## S. 2333, Energy Cybersecurity Act of 2019

Creates several programs within DOE to identify, enhance, and test supply chain vulnerabilities and response capabilities between the DOE and other agencies, national labs, and private industry. The bill looks to secure energy networks, bolster industry participation in information sharing, address the cybersecurity workforce, enhance monitoring tools, and expand DOE's cooperation with the intelligence community.

**Energy Sector Cybersecurity RD&D Program:** The Secretary shall carry out a program to develop advanced cybersecurity applications and technologies for the energy sector

- to identify and mitigate vulnerabilities, including dependencies on other critical infrastructure and impacts from weather and fuel supply
- to advance security of field devices and third-party control systems including
    - systems for generation, transmission, distribution, end use, and market functions
    - specific electric grid elements including advanced metering, demand response, distributed generation, and electricity storage
    - forensic analysis of infected systems, and
    - secure communications
- to assess risks to the energy sector, including implementing an all-hazards approach to communications, control systems, and power systems architecture
- to perform pilot demonstration projects with the energy sector to gain experience with new technologies and to develop a workforce development curricula for energy sector-related cybersecurity

*Authorized Appropriations*: $65,000,000 for each fiscal years 2020 through 2028

**Energy Sector Cyberresillience Program**: The Secretary shall establish a cybertesting and mitigation program to identify vulnerabilities of energy sector supply chain products to known threats; oversee third-party cybertesting; and, develop procurement guidelines for energy sector supply chain components.
*Authorized Appropriations*: $15,000,000 for each of fiscal years 2020 through 2028 to carry out this program.

**Operational Support for Cyberresillience Program**: The Secretary shall carry out a program to

- enhance and periodically test emergency response capabilities of DOE & coordination of DOE with other agencies, the National Laboratories, and private industry
- expand cooperation of DOE with the intelligence communities for energy sector-relating threat collection and analysis
- enhance tools of DOE and ES-ISAC for monitoring the status of the energy sector
- enhance participation in ES-ISAC, and
- provide technical assistance to small electrical utilities for purposes of assessing cybermaturity level.

*Authorized Appropriations*: $10,000,000 for each fiscal years 2020 through 2028 to carry out this program.

**Modeling and Assessing Risk**: The Secretary shall develop an advanced energy security program to secure energy networks, including electric, natural gas, and oil exploration, transmission, and delivery with the objective to increase the functional preservation of the electric grid, oil, and natural gas operations in the face of natural and human-made threats and hazards, including electric magnetic pulse and geomagnetic disturbances
*Authorized Appropriations:* $10,000,000 for each fiscal years 2020 through 2028 to carry out this program.

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**Cosponsors**: Senator Heinrich
**Legislative History:** This legislation was introduced as a part of the Energy and Natural Resources Act of 2017 (S. 1460) during the 115th Congress and received a full committee hearing by the Senate ENR on 9/19/2017.
This legislation was also introduced as a part of the Energy Policy Modernization Act of 2015 (S. 2012) during the 114th Congress. As a part of this package, this legislation was reported favorably by Senate ENR on 9/09/2015 and was passed by the Senate as amended by a vote of 85-12.