

**Testimony of David S. Ortiz, Ph.D.  
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Federal Energy Regulatory Commission**

**“The Next Generation: Empowering American Nuclear Energy”  
Subcommittee on Economic Growth, Energy Policy, and Regulatory Affairs  
Committee on Oversight and Accountability  
United States House of Representatives**

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Introduction

Chairman Fallon, Ranking Member Bush, Chairman Comer, Ranking Member Raskin, and Members of the Subcommittee, thank you for the opportunity to testify today. My name is David Ortiz and I am the Director of the Office of Electric Reliability (OER) of the Federal Energy Regulatory Commission (FERC or Commission). I am here today as a Commission staff witness and my remarks do not necessarily represent the views of the Commission or any individual Commissioner.

The Commission’s role on reliability is to help protect and improve the reliability of the Nation’s Bulk-Power System through effective regulatory oversight as established in the Energy Policy Act of 2005. My testimony summarizes the Commission’s oversight of the reliability of the Bulk-Power System and recent Commission activity implementing that authority. I then provide my perspective on nuclear power and its role in ensuring a reliable U.S. electric grid.

FERC’s Reliability Authority

In the Energy Policy Act of 2005, Congress amended the Federal Power Act to add section 215 pertaining to Bulk-Power System reliability. This provision tasked the Commission with responsibility to oversee mandatory, enforceable reliability standards for the Nation’s Bulk-Power System. This authority pertains to the interconnected electric power system (the “grid”) in the United States, and excludes Alaska, Hawaii, and local distribution systems. The Bulk-Power System also includes the electric energy needed to maintain transmission system reliability.

Section 215 requires the Commission to select an Electric Reliability Organization (ERO) that is responsible for proposing, for Commission review and approval, reliability standards to help protect and improve the reliability of the Nation’s Bulk-Power System. The Commission certified as the ERO the North American Electric Reliability

Corporation (NERC). The reliability standards apply to the users, owners and operators of the Bulk-Power System and become mandatory in the United States only after Commission approval. NERC and its six Regional Entities enforce the reliability standards and may impose penalties for noncompliance, after notice and opportunity for hearing, subject to review and approval by the Commission. The Commission may also enforce reliability standards independently of NERC.

The Commission may approve proposed new reliability standards or modifications to existing standards if it finds them to be “just, reasonable, not unduly discriminatory or preferential, and in the public interest.” If the Commission disapproves of a proposed standard or modification, section 215 requires the Commission to remand it to the ERO for further consideration. The Commission does not have the authority to modify or author a standard. Rather, on its own motion or upon complaint, the Commission may direct the ERO to develop and submit for Commission approval a new or modified standard on a specific matter to address a reliability gap.

Chairman Phillips’s reliability priorities are: (1) protecting the grid from cyber and physical attacks; (2) preparing for extreme weather; and (3) ensuring reliability as the grid’s resource mix changes. In recent testimony before the Subcommittee on Energy, Climate and Grid Security of the Committee on Energy and Commerce, I provided details on recent Commission actions on reliability in these three areas.

The Federal Power Act gives the Commission jurisdiction over rates, terms and conditions for wholesale sales of electricity, and reserves to the states the choice of electric generation facilities, including the development of nuclear electricity generating capacity. With respect to reliability, section 215 does not give FERC or the ERO the authority to direct the construction of electricity generation or transmission capacity. Nuclear power plants are large bulk-power system generators and therefore must comply with certain reliability and cybersecurity requirements, but the states determine whether those plants should be built.

Given the tight linkage among nuclear power plant safety systems (which are regulated by the Nuclear Regulatory Commission [NRC]) and electric generating systems, the Commission and the NRC entered into several Memoranda of Understanding (MOUs) to ensure appropriate coordination. For example, the NRC issued regulations governing cybersecurity in nuclear power plants, and the Commission approved cybersecurity standards applicable to nuclear power plants. To ensure that no gaps in coverage exist, the MOUs ensure a delineation between the cyber systems pertaining to plant safety from the reliable and secure operation of the grid. To further coordinate on these important issues, for nearly twenty years, the Commission and the NRC have conducted biannual joint commission meetings, where the commissioners of both FERC and the NRC meet to discuss matters of common interest. The next joint commission meeting will occur on

January 25<sup>th</sup> in Washington, DC, and will feature presentations and discussions with staff from FERC, NRC and NERC on topics including grid reliability, nuclear power plant technology and permitting, and cyber security, among others.

### Nuclear Power Plants and the Changing Resource Mix

The topic of today's hearing is nuclear power plants, which are large, traditional, synchronous resources. According to the Energy Information Administration, from January to September 2023, the U.S. nuclear power plant fleet produced 18 percent of U.S. electricity and operated at a capacity factor of 94 percent, which is significantly higher than the fleetwide averages for all other generation resources. Additionally, because nuclear power plant reactors and turbines are enclosed, they typically perform much better than other resources during extreme weather conditions: the FERC-NERC-Regional Entity report on Winter Storm Elliott found that only 0.4 percent of the outages that occurred during the storm were attributed to nuclear units. Therefore, the energy contribution of nuclear power has been and will continue to be an essential part of the generating resource mix.

The changing resource mix, however, poses significant challenges for reliable operations of the grid beyond having sufficient capacity. To ensure reliability, in addition to resource and energy adequacy, the resource mix must provide flexibility and system stability services. Most new resources interconnecting to the grid are renewable. These resources are highly variable and while in aggregate they may provide sufficient capacity, they may not provide essential services needed to maintain reliability at all times. The current fleet of nuclear power plants in the United States was not designed to be flexible and have historically not provided significant voltage control or other reliability services due to safety and operational factors. Nuclear power plants also do not provide black start service, which is needed to restart the grid in the event of a blackout. Technologies that are currently under development, including the small modular reactor, when deployed, could both provide the capacity and energy that nuclear power plants are known for, and help operators to meet flexibility requirements of the future grid. I defer to my colleagues from the Department of Energy and the NRC to provide the most up-to-date information in this regard.

### Conclusion

FERC will continue to work with relevant stakeholders and our sister agencies to execute its responsibilities under section 215 of the Federal Power Act to protect and enhance the reliability and security of the electric grid. Nuclear power has and will have a key role in supporting that reliable operation.

Thank you for allowing me to testify today. I would be glad to address any questions you may have.