

TO: Energy Committee

FROM: Rich Anderson

DATE: October 18, 2018



RE: Department of Energy FY 2019 Appropriations and Renewable Energy

Public Law No: 115-244 (09/21/2018)

This bill provides FY2019 appropriations for 3 of the 12 regular FY2019 appropriations bills, this review focuses on the Department of Energy Appropriations Act, 2019.

Highlights:

- Congressional appropriations for the four renewables (geothermal, solar, water, wind) is \$527.5 million:
 - An increase of 1.5% over FY2018
 - 66% greater than the President's 2019 Budget Request at \$175 million, (Table 1).

Table 1:

Renewable Power	FY 2018 Annualized	FY 2019 President's Budget Request	FY 2019 Enacted
	\$ mill	\$ mill	\$ mill
Solar	241.6	67.0	246.5
Wind	92.0	33.0	92.0
Water	105.0	45.0	105.0
Geothermal	80.9	30.0	84.0
Totals	519.5	175.0	527.5

- In general, the Congress gave a 14% increase to the Department of Energy's Energy Efficiency and Renewable Energy (EERE) Program for FY2019 \$2.379 billion (Table 2), compared to the actual spend in 2018 \$2.04 billion.

FY2019 Appropriations

HR5895 Division A – Title III Department of Energy Programs

Table 2: FY2019 Appropriations (HR 5895 - Public Law 115-244 9/21/2018)

Departmental Programs	\$
Energy Efficiency and Renewable Energy Program (EERE)	2.379 billion
Cybersecurity, Energy Security and Emergency Response	120 million
Electricity Delivery	156 million
Nuclear Energy	1.326 billion
Fossil Energy Research and Development	740 million
North-east Home Heating Oil Reserve	10 million
Energy Information Administration	125 million
Science	6.585 billion
Federal Energy Regulatory Commission	369.9 million
Advance Technology Vehicles	5 million
Innovative Technology Loan Guarantee Program	33 million

Below is the relevant part of the public conference report from H.R. 5895 describing specific directions from Congress to the Department of Energy programs.

Solar Energy

Within available funds, the agreement provides:

- \$72,000,000 for Photovoltaic Research and Development;
- \$45,000,000 for Systems Integration;
- \$35,000,000 for Balance of Systems Soft Cost Reduction, of which \$1,000,000 is for the Solar Ready Vets program and \$5,000,000 is to re-invigorate the National Community Solar Partnership program; and,
- \$30,000,000 for Innovations in Manufacturing Competitiveness.
- \$4,050,000 is provided for the five photovoltaic Regional Test Centers (RTCs).
 - Further, not later than 90 days after the enactment of this Act, the Department shall submit to the Committees on Appropriations of both Houses of Congress a plan for transitioning the RTCs to a self-sustaining business model as originally envisioned.
- funds for concentrating solar power research, development, and demonstration, \$5,000,000 is provided for competitively selected projects focused on advanced thermal desalination techniques.
- the conferees include \$10,000,000 for research and development to support inherently scalable production methods such as solution processing, roll-to-roll manufacturing, the science of inherent material stability, and ultrahigh efficiency through tandem manufacturing.

Wind Energy

- \$10,000,000 for distributed wind and
 - not less than \$10,000,000 for existing national-level offshore wind test facilities.
- \$30,000,000 for the National Wind Technology Center,
 - which shall include the development of a large-scale research platform to support next-generation wind energy science and manufacturing and systems integration of multiple energy generation, consumption, and storage technologies with the grid.

- The Department is directed to support the advancement of innovative technologies for offshore wind development, including freshwater, deep water, shallow water, and transitional depth installations.
- Further, the Department is directed to support innovative offshore wind demonstration projects, including efforts to optimize development, design, construction methods, testing plans, and economic value proposition.
- \$10,000,000 for a competitively awarded solicitation for additional project development for offshore wind demonstration projects.
- The Department is also directed to support the deployment and testing of scale floating wind turbines designed to reduce energy costs.
- \$30,000,000 for the Department to prioritize early-stage research on materials and manufacturing methods and advanced components that will enable accessing high-quality wind resources, on development that will enable these technologies to compete in the marketplace without the need for subsidies, and on activities that will accelerate fundamental offshore-specific research and development, such as those that target technology and deployment challenges unique to U.S. waters.

Water Power

- \$70,000,000 for marine and hydrokinetic technology research, development, and deployment activities, including research into mitigation of marine ecosystem impacts of these technologies.
- The Department is directed to continue development of the open-water wave energy test facility with previously provided funds.
- \$30,000,000 for a balanced portfolio of competitive solicitations to support industry- and university-led research, development, and deployment of marine and hydrokinetic technologies;
 - and support wave, ocean current, tidal and in-river energy conversion components and systems across the high- and low-technology readiness spectrum to increase energy capture, reliability, survivability, and integration into local or regional grids for lower costs and to assess and monitor environmental effects.
- \$8,000,000 to support collaborations between universities, Marine Renewable Energy Centers, and the national laboratories
 - and not less than \$5,000,000 to prioritize infrastructure needs at the marine and hydrokinetic technology testing sites operated by the Marine Renewable Energy Centers.
- the Department is directed to continue its coordination with the U.S. Navy on marine energy technology development for national security applications at the Wave Energy Test Site and other locations.

- \$35,000,000 is provided for conventional hydropower and pumped storage activities,
 - including \$6,600,000 for the purposes of section 242 of the Energy Policy Act of 2005.
- The agreement provides \$5,000,000 for a competitive funding opportunity for industry-led research, development, and deployment of cross-cutting energy converter technologies for run-of-river and tailrace applications to better utilize underdeveloped low-head and other hydropower resources.

Geothermal Technologies

- \$6,000,000 for Systems Analysis. The Department is directed to continue its efforts to identify prospective geothermal resources in areas with no obvious surface expressions.