



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

August 3, 2018

H.R. 589 **Department of Energy Research and Innovation Act**

As passed by the United States Senate on July 23, 2018

SUMMARY

H.R. 589 would amend the objectives of several programs administered by the Department of Energy (DOE). The legislation also would establish a low-dose radiation research program and recodify DOE's authority to carry out activities through its Office of Science.

Assuming appropriation of the necessary amounts, CBO estimates that implementing H.R. 589 would cost \$83 million over the 2019-2023 period.

Enacting the legislation would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

CBO estimates that enacting H.R. 589 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2029.

H.R. 589 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA).

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary effect of H.R. 589 is shown in the following table. The costs of the legislation fall within budget function 250 (general science, space, and technology).

	By Fiscal Year, in Millions of Dollars						2019- 2023
	2018	2019	2020	2021	2022	2023	
INCREASES IN SPENDING SUBJECT TO APPROPRIATION							
Estimated Authorization Level	0	18	18	19	19	20	94
Estimated Outlays	0	10	15	19	19	20	83

BASIS OF ESTIMATE

For this estimate, CBO assumes the legislation will be enacted near the start of 2019 and that the estimated amounts will be appropriated each year.

Spending Subject to Appropriation

The legislation would largely codify existing DOE programs, including activities within DOE’s Office of Science, which supports basic research in the physical sciences and operates a system of national scientific user facilities. The America Competes Reauthorization Act of 2010 last authorized the appropriation of \$6 billion in 2013 for those purposes. The office received an appropriation of about \$6.3 billion in 2018.

The legislation also would direct DOE to carry out a low-dose radiation research program that CBO expects would be similar to another DOE program that was terminated in 2016. Based on the amount of funding that program received in 2016, and based on historical spending patterns for similar activities, CBO estimates that implementing this provision would cost \$83 million over the 2019-2023 period.

PAY-AS-YOU-GO CONSIDERATIONS: None.

INCREASE IN LONG-TERM DIRECT SPENDING AND DEFICITS

CBO estimates that enacting H.R. 589 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2029.

MANDATES

H.R. 589 contains no intergovernmental or private-sector mandates as defined in UMRA.

PREVIOUS CBO ESTIMATE

On August 1, CBO transmitted a cost estimate for H.R. 589, the Department of Energy Research and Innovation Act, as passed by the House of Representatives on January 24, 2017. That version of the act would increase direct spending by \$10 million over the 2019-2023 period and spending subject to appropriation by about \$3.3 billion over the same period.

The estimates differ because H.R. 589 as passed by the Senate does not contain provisions on nuclear energy innovation capabilities that CBO estimates would increase both direct spending and spending subject to appropriation. Both acts contain a provision on low-dose related research and CBO's estimated costs for that provision are the same for both versions of the legislation.

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