

**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:

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

- 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)

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

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.

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## *Solar Energy*

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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.

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## *Wind Energy*

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- \$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.

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## *Water Power*

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- \$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.

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## *Geothermal Technologies*

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- \$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.