Office of Air and Radiation regarding final Good Neighbor Plan rule (OER, OEPI, OGC).
- April 2023. Meeting with EPA Office of Air and Radiation regarding FERC comments on proposed 111(d) rule (OER, OGC, OEPI, Office of External Affairs).

b. Did FERC or the Office of Electric Reliability express concerns about the impact that any of the rules could have on electric reliability?

Answer: The purpose of meetings between OER staff and EPA staff was for EPA staff to inform OER staff when EPA intended to propose a rule.

c. Alternatively, did you indicate that any of the rules are unlikely to cause reliability problems?

Answer: No.

d. During the hearing, Director Ortiz noted that EPA had claimed it made reliability analyses based on forward looking resource adequacy analysis. Director Ortiz stated that a forward-looking resource adequacy

analysis is only one piece of the puzzle and may not reveal other reliability concerns. Should EPA be able to propose rules without first performing independent and thorough reliability analyses? At a minimum, what additional analyses should EPA be required to perform and publicly share before proposing rules impacting the reliability of the bulk power system?

Answer: The analyses that could be performed to assess possible effects of a proposed rule on electric reliability can take many different forms depending on the conditions, infrastructure and planning horizons being assessed. Many of these topics were discussed at the FERC reliability technical conference on November 9, 2023. Specific questions about the analyses necessary or appropriate for an EPA rule are better posed to EPA as they depend on EPA's statutory and regulatory authorities.

e. You were asked during the hearing to provide the interagency comments that FERC sent to the EPA through OMB. Please provide those comments.

Answer: The pre-decisional, interagency comments are posted in anonymized form by OMB at the following cite: https://www.regulations.gov/docket/EPA-HQ-OAR-2023-0072/

2. If FERC makes a recommendation about a pending EPA rulemaking and EPA rejects that recommendation, what recourse does EPA face?

Answer: Currently, FERC has not submitted formal comments in the docket of any pending EPA rulemaking. If FERC were to submit comments in a pending EPA rulemaking docket, the EPA would likely address those comments in its final rule, consistent with the commitments EPA provided at the FERC reliability technical conference on November 9, 2023.

3. Your testimony stated that FERC lacks the tools and data to properly assess the reliability impacts of EPA's Greenhouse Gas Rule. Specifically, your written testimony states that the "Office of Electric Reliability regularly performs and validates power flow simulations supporting various filings but fulfilling the goal of the GRID Act would require detailed interconnection-wide modeling and analysis beyond our capabilities. Further, FERC may not have the underlying data – or the authority to obtain such data – necessary to conduct a meaningful assessment of the proposed actions' impact on the bulk-power system."

a. Can you describe the extent of the power flow simulations that the Office of Electric Reliability performs in support of various filings? Are these done on an RTO/ISO-wide basis? With its current capabilities, could FERC perform an RTO/ISO specific simulation of the system looking at the impacts that retirements would have?

Answer: Staff reviews and verifies Simultaneous Import Limit (SIL) studies submitted by applicants to support market-based rate authorizations for wholesale sales of electric energy, capacity and ancillary services under Federal Power Act (FPA) section 205 and for merger applications under FPA section 203. Staff performs seasonal power flow analyses of an applicant's study area and its connected neighboring areas to obtain net area interchange and system peak load. After the power flow analysis is completed, staff conducts simultaneous interregional transfer studies to compute First Contingency Incremental Transfer Capability in determining total simultaneous transfer capability. Based on the outputs of these analyses and additional data submitted by the applicant, staff reviews and verifies the final SIL values. These SIL studies are conducted on a Balancing Authority Area basis with all the necessary input files, such as power flow cases, contingency files and monitoring files, submitted by the applicants (e.g., Docket Nos: ER10-2437-017, ER10-2721-011 and EC23-36-000). The RTOs/ISOs are in the best position to perform reliability assessments of the impacts of power plant retirements in their footprints.

OER has a variety of tools to assess grid conditions, potential performance, and trends. Given the complexity of the grid and external factors affecting it, study outcomes are very sensitive to specific inputs

and modeling assumptions, requiring care to ensure that accurate and up-to-date models and data are used to assess reliability. This process requires significant time, staffing, and access to detailed grid data.

b. What additional capabilities or data would FERC need to perform an assessment to fulfill the goals of the GRID Act and assess the impact of EPA's proposed rules?

Answer: OER has a range of tools, data and capabilities to assess a variety of electric reliability issues. The GRID Act asks for a long-term assessment of electric reliability that would take into account many uncertainties regarding the evolution of the transmission system, how proposed policies are implemented by states and other entities, the deployment of generating resources, load characteristics, economic factors, operational mitigations, and a range of other inputs and conditions. Performing such analyses would require validated input data, additional technical staff, and computing resources.

c. You noted that other federal entities have this capability. Who are those federal entities? Why hasn't FERC worked with these entities to perform these analyses?

Answer: The Department of Energy's national laboratories have deep expertise in the electric transmission system and its underlying technologies, computing power, and related sciences, and are well positioned to engage with agencies to evaluate the reliability impacts of proposed actions. OER works with the national laboratories on occasion and as appropriate.

The Honorable H. Morgan Griffith

1. During my questioning of you at the hearing, I inquired about Environmental Protection Agency (EPA's) interaction with FERC in the rulemaking process, could you expound on FERC's role and specifically address what happens if EPA rejects a FERC comment? What recourse might FERC have within the Administration?

Answer: FERC's comments to the EPA were through the inter-agency process conducted by OMB. Such pre-decisional, interagency comments are posted in anonymized form for by OMB at the following cite: https://www.regulations.gov/docket/EPA-HQ-OAR-2023-0072/

FERC did not submit other comments. If FERC were to submit comments in a pending EPA rulemaking docket, the EPA would likely address those comments in its final rule.

Questions from the Honorable Richard Hudson

1. How can redundancy in grid transmission lead to grid resilience? What is Congress's role in improving or increasing transmission? Please provide insight on both regional transmission and interregional transmission.

Answer: A robust transmission system is the foundation for electric reliability, especially in the face of extreme weather events, such as those that we have experienced throughout the country over the last several years. Ensuring that the transmission system has redundancies built in to allow it to withstand disruptions and continue to reliably serve consumers is a key consideration in transmission infrastructure development. In addition, transmission allows access to low-cost generating resources that can help keep customers' energy bills more affordable. Effective transmission planning balances the vital need for transmission with the cost to consumers, incorporating regional and interregional perspectives and resulting in a robust electric grid. Congress plays an important role in the electric transmission sector by passing laws that respond to evolving and dynamic issues facing America's grid. For example, the 2021 Infrastructure

Investment and Jobs Act includes funding for transmission facility expansion, coordination, and research and development.

2. What are the security gaps and challenges associated with delivering government aid and emergency services during a blackout, as opposed to during some other hazard or disaster? What changes to your authorities should Congress make to better support your mission?

Answer: Security gaps and challenges associated with delivering government aid and emergency services during a blackout are beyond FERC's authority and outside its area of expertise. Other Federal agencies, such as FEMA, have responsibility for disaster relief and emergency assistance for all hazards. I do not have any recommendations regarding changes in FERC authority to support delivery of government aid and emergency services during a blackout.

I note that, separate from delivery of government aid and emergency services, mandatory Reliability Standards developed pursuant to section 215 of the Federal Power Act address operation of the electric grid under emergency circumstances, including such matters as grid emergency declarations, as well as restarting the grid after a blackout using blackstart generation resources (i.e., electric generating units that are capable of starting without electrical energy being supplied from the power transmission or distribution system that are used to reenergize the electric grid after a blackout.)

3. There are many humanitarian and national security risks posed by rapidly electrifying sectors like transportation, industry, space heating, and agriculture. How have governments built these risks into their emergency management strategies?

Answer: FEMA implements the National Response Framework, which uses the National Incident Management System to organize the government's response to incidents. The National Response Framework is an all-hazards approach and includes coordination with local, state, territorial, and tribal nation jurisdictions. FEMA or state emergency management agencies may be able to provide further information regarding how various jurisdictions develop and execute emergency management strategies.

4. How do you think North Carolina can better leverage innovative energy technology, like microgrids, in the face of grid failures? Could this improve the time it takes to get a substation back online?

Answer: According to the Department of Energy, a microgrid is "a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid." If the connection to the grid is lost, a microgrid could maintain electrical service in its area. North Carolina could explore how microgrids and other technologies may provide benefits to the state.