



Executive Order on Securing the United States Bulk-Power System

Frequently Asked Questions

December 2020

Why this Executive Order and why now?

The bulk-power system is the backbone of our Nation's energy infrastructure. It is fundamental to not only national security, but to the American economy and our way of life. The 2019 Worldwide Threat Assessment¹ and the 2020-2022 National Counterintelligence Strategy² describe in detail the threat our foreign adversaries pose to our critical infrastructure and the importance of energy to the United States. Accordingly, it is imperative we work quickly to protect the U.S. bulk-power system from potential devastation.

What specific threat examples can you provide?

The Ukraine power grid attack is one such example. On December 23, 2015, attackers remotely accessed the control centers of three Ukrainian electricity distribution companies, which gave the attackers access to the centers' control systems. Ultimately, the attackers were able to manipulate breakers at roughly 30 distribution substations, resulting in approximately 225,000 customers losing power for between one and six hours.³ The attackers also used malware to erase selected files and corrupt the master boot record, rendering some of the utilities' systems

¹ 1 Office of the Director of National Intelligence, Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community, (Jan. 29, 2019), <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>.

² National Counterintelligence and Security Center, National Counterintelligence Strategy of the United States of America 2020-2022 (Jan. 7, 2020), https://www.dni.gov/files/NCSC/documents/features/20200205-National_CI_Strategy_2020_2022.pdf.

³ Department of Homeland Security Cybersecurity and Infrastructure Agency, ICS Alert (IR-ALERT-H-16-056-01): Cyber-Attack Against Ukrainian Critical Infrastructure, last revised Aug. 23, 2018, available at <https://www.uscert.gov/ics/alerts/IR-ALERT-H-16-056-01>; Kim Zetter, "Inside the Cunning, Unprecedented Hack of Ukraine's Power Grid," *Wired*, Mar. 3, 2016, available at <https://www.wired.com/2016/03/inside-cunning-unprecedentedhack-ukraines-power-grid/>.



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
ELECTRICITY

FOR OFFICIAL USE ONLY

inoperable.⁴ While power was restored relatively quickly, all of the affected utilities were still running on constrained operations as of August 2018.⁵

Why is the Department of Energy the lead agency?

The Department of Energy is the sector-specific agency for the energy sector and it owns and operates a significant portion of the bulk-power system's transmission assets (and markets power using these assets) through three of the four Power Marketing Administrations—the Bonneville Power Administration, the Western Area Power Administration, and the Southwestern Power Administration.⁶ The Department of Energy also draws on extensive expertise, both through decades of research and development, as well as membership in the Intelligence Community, to identify risks to the bulk-power system and craft solutions to manage those risks.

What statutory authorities will the Department of Energy rely upon to carry out the duties in the Executive Order?

The President declared a national emergency with respect to the threat to the bulk-power system, using the powers vested in him in the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.) and the National Emergencies Act (50 U.S.C. 1601 et seq.). Pursuant to Section 301 of title 3, United States Code the President is authorized to delegate any function vested in him by law to department and agency heads.

Who is working with the Department of Energy on the Executive Order?

The Executive Order established a task force chaired by the Secretary of Energy and includes the secretaries of Defense, Interior, Commerce, and Homeland Security, as well as the directors of National Intelligence and Office of Management and Budget. The Department of Energy is also working closely with the North American Electric Reliability Corporation, Federal Energy Regulatory Commission, and industry leadership in the Electricity Subsector Coordinating Council and Oil and Natural Gas Subsector Coordinating Council, among others, to ensure the success of the Executive Order.

Can the Department of Energy provide additional guidance and clarity to businesses and/or enable them to avoid liabilities as a result of the rules and regulations to be promulgated?

We recognize the complexity of the bulk-power system supply chain, and we intend to implement such rules and regulations in a phased, thoughtful approach, working closely with industry, to avoid any unintended consequences. We began working with industry immediately after the President signed the Executive Order and will continue to work with industry leadership through the Electricity Subsector Coordinating Council and Oil and Natural Gas Subsector Coordinating Council.

How does this Executive Order impact Federal procurement?

To protect and enhance the security of the Nation's bulk-power system, the Executive Order established a Task Force on Federal Energy Infrastructure Procurement Policies Related to

⁴ Ibid.

⁵ Ibid.

⁶ Presidential Policy Directive – Critical Infrastructure Security and Resilience, (Feb. 12, 2013), <https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-criticalinfrastructure-security-and-resil>.

National Security. The Task Force will develop recommendations on energy infrastructure procurement policies to ensure national security considerations are fully integrated into government energy security and cybersecurity policymaking. The Federal Acquisition Regulatory (FAR) Council shall consider proposing an amendment to the applicable provisions in the FAR based on recommendations from the Task Force.

What organizations are part of the Task Force on Federal Energy Infrastructure Procurement Policies Related to National Security? Will there be industry involvement?

As the task force relates to federal procurement policies, it includes the heads of several federal agencies, specifically the Departments of Energy (Chair), Defense, Homeland Security, Interior, Commerce, the Director of National Intelligence, the Director of the Office of Management and Budget, and any other agency head that the Chair may designate after consultation with the Departments of Defense and Interior. Given the implications that changes to federal procurement policies related to the bulk-power system may have on the private sector, and recognizing that stakeholders and industry may begin to revise their own procurement policies, the task force will coordinate closely with both the Electricity Subsector and Oil and Natural Gas Subsector Coordinating Councils.

What type of, if any, generation is covered by the Executive Order?

The Executive Order covers “bulk-power system electric equipment,” which, as a defined term, includes equipment used in bulk-power system substations, control rooms, or power generating facilities owned or operated by public- and private-sector entities.

How does the Executive Order define Bulk-Power System? What equipment is included/excluded?

The Bulk-Power System is the facilities and control systems necessary for operating an interconnected electric transmission network, to include those lines rated at 69 kV or more, and the electric energy needed to maintain transmission reliability. The Executive Order covers “bulk-power system electric equipment,” which, as a defined term, includes equipment used in bulk-power system substations, control rooms, or power generating facilities owned or operated by public- and private-sector entities.

Why was 69-kV selected as the delineation between transmission and distribution for the purposes of the Executive Order rather than the more traditional 110-kV?

For the purposes of this Executive Order, transmission lines rated at 69-kilovolts (69-kV) or more are included, and facilities used in the local distribution of electric energy are excluded. Distribution line voltage typically does not exceed 69-kV in the United States; the Executive Order’s definition is designed to cover transmission lines including those operating in the lower voltage range of 69-kV to 110-kV. The Department’s Power Marketing Administrations, as well as some smaller utilities, utilize 69-kV lines for transmission.

While the focus of the Executive Order seems to be on transmission and generation, the definition of bulk-power system electricity systems includes distribution side equipment terms such as “metering.” Does this Executive Order have a hard jurisdictional “stop” at all electrical equipment below 69-kV?

The Executive Order delineates over 20 bulk-power system components to which the Executive Order specifically applies. The items not included in the list and that have broader application of use beyond the bulk-power system are outside the scope of the order.

How far down does the Executive Order go regarding bulk-power system equipment; does it apply down to the component level?

The Secretary of Energy, in consultation with the Secretary of Defense, Secretary of Homeland Security, the Director of National Intelligence, and the heads of other agencies as appropriate, will propose rules and regulations to carry out the authorities contained within the Executive Order. During the rulemaking process, the Department of Energy will work closely with stakeholders to further clarify the equipment covered by the Executive Order.

What if the manufacturer is an American subsidiary of a company based in a non-foreign adversary country? For a foreign adversary country?

The Secretary of Energy, in consultation with the Secretary of Defense, Secretary of Homeland Security, the Director of National Intelligence, and the heads of other agencies as appropriate, will propose rules and regulations to carry out the authorities contained within the Executive Order. During the rulemaking process, the Department of Energy will work closely with stakeholders to address this issue.

Does the Executive Order apply to an American-owned and -operated company domestically manufacturing electrical products with components from foreign suppliers? If so, is there a percentage content threshold or specific components that are not allowed?

The Secretary of Energy, in consultation with the Secretary of Defense, Secretary of Homeland Security, the Director of National Intelligence, and the heads of other agencies as appropriate, will propose rules and regulations to carry out the authorities contained within the Executive Order. During the rulemaking process, the Department of Energy will work closely with stakeholders to address this issue.

Will the Department of Energy issue a proposed rule?

The comment period for the Request for Information published in the Federal Register on July 8, 2020, closed on August 24, 2020. The Department is reviewing all comments that were submitted and is considering next steps. All information and updates related to the Bulk-Power System Executive Order will be posted on the website, <https://www.energy.gov/oe/bulkpowersystemexecutiveorder>.

How can I receive updates regarding the Executive Order/Prohibition Order and how can I submit questions?

All information and updates related to the Bulk-Power System Executive Order will be posted on the website, <https://www.energy.gov/oe/bulkpowersystemexecutiveorder>. To submit questions, please email bulkpowersystemEO@hq.doe.gov.

How will the Department of Energy define a “pre-qualified” vendor?

The Department is reviewing all comments that were submitted in response to the Request for Information and is considering next steps. All information and updates related to the Bulk-Power System Executive Order will be posted on the website, <https://www.energy.gov/oe/bulkpowersystemexecutiveorder>.

With respect to Section 1(b) of the Executive Order, what sort of measures can be designed to mitigate concerns resultant from Section 1(a)? May these measures be taken in order to include vendors on the pre-qualified vendor list who would otherwise be ineligible?

Examples of mitigation measures may include testing components and addressing vulnerabilities or inspecting manufacturing plants. Such measures may be used as a

precondition to allow a transaction (or class of transactions) that otherwise would have been prohibited.

Will Power Marketing Administration (PMA) customers see higher rates due to any changes in PMA bulk-power system procurement policies?

Not necessarily. While Federal procurement policies currently award contracts to the lowest cost bidder, the Executive Order does not prohibit the PMAs from continuing to do so if done in compliance with the Executive Order. Further, procedures for mitigation measures may be adopted in the Executive Order's rules and regulations that would allow for transactions to occur that would otherwise be prohibited. Additionally, the potential for new manufacturers to enter the market as a result of this Executive Order could potentially lower procurement costs due to increased competition.

Given their explicit mention, what role will the Electricity Subsector Coordinating Council (ESCC) and the Oil and Natural Gas Subsector Coordinating Council (ONGSCC) play in implementation of the Executive Order?

The Task Force on Federal Energy Infrastructure Procurement Policies Related to National Security created by the Executive Order will focus on Federal energy infrastructure procurement policies. The task force will consult with the ESCC and ONGSCC to conduct evaluations and develop recommendations to improve these policies.

Will the Department of Energy's National Laboratories be involved in the implementation of this Executive Order?

Yes, the National Laboratories will be important partners for implementing many aspects of this Executive Order, including supply chain testing and evaluation.

How does this Executive Order compare to the May 2019 Executive Order 13873, Securing the Information and Communications Technology and Services Supply Chain? Is there any overlap? How will DOE work with the Department of Homeland Security?

This Executive Order covers bulk-power system electrical equipment, not information technology equipment. However, both Executive Orders cover control systems, e.g., supervisory control and data acquisition systems. The Department of Energy will work closely with Departments of Homeland Security and Commerce during implementation of this Executive Order to ensure consistency with and avoid any duplication of Executive Order 13873.

Will funding will be required to implement this Executive Order?

Yes, funding will be required for the Task Force on Federal Energy Infrastructure Procurement Policies Related to National Security, supply chain testing and evaluation, and identifying prequalified equipment and vendors.

What impact will this Executive Order have on the adoption of renewable energy in the United States?

Renewables play a very important role in the country's energy infrastructure and the Administration supports an "all of the above" approach to generation. This Executive Order applies only to the bulk-power system, which would include electric energy from generation facilities needed to maintain transmission reliability.

The Department of Commerce recently launched a Section 232 investigation into transformers and related components. How is the Department of Energy involved?

The Department is currently working with the Department of Commerce's Bureau of Industry and Security at the leadership and staff levels to avoid duplication of effort as well as for each organization to leverage the work of the other.

What is the effective date of the Prohibition Order Securing Defense Facilities issued on December 17, 2020?

The prohibition order is effective January 16, 2021. The order applies to any prohibited transaction initiated on or after the effective date.

Does the Prohibition Order include transactions prior to May 1, 2020?

Neither the Executive Order nor the Prohibition Order applies to transactions prior to May 1, 2020. The Prohibition Order is effective January 16, 2021.

Why was only the People's Republic of China included in the Prohibition Order?

The Department of Energy has reason to believe, as detailed in the Prohibition Order, that the People's Republic of China is equipped and actively planning to undermine the Nation's bulk-power system. As a result, the Department has determined certain bulk-power system electric equipment that serves critical defense facilities (CDF) and that is manufactured or supplied by persons owned by, controlled by, or subject to the jurisdiction or direction of the People's Republic of China, that poses an undue risk to the bulk-power system, the security or resilience of critical infrastructure, the economy, national security, or safety and security of Americans, are prohibited.

Will the Department of Energy name all "foreign adversary" countries of concern?

To date, the Department has identified as foreign adversaries the governments of the People's Republic of China (China), the Republic of Cuba (Cuba), the Islamic Republic of Iran (Iran), the Democratic People's Republic of Korea (North Korea), the Russian Federation (Russia), and the Bolivarian Republic of Venezuela (Venezuela). This determination is based on multiple sources, including ODNI's 2016-2019 Worldwide Threat Assessments of the U.S. Intelligence Community, the 2020-2022 National Counterintelligence Strategy. The identification does not reflect a determination by the U.S. about the nature of other countries for any purposes other than this Executive Order. Additionally, the Secretary will periodically review this list in consultation with appropriate agency heads and may add to, subtract from, supplement, or otherwise amend the list at any time. Links to both documents are on the Bulk-Power System Executive Order website, <https://www.energy.gov/oe/bulkpowersystemexecutiveorder>.

Will there be additional prohibition orders issued for other foreign adversaries?

The Department is taking a phased approach based on reducing risk to the bulk-power system. The Department will continue to balance the need to protect the security, integrity, and reliability of bulk-power system electric equipment used in the United States with the potential for supply chain disruptions to result from any such actions being taken.

Can the Department of Energy further elaborate on the type of security risks currently facing the bulk-power system, e.g., cyber, physical?

The 2019 Worldwide Threat Assessment and the 2020-2022 National Counterintelligence Strategy lay out the threats that foreign adversaries pose to our bulk-power system. Links to both documents are on the Bulk-Power System Executive Order website, <https://www.energy.gov/oe/bulkpowersystemexecutiveorder>.

Are cybersecurity vulnerabilities addressed in the Prohibition Order?

Yes, the bulk-power system electric equipment subject to the Prohibition Order includes software, firmware and digital components that control the operation of bulk-power system electric equipment and are manufactured or supplied by persons owned by, controlled by, or subject to the jurisdiction or direction of the People's Republic of China.

What equipment is now prohibited per the Prohibition Order?

The Prohibition Order includes bulk-power system electric equipment or programmable components that have been manufactured or supplied by persons owned by, controlled by, or subject to the jurisdiction or direction of the People's Republic of China, and is for use by a utility as a component of its Defense Critical Electric Infrastructure serving a Critical Defense Facility at a service voltage level of 69 kV or higher, from the point of electrical interconnection (at a service voltage level of 69kV or higher) with the CDF up to and including the next "upstream" transmission substation.

Attachment 1 of the "Prohibition Order Securing Critical Defense Facilities" lists the regulated equipment:

1. Power transformers with low-side voltage rating of 69 kV or higher and associated control and protection systems such as load tap changers, cooling systems, and sudden pressure relays;
2. Generator step up transformers with high-side voltage rating of 69 kV or higher and associated control and protection systems such as load tap changers, cooling system, and sudden pressure relays;
3. Circuit breakers operating at 69 kV or higher;
4. Reactive power equipment (Reactors and Capacitors) 69 kV or higher; and,
5. Associated software and firmware installed in any equipment or used in the operation of items listed in 1 through 4.

How will my company know if our components or equipment will be impacted by the Prohibition Order?

Affected utilities will receive notification from DOE within five (5) business days from the issuance of the Prohibition Order.

When will affected utilities be contacted by the Department of Energy?

If a utility is covered by the Prohibition Order, the Department will notify the utility no later than five (5) business days after issuance of the Prohibition Order.

Does the Prohibition Order affect equipment already in use by utilities?

Neither the Executive Order nor the Prohibition Order applies to transactions prior to May 1, 2020. The Prohibition Order is effective January 16, 2021.

If my utility has regulated equipment listed in the Prohibition Order should we no longer use the equipment and/or replace it?

The Department of Energy is taking a phased approach based on reducing risk to the bulk-power system. We understand some equipment has long procurement lead times and that utilities are aware of supply chain risks. The Prohibition Order does not apply to transactions prior to May 1, 2020. The Prohibition Order is effective January 16, 2021.