



FOR IMMEDIATE RELEASE

December 17, 2025

ESIG Releases Modernizing Transmission Planning: Integrating Silos to Deliver Multi-Driver, Multi-Value Outcomes

New ESIG report presents an “integrate, broaden, deepen” approach that connects siloed transmission planning tracks that run in parallel, and supports the coordinated development and selection of transmission upgrades to deliver multi-driver, multi-value transmission portfolios aligned with FERC Order 1920.

Reston, VA — The [Energy Systems Integration Group \(ESIG\)](#) today released [Modernizing Transmission Planning: Integrating Silos to Deliver Multi-Driver, Multi-Value Outcomes](#), a report addressing a central challenge: U.S. transmission planning remains fragmented across several planning areas including generator interconnection, load interconnection, reliability, economic, asset replacement, and public policy, tracks that have separate mandates and operate on misaligned timelines and with different assumptions. This siloed approach produces piecemeal fixes, repeated mitigations in the same transmission corridors, and slower, less predictable interconnection of generation and load just as demand rises, large loads concentrate, resources shift, and extreme weather increases system stress.

The report sets out an **integrate, broaden, deepen** approach, which connects formerly siloed transmission planning tracks, uses shared planning futures, and makes possible the coordinated development and selection of projects to deliver multi-need, multi-value transmission portfolios aligned with FERC Order 1920. Accompanying the report is a link to an interactive data explorer showing how transmission projects are approved and categorized across regions, with trends by voltage, project type, and in-service year, as of mid-2025.

“Planning teams are being asked to do more and do it faster, amid rising demand, new load centers, evolving resource mixes, and more frequent extreme weather,” said Ahmed Rashwan, senior director at Electric Power Engineers, and the task force lead. “The guidance given in this report connects studies that utilities and system operators already run, so projects are scoped once to meet multiple needs. This delivers clear gains: less congestion, faster interconnection, coordinated portfolios, and right-sized replacements.”

Near-term integration priorities recommended in this report

- **Integrating interconnection with long-range planning.** Planners should use common futures and constraints across studies, group compatible requests, convert recurring bottlenecks into shared corridor upgrades tied to the long-range plan, and use high-interest queue areas and load-interconnection zones in expansion plans.

- **Integrating asset replacement with long-term needs.** Planners should make right-sizing the default and bundle overlapping rebuilds with nearby system constraints, so that a single corridor upgrade avoids repeated construction and delivers durable transfer capability.
- **Integrating operations with planning.** Study teams should bring ramping, stability, inertia, voltage, and weak-grid conditions into screening and design; formalize operator input; use production-cost-derived stress periods; and apply transient analysis when warranted.

“Aligning interconnection with the long-range plan gives generators and large loads a clearer, more predictable path to interconnection and delivery,” said Drew Siebenaler, senior manager, Electric Power Engineers. “It reduces restudies and withdrawals, minimizes planning uncertainty, and targets appropriately sized upgrades where they deliver the most value.”

Why it matters:

- **Planning studies produce coordinated portfolios and documented decisions** by using shared assumptions, common benefits, and portfolio-level scoring.
- **Interconnection of generation and load moves faster and becomes more predictable** as shared corridor upgrades address recurring constraints and align with the long-range plan.
- **The grid expands steadily at higher voltages**, with a consistent pipeline of high-voltage, multi-benefit lines complemented by targeted lower-voltage projects designed for the same scenarios.
- **Near-term fixes and asset replacements are right-sized for long-term needs**, reducing serial mitigations and rework.

“Modernization is not about discarding methods that work; it is about linking them,” said James Okullo, Director of System Planning at ESIG. “The integrate, broaden, deepen approach described in this report ensures that the transmission we build reflects how the grid will actually run.”

For more information on ESIG, visit www.esig.energy.

###

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.

MEDIA CONTACT:

Lacey Jamison
Director, Marketing
(615) 478-1639
lacey@esig.energy