

S. 2668, Solar Energy Research and Development Act of 2019

As ordered reported by the Senate Committee on Energy and Natural Resources on November 19, 2019

By Fiscal Year, Millions of Dollars	2020	2020-2024	2020-2029
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Increase or Decrease (-) in the Deficit	0	0	0
Spending Subject to Appropriation (Outlays)	5	658	1,104
Statutory pay-as-you-go procedures apply?	No	Mandate Effects	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2030?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No

S. 2668 would authorize the appropriation of \$270 million annually through 2024 for the Department of Energy (DOE) to research, develop, test, evaluate, and demonstrate solar energy technologies. The bill would recodify existing DOE activities related to those technologies and would direct the department to establish new programs. Under S. 2668, DOE would:

- Award grants and provide technical assistance for entities to research, develop, and demonstrate various solar energy technologies;
- Perform precompetitive research and development activities;
- Maintain or establish demonstration facilities;
- Establish prize competitions;
- Conduct education and outreach activities;
- Create a solar energy technologies database in coordination with other federal agencies; and
- Submit reports and analyses.

In 2019, the Congress appropriated \$246 million for DOE to conduct activities related to solar energy. Because CBO scores continuing resolutions on an annualized basis, in 2020

CBO assumes that the same amount of funds will be available under the current continuing resolution (Public Law 116-69). As a result, CBO estimates that S. 2668 would authorize an increase in spending subject to appropriation in 2020 of \$24 million, the difference between the authorized amount and the annualized amount under the continuing resolution.

CBO estimates that implementing S. 2668 would cost \$658 million over the 2020-2024 period and \$446 million after 2024, assuming appropriation of the specified amounts and that the bill is enacted near the end of 2019. Estimated outlays are based on historical spending patterns for similar programs. The costs of the legislation, detailed in Table 1, would fall within budget function 270 (energy).

Table 1.
Estimated Increases in Spending Subject to Appropriation Under S. 2668

	By Fiscal Year, Millions of Dollars										2020-2024	2020-2029
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
Authorization ^a	24	270	270	270	270	0	0	0	0	0	1,104	1,104
Estimated Outlays	5	61	141	206	245	209	135	67	27	8	658	1,104

a. S. 2668 would authorize the appropriation of \$270 million in 2020 for DOE to conduct activities related to solar energy research, development, and demonstration. However, CBO estimates that \$246 million has been allocated on an annualized basis from funds made available under the current continuing resolution (Public Law 116-69), which provided appropriations through December 20, 2019. Thus, the estimated authorization for 2020 (\$24 million) is equal to the specified amount (\$270 million) minus the annualized amount from the continuing resolution (\$246 million).

On August 28, 2019, CBO transmitted a [cost estimate for H.R. 3597](#), the Solar Energy Research and Development Act of 2019, as ordered reported by the House Committee on Science, Space, and Technology on July 24, 2019. The two pieces of legislation are similar, but CBO’s cost estimates are different because of differences in the authorized amounts. The cost estimate for S. 2668 also reflects enactment of the continuing resolution for 2020.

The CBO staff contact for this estimate is Aaron Krupkin. The estimate was reviewed by H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis.