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# DOE Office of Electricity Delivery and Energy Reliability: Organization and FY2019 Budget Request

## Overview

The Department of Energy's (DOE's) Office of Electricity Delivery and Energy Reliability (OE) has the lead role in addressing electricity infrastructure issues. Working with the Department of Homeland Security, OE seeks to ensure security and reliability of critical energy infrastructure (not just electric power). The office has a key role in developing energy storage, supporting the grid integration of renewable energy, and intergovernmental planning for grid emergencies. Issues for Congress primarily involve the program's appropriations and potential changes to the organizational structure and priorities of OE.

## Existing Organization and Function

OE manages both research and development (R&D) programs and deployment programs. The largest share of OE funding (e.g., about 80% of the FY2018 appropriation) goes to R&D on technology to improve grid reliability, resiliency, security, efficiency, flexibility, and controllability. The R&D programs are usually conducted in cost-shared partnership with private sector firms. The remainder of OE funding (e.g., about 20% of the FY2018 appropriation) goes to a variety of planning and other operational areas. Deployment and technical assistance programs are conducted mainly with state and tribal governments. Each OE program office has its own set of goals and objectives. The office plays the central role in two of DOE's broad cross-cutting initiatives: grid modernization and cybersecurity.

In 2007, DOE established a new Assistant Secretary for OE and, thereby, elevated the office to an administrative status equal to that of the major energy technologies (nuclear, fossil, renewables). OE currently has five deputy assistant secretaries, each of whom reports to the Assistant Secretary. The corresponding five offices are: Power Systems Engineering R&D, National Electricity Delivery, Infrastructure Security and Energy Restoration, Energy Infrastructure Modeling and Analysis, and Advanced Grid Integration.

## OE Appropriations

OE receives funding from the annual Energy and Water Development (E&W) appropriations bill. Under the Consolidated Appropriations Act, 2018, P.L. 115-141, OE will receive $248 million for FY2018, approximately $18 million more than the enacted FY2017 level of $230 million (the Consolidated Appropriations Act of 2017, P.L. 115-31, Division D).

## Executive Branch Actions

For FY2019, the Trump Administration requested $157 million for OE—roughly a 37% reduction from the FY2018 enacted level of $248 million. With the exception of infrastructure security and energy restoration (which would rise 50%), the Administration proposes reductions for all programs, including energy storage, resilient distribution systems, and transmission reliability, compared to FY2018 appropriations. The Administration also proposes that OE-funded federal full-time equivalent employees (FTEs) would be reduced from 118 for FY2017 to 99 for FY2019—roughly a 16% reduction (FTEs for FY2018 enacted not reported).

The FY2019 request proposes to split the Electricity Delivery and Energy Reliability appropriation into two appropriations: Electricity Delivery; and Cybersecurity, Energy Security, and Energy Reliability (CESER). The request states that proposing a separate account for CESER "supports the Administration's commitment to protecting energy infrastructure security."

## Legislative Issues

There are a number of issues related to DOE's work on electricity delivery and energy reliability for consideration in the 115th Congress. Funding of OE for FY2019 is likely to be a key issue. Concerns may include not only the level of OE appropriations, but also which activities OE should support. Congress might question whether the goals of the office can be met with the proposed reorganization and funding reductions in the Administration's request.

In addition to appropriations, several bills before the 115th Congress would propose changes to DOE's activities within the electricity delivery and energy reliability space.

- H.R. 4120 would establish an interdisciplinary research, development, and demonstration program (RD&D) to improve the cybersecurity and cyberresiliency of the electric grid.
- H.R. 5174 would create an assistant secretary position at DOE to focus on emergencies and security.
- H.R. 5239 would establish a voluntary Cyber Sense program at DOE to identify and promote cybersecure products for use in the bulk power system.
- H.R. 5240 would create a program at DOE to promote and advance physical security and cybersecurity of electric utilities and prioritize small or rural utilities.

- S. 1460 would address numerous energy and natural resources issues and includes provisions that would establish RD&D priorities related to energy sector cybersecurity and cyberresilience, grid energy storage, grid modeling, micro-grid systems, grid modernization, and evaluating grid performance.
- S. 1851 would establish an energy storage RD&D program and technical assistance and grant program at DOE.
- S. 2444 would create new programs at DOE to address vulnerabilities to the power system. It is related to S. 1460.
- S. 2445 would promote new technologies related to microgrids and electric cars. It is also related to S. 1460.

**Table 1. OE FY2017-FY2018 Enacted Appropriations and FY2019 Budget Request**
(in thousands of dollars)

| | | | | Requested Change from FY2018 | |
|---|---|---|---|---|---|
| | **FY2017 Enacted** | **FY2018 Enacted** | **FY2019 Request** | **Dollars** | **Percent** |
| **OE, Total** | **230,000** | **248,329** | **157,109** | **-91,220** | **-37%** |
| *Electricity Delivery* | | | | | |
| Transmission Reliability[a] | 36,000 | 39,000 | 13,000 | -26,000 | -67% |
| Resilient Distribution Systems | 50,000 | 38,000 | 10,000 | -28,000 | -74% |
| Energy Storage | 31,000 | 41,000 | 8,000 | -33,000 | -81% |
| Transformer Resilience and Advanced Components | 6,000 | 7,000 | 5,000 | -2,000 | -29% |
| Transmission Permitting and Technical Assistance | 7,500 | 7,000 | 6,000 | -1,000 | -14% |
| *CESER* | | | | | |
| Cybersecurity for Energy Delivery Systems | 62,000 | 75,829 | 70,000 | -5,829 | -8% |
| Infrastructure Security and Energy Restoration | 9,000 | 12,000 | 18,000 | 6,000 | 50% |
| *Program Direction* | *28,500* | *28,500* | *27,109* | *-1,391* | *-5%* |
| Program Direction, Electricity Delivery | — | — | 19,309 | — | — |
| Program Direction, CESER | — | — | 7,800 | — | — |

**Source:** DOE, FY2019 Budget Request vol. 3, part 1 (March 2018). P.L. 115-141 Division D Explanatory Statement.
**Notes:** OE = DOE's Office of Electricity Delivery and Energy Reliability; Electricity Delivery = Proposed Office of Electricity Delivery; CESER = Proposed Office of Cybersecurity, Energy Security, and Emergency Response. The FY2019 Budget Request also includes $415,000 in rescissions of prior year unobligated balances for FY2017 that are not included in the table.
a. Transmission Reliability is titled Transmission Reliability and Resilience in the FY2019 Budget Request.

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