
The 2005 Energy Policy Act provided limited incentives for new nuclear energy development. That legislation, and other legislation enacted before and since 2005, provided large incentives for renewable forms of energy. Federal support for renewable energy dwarfs federal spending on nuclear energy.

Nuclear Production Tax Credits. The 2005 Energy Policy Act (2005 EPAct) provided a production tax credit of 1.8 cents per kilowatt-hour of electricity produced by new nuclear power plants. The tax credit is available only for the first 6,000 megawatts of new nuclear generating capacity, and lasts only for the first eight years of operation.

- To qualify for the nuclear production tax credit, a new nuclear power plant must be in service on or before December 31, 2020. Because of this, only two projects are likely to qualify – the Vogtle 3 and 4 plants being built by Georgia Power Co. and the Summer 2 and 3 plants being built by South Carolina Electric & Gas.
- These projects together represent approximately 4,400 megawatts of capacity; it is unlikely that the full 6,000 megawatts of tax credit capacity made available by EPAct 2005 will be used. The companies cannot claim the tax credit until the new reactors start producing electricity.
- These companies, and their partners in these two projects, based their decisions to build these projects partly on the production tax credit. Eliminating the credit retroactively would seriously compromise both projects.

Renewable Energy Tax Credits. Compared to the limited production tax credit available to new nuclear power plants, renewable energy sources receive several more generous tax credits and cash grants:

- Wind energy (and certain other forms of renewable energy) receive a production tax credit of 2.3 cents per kilowatt-hour for the first 10 years of operation (compared to the eight years provided to nuclear power). The wind energy production tax credit was established in the 1992 Energy Policy Act, 13 years before the nuclear tax credit.
- The maximum value of the nuclear production tax credit is $6 billion over eight years, or $750 million per year. In 2015, the renewable energy production tax credit cost the U.S. Treasury $2.6 billion, according to the Joint Committee on Taxation. From 1992 to 2010, the renewable credit cost the Treasury $7.9 billion. Between 2015 and 2019, the renewable credit is expected to cost an additional $17.6 billion.
- The production tax credit for wind energy escalates with inflation; the nuclear tax credit does not.

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3 Id., Joint Committee on Taxation.
Under the American Recovery and Reinvestment Act of 2009, renewable energy developers eligible for the production tax credit could instead take a 30-percent investment tax credit or a cash grant. Most elected to take the cash grant. As of March 15, 2016, $25 billion had been paid out under the 1603 grant program to over 100,000 projects.  

Solar energy facilities receive a 30-percent investment tax credit (ITC). In 2015, the solar ITC cost the Treasury $1 billion. Between 2015 and 2019, the solar ITC will cost the Treasury $7.7 billion, according to the Joint Committee on Taxation.  

Under the budget deal of December 2015, Congress extended both renewable production and investment tax credits. The wind production tax credit continues at $23/MWh through 2016, then starts phasing down – 80 percent of its present value in 2017, 60 percent in 2018 and 40 percent in 2019. Solar projects will continue to receive the 30 percent solar investment tax credit as long as they’re under construction by December 2019. The ITC will fall to 26 percent for projects starting construction in 2020 and 22 percent for projects starting construction in 2021, then remain at 10 percent permanently beginning in 2022.  

Clean Energy Loan Guarantees. The 2005 Energy Policy Act also created a loan guarantee program to stimulate investment in clean energy technologies, including new nuclear energy facilities and renewable energy facilities. Nuclear energy and renewable energy are treated very differently, however.  

- Nuclear energy facilities are required to pay the so-called credit subsidy cost – i.e., the cost to the federal government of providing the loan guarantee – thus ensuring that nuclear energy developers have a large stake in the project’s success. For renewable energy projects, the federal government pays the credit subsidy cost.  
- The Department of Energy has closed one loan guarantee for a nuclear energy project for approximately $8.3 billion. By contrast, DOE has guaranteed loans of approximately $14 billion to 27 renewable energy projects.  

Federal energy incentives have not favored nuclear energy at the expense of other energy sources, including renewables, such as wind and solar. The largest beneficiaries of federal energy incentives have been oil and gas, receiving more than half of all incentives provided since 1950.  

- The federal government’s primary incentive to nuclear energy has been in the form of R&D. Since the end of funding for the breeder reactor program in 1988, federal spending on nuclear energy research has been less than spending on coal research and since 1994 has also been less than spending on renewable energy research.  
- Oil and gas received almost 60 percent ($490 billion) of federal spending to support energy since 1950. Oil alone received three-fourths ($369 billion) of this amount. (See table below.)  
- Coal received approximately 12 percent ($104 billion) of federal spending.  
- Hydro received approximately 11 percent ($90 billion) of federal spending.  
- Wind, solar and geothermal received approximately 10 percent ($81 billion).  
- Nuclear received approximately 9 percent ($73 billion) of federal spending.  

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4 Overview and Status Update of the §1603 Program, Department of the Treasury, January 13, 2016.  
5 Id., Joint Committee on Taxation.  
Nuclear energy was the beneficiary of about one-half ($74 billion) of the government’s spending on energy R&D, but almost 60 percent of the total spent on nuclear energy research since 1950 was spent before 1975.

<table>
<thead>
<tr>
<th>TYPE OF INCENTIVE</th>
<th>ENERGY SOURCE (Billion $)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oil</td>
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<tr>
<td>Tax Benefits</td>
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<tr>
<td>Cost of Regulation</td>
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<tr>
<td>R&amp;D</td>
<td>8</td>
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<tr>
<td>Other (grants, cost of services and programs provided by federal government, etc.)</td>
<td>41</td>
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<tr>
<td>Total</td>
<td>369</td>
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<tr>
<td>Share</td>
<td>44%</td>
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\(^8\) Renewables are primarily wind and solar energy.

April 2016