

EPRI launches new framework to classify flexibility for large electric loads

Published on March 25, 2026 by [Kim Riley](#)



Toward addressing the time-to-power bottleneck, the Electric Power Research Institute (EPRI) is launching a uniform flexibility classification framework for large electric loads.

“As demand from AI and data centers grows at unprecedented speed, flexibility is becoming the third leg of the speed-to-power stool, alongside generation and transmission,” said EPRI President and CEO Arshad Mansoor. “This framework allows everyone — utilities, regulators, and large load developers — to have common language about flexibility and to trust what that language means. That shared understanding is essential to moving faster while maintaining reliability.”

The Flex MOSAIC framework has been developed through EPRI’s [DCFlex initiative](#) in collaboration with more than 65 utilities, system operators, regulators, hyperscalers, and technology providers. The launch was announced March 23 at CERAWeek.

The voluntary framework establishes a shared, credible way to define flexibility from large loads — particularly data centers — based on the magnitude, timing, duration, and frequency of their response, according to EPRI.

“By enabling a common understanding of what flexibility a load can deliver, the framework may shorten interconnection timelines, improve grid planning confidence, and accelerate access to power without compromising reliability or affordability,” the institute said in a statement.

Greater transparency and a consistent framework benefit all parties, with utilities and system operators gaining more confidence in integrating large, flexible loads while maintaining reliability.

At the same time, developers may design facilities with flexibility in mind to unlock faster, more predictable grid connections and expand options for where projects can be sited.

Initial framework participants include Alliant Energy, Arizona Public Service, California ISO, Carrier, El Centro Nacional de Control de Energía (CENACE), Compass Datacenters, Constellation Energy, DTE Energy, Entergy, Exelon, Georgia Transmission Corporation, Google, Honeywell, Independent Electricity System Operator (IESO), ING, Jenbacher, Korea Power Exchange (KPX), KPMG, LG Pado, Lincoln Electric System, the Lower Colorado River Authority, Meta, the Midcontinent Independent System Operator (MISO), the Nebraska Public Power District, NERC, NVIDIA, Octopus Energy, Portland General Electric, PSEG, Rayburn Electric, Salt River Project, Siemens, Southern Company, Southwest Power Pool, and United Power.

The framework defines flexibility through practical performance characteristics, including how quickly a load can respond, how long adjustments can last, and how much power can be reduced or shifted, said EPRI, noting that such characteristics are organized into a small set of uniform flexibility classes that utilities, system operators, and data centers can apply consistently across regions.

“Flexibility is critical for fast access to power for data centers,” said Vladimir Troy, vice president of AI Infrastructure at NVIDIA. “By clearly defining flexibility, the Flex MOSAIC framework gives all parties the confidence needed to accelerate deployment and meet the growing needs of AI.”

The framework is meant to provide a technical foundation that jurisdictions and market participants can adapt to their local needs.

“As large, flexible loads play a growing role in the power system, having clear, technically grounded definitions of flexibility is critical for reliability,” said North American Electric

Reliability Corporation President Jim Robb. “A common framework like this can help system operators and planners speak the same language, essential for maintaining a reliable grid.”

Ann Rendahl, a commissioner with the Washington Utilities and Transportation Commission and president of the National Association of Regulatory Utility Commissioners (NARUC), said that state regulators are focused on ensuring customers are not burdened by the costs of serving new, large loads while also maintaining grid reliability.

“NARUC looks forward to engaging with EPRI and others on how a voluntary, standardized framework like Flex MOSAIC can create a common language and shared understanding of flexibility, and provide benefits to state regulators when evaluating data center integration, without shifting costs to customers or compromising grid reliability,” said Rendahl.