

Power Equipment Security Order Adds Compliance Burdens

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On May 1, President Donald Trump issued an executive order concerned with securing the U.S. bulk power system, pursuant to his authority under the International Emergency Economic Powers Act.

In the order, he determined that the unrestricted foreign supply of bulk power system electric equipment constitutes an "unusual and extraordinary threat to the national security, foreign policy, and economy of the United States," and declared a national emergency with respect to the U.S. bulk power system.

In construction, the EO is similar to Executive Order 13873, on securing the information and communications technology and services supply chain, released on May 15, 2019, which applied to transactions involving "information and communications technology or services."

Both are aimed at addressing the risks associated with the vulnerabilities of critical infrastructure, and opportunities for backdoor exploitation and disruption that hardware and equipment connected to that infrastructure present.

Summary of Key Provisions

The EO prohibits persons subject to U.S. jurisdiction from initiating any transactions after May 1 to acquire, import, transfer or install certain bulk power system electric equipment where the transaction involves "any property in which any foreign country or a national thereof has any interest," and where the U.S. secretary of energy, in consultation with other agencies, makes certain determinations, described below.

These determination are: (1) that the transaction involves bulk power system electric equipment that was "designed, developed, manufactured, or supplied by persons owned by, controlled by, or subject to the jurisdiction of a foreign adversary," and (2) that the transaction:

- Poses an undue risk of sabotage to or subversion of the design, integrity, manufacturing, production, distribution, installation, operation or maintenance of the bulk power system in the U.S.;
- Poses an undue risk of catastrophic effects on the security or resiliency of U.S. critical infrastructure or the economy of the U.S.; [1] or
- Otherwise poses an unacceptable risk to the national security of the U.S. or the security and safety of U.S. persons.

In addition, the EO authorizes the secretary of energy to negotiate mitigation measures as a precondition for approving prohibited transactions, and to identify prequalified equipment and vendors for future transactions — i.e., a white list.

The EO directs the U.S. Department of Energy to publish implementing rules and regulations by September 28 — i.e., within 150 days of the date of the EO. It also instructs the secretary of energy to identify the risks associated with already-installed bulk power system electric equipment, and to develop recommendations for addressing those risks, including replacement of such items.

Finally, the EO establishes a task force to examine federal agencies' energy infrastructure procurement policies, and recommend changes to the Federal Acquisition Regulation.

The task force will develop recommendations for energy infrastructure procurement policies for consideration by the Federal Acquisition Regulatory Council, and evaluate the incorporation of national security considerations into energy security and cybersecurity policymaking, among other responsibilities.

Additionally, because "attacks on the bulk-power system can originate through the distribution system," the EO instructs the task force to engage with distribution system industry groups.

Scope of the EO and Impact on Industry

What are the bulk power system and bulk power system electric equipment?

The EO defines the bulk power system as "(1) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (2) electric energy from generation facilities needed to maintain transmission reliability."

The EO further notes that "this definition includes transmission lines rated at 69,000 volts (69 kV) or more, but does not include facilities used in the local distribution of electric energy."

In the electric energy sector, the bulk power system is generally understood to refer to the U.S. interconnected electric grid, which includes generation and high-voltage transmission facilities, but excludes lower-voltage distribution facilities, the primary function of which is to deliver electricity to homes and businesses, and which are regulated at the state level.[2]

Small-scale and behind-the-meter renewable energy generation projects are typically considered part of the distribution system and not the bulk power system. Although it seems likely that the EO intended to adopt that general understanding by expressly excluding "facilities used in the local distribution of electric energy" from the definition of the bulk power system, it does not further explain what that carveout means in practice.

Similarly, although large-scale renewable resources are often considered part of the bulk power system,[3] the definition's reference to "electric energy from generation facilities needed to maintain transmission system reliability" may call that conclusion into question.



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The EO defines bulk power system electric equipment as:

[1]tems used in bulk-power system substations, control rooms, or power generating stations, including reactors, capacitors, substation transformers, current coupling capacitors, large generators, backup generators, substation voltage regulators, shunt capacitor equipment, automatic circuit reclosers, instrument transformers, coupling capacity voltage transformers, protective relaying, metering equipment, high voltage circuit breakers, generation turbines, industrial control systems, distributed control systems, and safety instrumented systems.

It notes that "[i]tems not included in the preceding list and that have broader application of use beyond the bulk-power system are outside the scope of this order." Excluded items could include, for example, solar photovoltaic panels and modules and/or inverters that are not "large generators," which the EO does not define.

Although the EO directs the implementing regulations to identify particular equipment and countries that will help in targeting those transactions warranting "particular scrutiny," the ambiguity of what constitutes bulk power system electric equipment leaves a lot of room for interpretation.

Who is a foreign adversary?

The policy motivation behind the EO is understood to be primarily aimed at limiting opportunities for China to exploit known and growing vulnerabilities in the U.S. electric grid.

Specifically, the EO authorizes the secretary of energy to block transactions involving bulk power system electric equipment that was "designed, developed, manufactured, or supplied by persons owned by, controlled by, or subject to the jurisdiction of a foreign adversary."

Like the earlier supply chain executive order, however, this EO does not identify any specific country or person as a foreign adversary, simply defining the term as referring to any foreign governments or persons "engaged in a long-term pattern or serious instances of conduct" adverse to U.S. national security. The EO leaves identification of specific foreign adversaries to the forthcoming DOE implementing regulations.

The DOE[4] and the intelligence community[5] have previously identified China and Russia, among others, as threats actors who seek to target and exploit vulnerabilities in the U.S. electric grid.

If China is identified as a foreign adversary for purposes of this EO, it could impact any bulk power system electric equipment manufactured in China, or manufactured by any company owned or controlled by Chinese nationals regardless of where the equipment is manufactured.

Is preapproval of relevant transactions required?

Certain provisions of the EO appear to contemplate a new licensing regime established through implementing regulations for transactions involving bulk power system electric equipment manufactured in or connected with foreign adversaries, although it is not clear what form it would take.

Specifically, Section 2(b) authorizes the DOE to use the implementing regulations to "establish procedures to license transactions otherwise prohibited" by the EO, and to "identify a mechanism" for the negotiation of mitigation agreements. Section 1(b) authorizes the secretary of energy to negotiate mitigation measures, which "may serve as a precondition to the approval" of otherwise prohibited transactions.

Those requirements are somewhat in tension with the fact that, technically, Section 1(a) of the EO only purports to prohibit those transactions involving bulk power system electric equipment that the secretary of energy has specifically determined are connected to an identified foreign adversary, and that pose undue risks to the bulk power system and U.S. national security.

In other words, the determination standard of Section 1(a) of the EO appears to call for a case-by-case review of transactions at the discretion of the secretary of energy — but elsewhere the EO appears to contemplate subjecting all possibly covered transactions to a comprehensive preapproval scheme, including license requirements and a mechanism for negotiating mitigation agreements.

It is not clear, therefore, whether industry should prepare itself for a new prescreening mechanism or not. The implementing regulations will hopefully provide greater clarity on any specific framework for seeking clearance of transactions involving foreign bulk power system electric equipment.

When does the EO take effect?

Although the DOE is directed to issue the implementing regulations within 150 days after the EO is published — i.e., by Sept. 28 — the EO purports to apply to any relevant transaction initiated after the date of the order. Accordingly, it is possible that the secretary of energy could begin blocking pending transactions prior to Sept. 28.

This is similar in construction to the supply chain executive order, which was released on May 15, 2019. While the proposed regulations implementing the EO were released on Nov. 26, 2019, they were similarly applied retroactively to allow for review of transactions entered into since the date the supply chain executive order was released.

What This Action Means for Business

The EO's authorization to block certain transactions, and possibly establish a new licensing regime and/or preapproval mechanism, will create significant compliance challenges for companies involved in industries dealing with bulk power system electric equipment.

Implementation of the EO, including potential disallowance of certain transactions, could result in delays or significant cost increases to obtain certain equipment included in the design of bulk power system projects already under development, or an inability to obtain such equipment. It could also require redesigning projects in less advanced stages of development.

The regulatory burden will be even more complex for cases that overlap with existing review processes, such as the export control and Committee on Foreign Investment in the U.S. regimes, by possibly adding another preapproval screening requirement.

Based on the lack of clarity regarding the EO's ultimate scope and impact on affected industries, companies that engage in any transactions involving possibly-impacted bulk power system electric equipment should begin assessing the potential impact of this new regime with respect to current and planned transactions, and consider engaging with the DOE and other stakeholders as this regime develops further.

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[1] Resiliency is a characteristic that is typically associated with nuclear and coal-fired electric generating facilities.

[2] The definition of "bulk-power system" in the EO generally tracks the definition in Section 215 of the Federal Power Act, added by the Energy Policy Act of 2005, which gave the Federal Energy Regulatory Commission the primary responsibility for ensuring the reliability of the bulk-power system. Specifically, Section 215 defines the bulk-power system as those "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and ... electric energy from generating facilities needed to maintain transmission system reliability." 16 U.S.C. § 824o(a)(1)

(2012). The term does not include facilities used in the local distribution of electric energy. Id. FERC has not adopted a more granular, definitive definition of "bulk-power system," despite indicating that it might do so in a future proceeding and noting its "concern ... about the need to address the potential for gaps in coverage of facilities." Mandatory Reliability Standards for the Bulk-Power Sys., Order No. 693, 118 FERC ¶ 61,218, at P 77, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

[3] Congressional Research Service, *Maintaining Electric Reliability with Wind and Solar Sources: Background and Issues for Congress* (June 10, 2019), <https://fas.org/sgp/crs/misc/R45764.pdf> ("Under the current regulatory framework, the federal government oversees reliability for the generation and transmission systems of the electric power sector. These components comprise the bulk power system and include large-scale wind and solar sources. [The Energy Policy Act of 2005] authorized [FERC and the North American Electric Reliability Corporation, as the U.S. national Electric Reliability Organization] to develop and enforce mandatory reliability standards for the bulk power system. Small-scale wind and solar sources, such as rooftop solar photovoltaic (PV) panels, are connected to the distribution system which is localized and under state jurisdiction. Federal mandatory reliability standards do not apply to the distribution system").

[4]

<https://www.energy.gov/sites/prod/files/2017/01/f34/Cyber%20Threat%20and%20Vulnerability%20Analysis%20of%20the%20U.S.%20Electric%20Sector.pdf>

[5] <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>.

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