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Some 2.6 terawatts of proposed electricity generation projects and energy storage facilities[1] are stuck in a regulatory purgatory called the "interconnection queue."[2] For context, the United States has about 1.3 terawatts of power generation capacity today.[3] So why are projects worth twice the country"s total power capacity waiting to be connected to the electrical grid?

Second, that study process -- and the interconnection process as a whole -- is slow, reactive, and no longer fit for purpose. In the years ahead, experts expect demand for electricity to grow at the fastest rate in decades.[8] As power generators clamor to get onto the grid, the interconnection queue backlog becomes self-reinforcing as long-delayed projects drop out, forcing studies to start over.

To address these issues, the Federal Energy Regulatory Commission (FERC) has recently begun to implement a more efficient approach via Order 2023 wherein groups of projects are studied in order of project readiness.[9] Order 2023 also spreads costs across study groups, increases study deposits and withdrawal fees, strengthens study deadlines, and requires consideration of alternative transmission technologies.[10]

These reforms improve upon the old method of studying projects one by one in the order they entered the queue, but it remains insufficient. Why? Because U.S. energy regulators today are essentially reactive and laissez-faire. Simply adopting a more efficient but equally reactive regime does not meet the moment.

It is time for a generational shift[11] in American power sector regulation. Regulators must be proactive, preparing our grid infrastructure for increased power demand, the intensifying climate crisis, and new forms of electric generation. Indeed, meeting these challenges will require regulators to take center stage, maximizing efficiency by centralizing the work of expanding and modernizing our power infrastructure.

Third, FERC should create a fast-track process for most-ready projects that can replace the retiring generation.[15] While building new transmission will help to add far-flung renewable generation to the grid, FERC could create an incentive for optimal use of existing transmission by accelerating timelines for projects whose generation profile could operate similarly to an outgoing power plant (for example, projects to build solar with storage could have generation profiles akin to some gas plants).

Many other reforms could follow in this vein, but these three epitomize the changes needed: empowering regulators to be proactive and level the playing field between electric generation and gas; modernizing all aspects of the interconnection process, especially via automation; and creating a most-favored, highest-readiness category to clear out the queue as fast as possible. When in doubt, Congress, courts, and FERC itself should err on the side of maximizing FERC"s authority and deferring to its leadership on the complex and vital work of planning out the future of the grid.

A transmission system without deadlines guarantees a graveyard of dead lines, and the U.S. has no time to lose in preparing its grid for the surge of renewable generation we need to mitigate power sector emissions and supply the demand of decades to come.

[1] Roughly 2.5 terawatts of this total is renewable energy and energy storage projects. Grid connection backlog grows by 30% in 2023, dominated by requests for solar, wind, and energy storage, Lawrence Berkeley Nat"l Lab"y (Apr. 10, 2024), https://emp.lbl.gov/news/grid-connection-backlog-grows-30-2023-dominated-requests-solar-wind-and-energy-storage.

[4] See Aidan Bassett, Transmission Now!, Geo. Env"t L. Rev. (Apr. 2, 2024), https://; Richard Schmalensee, Crossed Wires: Modernizing the US Electric Grid, Resources (May 16, 2024), https://

[8] John D. Wilson & Zach Zimmerman, Grid Strategies, The Era of Flat Power Demand is Over (2023), https://gridstrategiesllc /wp-content/uploads/2023/12/National-Load-Growth-Report-2023.pdf.

[9] Improvements to Generator Interconnection Procedures and Agreements, Order No. 2023, 88 Fed. Reg. 61014 (Nov. 6, 2023) (to be codified at 18 C.F.R. pt. 35); see also Explainer on the Interconnection Final Rule, Fed. Energy Reg. Comm"n, https:// (last visited Sept. 21, 2024).