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DOE Initiates Program to Bring Resources of The National Labs to Bear on Interconnection Reform

By Donna Bobbish¹ and [Bill DeGrandis](#)²

At the end of May, the U.S. Department of Energy (“DOE”) announced a new program, the Interconnection Innovation e-Xchange (“i2X”), to bring together stakeholders and several of DOE’s National Laboratories³ to “develop solutions for faster, simpler, and fairer interconnection” of solar, wind, and energy storage resources to the distribution and bulk power grids.⁴

As explained by Secretary of Energy Jennifer Granholm during a “kick-off” webinar held on June 7, the \$3,000,000 i2X program is funded by the Infrastructure Investment and Jobs Act passed in November 2021, and is in furtherance of the Biden Administration’s goal of a decarbonized electricity system by 2035.

According to DOE, dramatic expansion of solar and wind energy resources will be needed to meet the Administration’s decarbonization goals, but current interconnection procedures are not designed to accommodate the hundreds of gigawatts of solar, wind, and energy storage resources needed each year, and interconnection queue waiting times for solar, wind, and energy storage projects are increasing.

In April, LBNL issued a study in which it found that, as of the end of 2021, over 1000 GW of generator capacity and 420 GW of storage were seeking interconnection to the bulk power grid.⁵ It also found that only 23% of projects that requested interconnection from 2000-2016 have reached commercial operation, with 72% having withdrawn from the interconnection queue. LBNL further found even lower completion rates for wind (20%) and solar (16%) projects during the 2000-2016 period.⁶

The i2X program aims to “address the core issues surrounding grid interconnection,” which DOE identifies as a lack of data, a shortage of human resources and capabilities to manage long interconnection queues, and more complicated grid impact assessments.

During the June 7 kick-off webinar, Secretary Granholm emphasized that DOE will lead the data collection and analysis to ensure that utilities and other stakeholders have the information they need, provide technical assistance to allow groups to test solutions, and create a strategic roadmap.

Although one of the “four key activities” of the i2X program is to create a five-year strategic Interconnection Roadmap to “inform interconnection process improvements,” DOE’s focus on the data

collection and analysis and technical aspects of interconnection, and bringing the resources of its National Labs to bear on interconnection reform, perhaps reflect that in general, the processes for transmission level interconnections are regulated by the Federal Energy Regulatory Commission ("FERC"),⁷ while the processes for distribution level interconnections are regulated by state public utility commissions.

Under its authority under the Federal Power Act, FERC has established standardized Generator Interconnection Procedures and Standard Interconnection Agreements for Large (over 20 MW) and Small (20 MW and below) generators connecting to the bulk power grid. FERC's interconnection policies and regulations are implemented by regional transmission organizations ("RTOs"), independent system operators ("ISOs"), and FERC-jurisdictional utilities, including those that are not members of RTOs/ISOs.

The participants thus far in the DOE i2X program include a wide variety of industry participants and stakeholders, including renewable energy developers, utilities, transmission and storage developers, RTOs/ISOs, equipment manufacturers, consulting and law firms and universities, and trade associations. It may be difficult for DOE to forge consensus among such a diverse group, and its five-year horizon will not result in near-term remedies. However, the data collection, analysis and sharing that is a core element of the i2X program potentially could inform pending and anticipated interconnection reforms at the federal and state levels, especially at FERC. In particular, FERC recently has raised the issue of increasing numbers of projects withdrawing from the interconnection queue in the context of transmission planning and cost allocation reforms.

As discussed in a previous Paul Hastings Client Alert,⁸ in its April 21 Notice of Proposed Rulemaking ("NOPR") proposing reforms to its existing regional transmission planning and cost allocation requirements,⁹ FERC expressed concern about "the prevalence of interconnection-related network upgrades being repeatedly identified in the generator interconnection process in multiple interconnection queue cycles in a short period of time (e.g. five years) but not being developed because the interconnection requests driving the need for the upgrade are all withdrawn."¹⁰ FERC observed that "more and more interconnection customers are withdrawing their interconnection requests in the face of significant costs associated with interconnection-related network upgrades,"¹¹ and a dramatic increase in recent years in the level of spending on interconnection-related network upgrades is driving the cost of interconnecting new generation to the transmission system higher and higher.¹² FERC further observed that "when interconnection customers withdraw from the interconnection queue, the identified interconnection-related network upgrades remain unbuilt and the underlying interconnection-related needs go unaddressed."¹³ FERC found on a preliminary basis that "current regional transmission planning processes fail to plan for transmission needs driven by changes in the resource mix and demand," and that "there may be a need for better coordination between regional transmission planning and cost allocation and generator interconnection processes."¹⁴ Such coordination could result in allocating to all users of a transmission provider's system the costs of network upgrades that benefit that transmission system, enabling more generation, including renewable generation, to interconnect to the bulk power grid.

FERC will be giving much attention to interconnection matters this year. In addition to the interconnection section of the Transmission NOPR, FERC soon will review the anticipated PJM interconnection queue reform filing. FERC Chairman Richard Glick recently announced during a FERC public meeting that a separate NOPR focusing on interconnection issues likely will be issued in the near future. This interconnection NOPR is on FERC's agenda for its public meeting on June 16.

Finally, the results of the i2X program could form the basis for the Secretary of Energy to propose to FERC a rule, regulation, or statement of policy with respect to interconnection. Section 403(a) of the DOE Organization Act of 1977¹⁵ allows the Secretary of Energy to “propose rules, regulations, and statements of policy of general applicability with respect to any function within the jurisdiction of the Commission.” However, FERC has exclusive jurisdiction to consider and decide what final action to take in response to any such DOE proposal.¹⁶

DOE has indicated that “next steps” in the i2X program would include the establishment of several Preliminary i2X Working Groups.

We continue to monitor opportunities to engage with DOE and FERC on matters affecting clients’ interests, and are actively following this new DOE program.



If you have any questions concerning these developing issues, please do not hesitate to contact either of the following Paul Hastings Washington, D.C. lawyers:

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³ Lawrence Berkeley National Laboratory (“LBNL”), the National Renewable Energy Laboratory, and the Pacific Northwest National Laboratory.

⁴ <https://www.energy.gov/articles/biden-administration-launches-bipartisan-infrastructure-law-initiative-connect-more-clean>.

⁵ Lawrence Berkeley National Laboratory, “Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection as of the End of 2021” at p. 3 (April 2022).

⁶ *Id.*

⁷ FERC is an independent agency under DOE.

⁸ See “FERC NOPR on Transmission Planning, Cost Allocation, and Certain Interconnection Issues,” Section II-C, May 12, 2022.

⁹ *Building for the Future through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, Notice of Proposed Rulemaking, 179 FERC ¶ 61,028 at P 24 (2022) (“Transmission NOPR”).

¹⁰ *Id.* at P 162.

¹¹ *Id.*

¹² *Id.* (citation omitted).

¹³ *Id.* at P 163.

¹⁴ *Id.* at P 154.

¹⁵ 42 U.S.C. § 7173 (2012).

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¹⁶ In 2018, FERC rejected the Proposed Rule on Grid Reliability and Resilience Pricing submitted to FERC by then-Secretary of Energy Rick Perry. *Grid Reliability and Resilience Pricing*, 162 FERC ¶ 61,012 (2018), *order modified and result sustained*, 174 FERC ¶ 61,112 (2021).