August 24, 2020

Deputy Assistant Secretary Charles Kosak
Office of Electricity
Department of Energy
1000 Independence Avenue SW
Washington, DC 20585
bulkpowersystemEO@hq.doe.gov

Re: Response to Executive Order 13920 Request For Information (DOE-HQ-2020-0028)

Dear Deputy Assistant Secretary Kosak—

The U.S. Energy Storage Association (ESA) respectfully offers these comments to provide a perspective from the energy storage industry, recognizing that our recommendations may be of shared interest to many industries. As the Department of Energy (DOE) considers promulgation of implementing regulations for Executive Order (EO) 13920, ESA urges DOE to implement the order in a manner that focuses on reducing regulatory uncertainty and the cost to compliance faced by U.S. businesses, many of which are already struggling to manage challenges associated with economic disruption from the COVID-19 pandemic. Additionally, ESA recommends that DOE clearly delineate the aspects of compound products that trigger compliance requirements and rely on existing standards where possible.

ESA is the national trade association dedicated to energy storage, working toward a more resilient, efficient, sustainable, and affordable electricity grid – as is uniquely enabled by energy storage. With more than 190 member companies, ESA represents a diverse group of power sector stakeholders, including independent power producers, electric utilities, energy service companies, financiers, insurers, law firms, installers, manufacturers, component suppliers and integrators involved in deploying energy storage systems, both in the U.S. and around the globe. ESA members work with a range of energy storage technologies, including battery storage systems, and many of our members work with batteries imported from abroad.

The ESA membership is part of the success story of American economic growth. Our industry is a fast-growing source of jobs and business formation in the United States, and is transforming the way Americans generate, distribute and consume electricity. In 2018, the entire U.S. energy battery storage industry (e.g., for grid service, for electric vehicles, and for consumer devices) employed over 60,000 Americans—with over half of such jobs in project planning, construction, and operations.\(^1\) We estimate that, in 2020, installations of energy storage systems in the U.S.

electric system will account for over $1.5 billion in economic activity. Based on the number of projects in the pipeline today, we expect this activity to accelerate into 2021, and reach over $4 billion that year. Indeed, the Southwest, Southeast, and Central and Midwest regions of the United States are already seeing significant job creation opportunities as a result of utility plans for over 8,000 MW of energy storage deployments in the next 10 years.

Energy storage systems have been identified by Administration officials as “a game changer” for a more resilient electric system. Secretary Brouillette has emphasized the strategic priority of energy storage, and Federal Energy Regulatory Commission Chairman Neil Chatterjee has prioritized regulations to enable storage capabilities for electric service. Members of Congress have reached the same conclusion, including Chairman Lisa Murkowski in hearings of the Senate Energy and Natural Resources Committee, as did members of the Energy Subcommittee of the House Energy & Commerce Committee. The National Governors Association also has touted the economic and security gains achieved by increased use of battery energy storage systems. The Department of Energy has identified electric grid

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3 “Energy storage is key to capturing the full value of our diverse energy resources...we will deploy the Department’s extensive resources and expertise to address the technology development, commercialization, manufacturing, valuation, and workforce challenges to position the U.S. for global leadership in the energy storage technologies of the future.” Department of Energy, 8 Jan 2020, available at https://www.energy.gov/articles/us-department-energy-launches-energy-storage-grand-challenge

4 “I say it all the time, but I’ll say it again now: storage really has the potential to be a game changer...It’s so important – so, so important – that these sources of electricity storage are able to participate on an even playing field in the wholesale power markets that we at the Commission regulate. I firmly believe that one of the best things we can do is create a regulatory environment that allows us to unleash competition in the markets. By doing so, we’ll see an increase in the deployment of storage resources, which should result in greater reliability on our grid and lower prices for consumers. That’s where FERC comes in, and it’s an ever-present goal in my mind as a regulator playing a role in this pivotal moment in our energy landscape.” See “Commissioner Chatterjee Talks Electricity Storage,” FERC Podcast, 8 July 2019, available at https://www.ferc.gov/sites/default/files/2020-05/07-10-transcript.pdf


resilience as a priority, with Assistant Secretary Bruce Walker stating that battery energy storage is the newest tool for electric utilities and their customers to achieve greater energy security and resilience. Resilience of electric service to withstand or recover from disruptions is an issue of particular concern as more and more businesses rely on electricity and computerized systems to function. As extreme weather events become more frequent, such as demonstrated this past month in outages along the East Coast due to Tropical Storm Isaias and rolling blackouts as a result of the California heatwave, reliance on energy storage systems is increasing.

RECOMMENDATION 1: DOE would lower uncertainty, risk, and cost of compliance to U.S. companies by clearly and specifically defining what equipment is included in the compliance requirements implemented pursuant to EO 13920.

While the EO does include definitions of bulk-power system electric equipment and configurations in Sections 4(a) and 4(b), the EO leaves open a wide range of potentially covered equipment that may ultimately be included in compliance requirements, with little clarity on determining what will be included. The EO defines BPS electric equipment under the broad category of “items used in bulk-power system substations, control rooms, or power generating stations.” While the EO states, “Items 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,” significant uncertainty remains as to how DOE will make such a determination. This approach imposes significant regulatory uncertainty and cost of compliance on U.S. businesses.

The consequence of a broad definition of included items and ambiguous definition of excluded items is that businesses will seek to reduce risk by presuming that all potentially eligible equipment is included in the compliance requirements until DOE explicitly determines specific equipment is excluded. Creating significant uncertainty in this manner imposes significant costs on companies seeking to manage regulatory risk. These costs will ultimately be passed on to consumer, suppressing the accelerated deployment of technologies like storage to reinforce the reliability and resilience of the bulk power system. Moreover, the burden of these costs will fall disproportionately on smaller companies that have less resources for conducting compliance activities, putting American jobs in smaller companies at risk.

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9 “You’ve heard the secretary [Rick Perry] reference storage as the ‘holy grail,’ and we believe that. It’s about having storage capability during times of emergency, during times of crisis, even during normal course of business when you are running peak load. It’s really just to provide another tool in the toolbox that improves our capacity as an industry to operate during blue sky days and black sky days.” See “Trump administration: Energy storage boosts renewables, national security,” Washington Examiner, 12 June 2019, available at https://www.washingtonexaminer.com/policy/energy/daily-on-energy-trump-administration-sees-energy-storage-as-a-national-security-tool
To fulfill the goals of the EO while reducing compliance costs to U.S. businesses, ESA respectfully submits that DOE should clearly and specifically define the equipment that is included in its compliance requirements, with the understanding that equipment not included such definitions is excluded from compliance requirements until further notice by DOE. This approach to defining included equipment clearly and specifically is consistent with Section 2(b) of the EO, which directs DOE to “…identify particular equipment or countries with respect to which transactions involving bulk-power system electric equipment warrant particular scrutiny under the provisions of this order…” Doing so will provide businesses greater certainty and reduce cost burdens to U.S. companies for compliance with federal regulations.

**RECOMMENDATION 2: DOE should create clear and specific rules to determine what “compound” BPS electric equipment is included in the compliance requirements implemented pursuant to EO 13920.**

BPS electric technologies, even if well-defined in regulatory language, vary significantly in the extent to which they integrate multiple technologies. “Compound” technologies, for example, may incorporate multiple types of hardware and may or may not include electronics components that are programmable. For example, a battery energy storage installation connected to the BPS can include battery cells, battery management systems, power control systems, and thermal management systems within integrated units. Compound BPS electric equipment can have various components sourced from different countries, and specific components do not necessarily reflect vulnerabilities of the fully operational unit that DOE might consider merit compliance. To continue the example, battery cells lack any communications capability and are used widely beyond just BPS energy storage installations, and battery management systems include only sensors and slave controllers incapable of function without external instructions. These components do not present the vulnerabilities that, for example, power control systems with integrated software may confer.

To ensure that compliance requirements are commensurate with BPS electric equipment vulnerabilities, the level of integration for compound equipment triggering compliance must be clearly identified for the purposes of identifying risks of importation from a designated foreign adversary. ESA strongly recommends that DOE clearly identify such levels. For example, battery packs used in BPS battery energy storage facilities contain only battery cells, battery management systems and physical enclosures; this compound equipment does not present vulnerabilities with which the EO is concerned and meets the criteria of “broader application of use beyond the bulk-power system” in Section 4(b) of the EO. In line with Recommendation 1, ESA recommends that DOE define the specific components in compound battery energy storage equipment that would trigger compliance requirements when imported from a designated foreign adversary. Doing so will confirm to our member companies that compliance requirements do not apply to imports of battery packs, as well as support our member companies to focus limited resources on any additional supply chain monitoring that may be necessary.
RECOMMENDATION 3: DOE should utilize existing standards and protocols where possible to implement EO 13920.

ESA member companies have robust practices in enterprise risk management, cybersecurity, and supply chain risk management. Many of these are based on existing standards and best practices suited for BPS equipment, such as compliance with NIST’s Critical Infrastructure Protection requirements and its SP 800 cybersecurity and supply chain risk protocols, as well as IEC 62443 and ISO 27001. By utilizing the existing suite of standards where possible before creating new standards, DOE would maintain a level of continuity in business practices, while still meeting its objective of BPS security. Adapting existing standards where appropriate for the private sector would also encourage wider adoption by the international community.

ESA appreciates the opportunity to comment on the DOE Request for Information. We welcome further opportunities to describe the architecture and sourcing of our industry’s equipment when put into service for BPS functions, in support of DOE objectives. We look forward to working with DOE to meet the necessity of reducing foreign threats to the bulk power system in a regimen that ensures compliance burdens match the vulnerabilities and limit compliance costs to American businesses.

Sincerely,

[Signature]

Jason Burwen
Vice President, Policy
Energy Storage Association