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## **New ESIG Report Offers Framework for Integrating Large Load Flexibility into Resource Adequacy Planning**

*ESIG Large Loads Task Force finds that treating demand flexibility as a planned capacity resource—rather than an ad hoc, short-term measure—can accelerate large load interconnection while protecting grid reliability*

**Reston, VA** — The Energy Systems Integration Group (ESIG) today released a new report examining how utilities, regional grid operators, and large load customers can address growing resource adequacy risks as electricity demand grows faster than it has in decades, spurred by unprecedented load growth driven by data centers, advanced manufacturing, and other very large loads

[Resource Adequacy with Large Loads: Planning for Flexibility to Accelerate Integration](#), produced by ESIG's [Large Loads Task Force](#), finds that the power industry has largely responded to the rapid growth of data centers, industrial facilities, and other large loads through short-term measures—including interconnection moratoriums, curtailment programs, and bring-your-own-generation arrangements. While these tools address immediate pressures, the task force finds they are insufficient on their own when not integrated into long-term planning.

“Many large loads—particularly data centers—have the technical capability to reduce consumption during the hours that matter most for grid reliability,” said James Okullo, director of system planning for ESIG. “Planning processes can recognize and credit that flexibility before these customers connect, not after. This report lays out a practical path to get there.”

The report presents a six-step framework for utilities and regional grid operators to evaluate large load flexibility as a planned capacity resource from the start of the resource adequacy process, rather than treating it as a fallback option.

Large loads, particularly data centers, can reduce grid stress through workload shifting, thermal management strategies, and on-site generation. This report focuses on how those capabilities can be quantified and credited in resource adequacy planning constructs before a load connects. By quantifying the capacity value of flexibility, planners can identify what generation investment may be avoided or deferred, providing a data-driven basis for designing tariffs, interconnection agreements, and market rules.



“If planned correctly, large loads present a unique opportunity to enhance resource adequacy,” said Aaron Schwartz, senior engineer at Telos Energy and a lead writer on the report. “To achieve this means getting incentives right, and that requires integrating large loads and their flexibility potential up front in utilities’ and regional grid operators’ planning processes.”

The report includes targeted recommendations for five stakeholder groups: resource adequacy modelers, resource planners at vertically integrated utilities, independent system operator market planners, data center and other large load developers, and regulators. It is one of 11 reports produced by the ESIG Large Loads Task Force, which convened a multi-stakeholder group of independent system operators, utilities, data center operators, regulators, and researchers to examine grid integration challenges across interconnection, operations, planning, and market design.

For more information on ESIG, visit [www.esig.energy](http://www.esig.energy) .

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### **About Energy Systems Integration Group**

ESIG began in 1989 as the Utility Wind Interest Group, an organization created to educate utilities about wind power. Within ten years, it developed into a significant technical educational organization and convener of peer-to-peer workshops to assist utilities, system operators, project developers and equipment manufacturers from around the world with the integration of wind power, and then by 2011, also with the

integration of solar power. With renewables becoming the mainstream sources of new generation and reliability services, the organization expanded its mission, branding and international participation in 2018 through a merger with the International Institute of Energy Systems Integration (IIESI) to become the Energy Systems Integration Group (ESIG), taking on not just the planning and operations of electricity systems and power markets, but also the growing issues for other energy vectors, including the electrification of transportation, buildings and industry for decarbonizing the entire energy supply.

ESIG now serves as a resource for a broad cross-section of the global energy industry, including utilities, ISOs, independent power producers, project developers, manufacturers, forecasters, consultants, educational institutions, and government agencies, including regulatory bodies.



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