



ENSURING EFFICIENT RELIABILITY: NEW DESIGN PRINCIPLES FOR CAPACITY ACCREDITATION

Capacity Accreditation Methods Should Be Technology-Neutral and Linked to Operations

Reston, Va. – The [Energy Systems Integration Group \(ESIG\)](#) has released a new report, [Ensuring Efficient Reliability: New Design Principles for Capacity Accreditation](#), discussing key considerations for capacity accreditation for the next phase of the energy transition in which solar, wind, and battery storage will be increasingly relied on to ensure grid reliability.

As the power system changes due to increased renewables, coal and gas retirements, and the growing use of storage and load flexibility for reliability, new methods are needed to measure each resource's contribution toward reliability. Capacity accreditation measures the contribution of individual resources toward meeting the system's resource adequacy, and ESIG's Redefining Resource Adequacy Task Force developed a gap analysis of current accreditation methods to understand where the industry's processes and accreditation techniques currently fall short, and to describe the most viable improvements to current techniques at this point in time.

"'Capacity accreditation for all' is increasingly heard across the electric power sector," said Julia Matevosyan, chief engineer at ESIG. "If capacity accreditation is used to measure the performance of one type of resource, it should be applied to all types of resources in a similar manner."

Traditionally, wind, solar, and storage were procured primarily to produce energy, displace fuel, and reduce emissions, but the next phase of the energy transition will increasingly look to them to ensure reliability. *Ensuring Efficient Reliability: New Design Principles for Capacity Accreditation* details the ways that resources are accredited today, how those processes are evolving with a changing resource mix, and limitations inherent in these techniques, and it provides suggestions on ways to simplify the approaches to ensure they can be used across all resource types in a more transparent manner. The report provides a framework and foundational pillars that can be used throughout the industry to improve accreditation processes and ensure resource adequacy in the future.

"The changing resource mix, changing climate, and extreme weather is changing when and where reliability risks occur on the power system. While resource adequacy modeling has improved, it is not perfect," said Derek Stenlik, task force chair. "Accreditation approaches need to be linked to operations in order to ensure that resources deliver in the moment when the grid needs them most, regardless of when scarcity events occur."

The key considerations highlighted in this report are to ensure that capacity accreditation methods are applied to all resources, not just wind, solar, and battery storage, in a consistent, non-discriminatory manner; and to ensure there is a linkage between resource accreditation and real-world operations.

ESIG is a nonprofit organization that marshals the expertise of the electricity industry's technical community to support grid transformation and energy systems integration and operation.

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