Office of Electricity

(dollars in thousands)

	FY 2020 Enacted	FY 2021 Request	FY 2021 vs. FY 2020	
Transmission Reliability and Resilience	57,000	55,950	-1,050	-1.8%
Resilient Distribution Systems	45,000	18,300	-26,700	-59.3%
Energy Storage	56,000	83,500	+27,500	+49.1%
Transformer Resilience & Advanced Components	7,000	9,000	+2,000	+28.6%
Defense Critical Energy Infrastructure Energy Mission Assurance	…	1,650	+1,650	N/A
Transmission Permitting & Technical Assistance	7,000	7,000	…	…
Program Direction	18,000	19,645	+1,645	+9.1%
Total, OE	190,000	195,045	+5,045	+2.7%

- The Office of Electricity's priorities are the North American Energy Resiliency Model, megawatt-scale energy storage, revolutionizing sensing technology utilization, and transmission policy.
- **Transmission Reliability and Resilience** includes support for two initiatives, the North American Energy Resilience Model (NAERM) and Sensor and Data Analytics.
  - An integrated NAERM ($21.0M; -$4.0M) will be a first-of-its-kind tool providing real-time situational awareness and analysis of emergency events for optimal operation, recovery, and planning. The FY 2021 request completes planned development funding for NAERM.
  - Sensor and data analytics R&D ($8.5M; +$3.5M) will allow early detection of power disturbance events and is critical to enabling NAERM development with key sensor data feeds.
- **Resilient Distribution Systems** supports innovative technologies, tools, and techniques to enable industry to modernize the distribution portion of the electric delivery system. Reductions are primarily for the Coordinated Management of Microgrids and Networked Distributed Energy Resources (COMMANDER) National Testbed Lab (-$10.0M), which was fully funded in FY 2020, and for the Advanced Distribution Management Systems platform, which is transitioned in FY 2021 to industry for maintenance and further development (-$9.0M).
- **Energy Storage** supports grid-related objectives of DOE's Energy Storage Grand Challenge (ESGC), and includes a $39.0M increase for design and construction funding for an OE Grid Storage Launchpad (GSL) aimed at accelerating materials development, testing, and independent evaluation of battery materials and battery systems for grid applications. Partially offsetting the GSL increase is an $8.5M reduction for two congressionally directed projects that were fully funded in FY 2020.
- **Transformer Resilience and Advanced Components** supports hardening, response, and restoration of electric infrastructure by addressing the unique challenges facing transformers and other critical grid components responsible for carrying and controlling electricity from where it is generated to where it is needed.
- **Defense Critical Energy Infrastructure (DCEI) Energy Mission Assurance** will identify, evaluate, prioritize, and assist in developing executable strategies to strengthen the energy infrastructure systems that supply critical infrastructure needed to ensure government continuity following severe natural and manmade disasters.
- **Transmission Planning and Technical Assistance** promotes a secure and resilient electricity system through regulatory and policy solutions.
- **Program Direction** provides for the costs associated with the Federal workforce and supporting contractual services.