



CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE

December 18, 2017

H.R. 4376
Department of Energy Research Infrastructure Act of 2017

*As ordered reported by the House Committee on Science, Space, and Technology
on November 15, 2017*

SUMMARY

H.R. 4376 would authorize the appropriation of funds to support the upgrade and construction of research equipment and facilities administered by the Department of Energy's (DOE's) Office of Science. CBO estimates that implementing H.R. 4376 would cost \$836 million over the 2018-2022 period, assuming appropriation of the authorized amounts.

Enacting H.R. 4376 would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

CBO estimates that enacting H.R. 4376 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

H.R. 4376 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. 4376 is shown in the following table. The cost of this legislation falls within budget function 250 (general science, space, and technology).

	By Fiscal Year, in Millions of Dollars					2018- 2022
	2018	2019	2020	2021	2022	
INCREASES IN SPENDING SUBJECT TO APPROPRIATION						
Advanced Light Source Upgrade						
Authorization Level	20	50	80	80	52	282
Estimated Outlays	11	34	62	76	65	247
Linac Coherent Light Source II Upgrade ^a						
Authorization Level	0	55	80	80	54	269
Estimated Outlays	0	30	61	76	66	233
Facility for Rare Isotope Beams ^b						
Authorization Level	2	103	104	105	106	420
Estimated Outlays	1	57	88	104	105	357
Total						
Authorization Level	22	208	264	265	212	971
Estimated Outlays	12	121	211	256	236	836

Numbers may not add up to totals because of rounding.

- a. H.R. 4376 would authorize the appropriation of \$20 million in 2018 for upgrades to the Linac Coherent Light Source II. On an annualized basis, Public Law 115-90 provided \$188 million in 2018 for this project. As a result, CBO estimates that H.R. 4376 would not authorize an increase in spending subject to appropriation in 2018.
- b. H.R. 4376 would authorize the appropriation of \$101 million in 2018 for construction of the Facility for Rare Isotope Beams. On an annualized basis, Public Law 115-90 provided \$99 million in 2018 for this project. As a result, CBO estimates that H.R. 4376 would authorize an increase in spending subject to appropriation in 2018 by \$2 million, the difference between the authorized amount and annualized appropriated amount.

BASIS OF ESTIMATE

Spending Subject to Appropriation

Under current law, DOE's Office of Science supports basic research in the physical sciences and operates a system of national scientific user facilities. The office received an appropriation of \$5.4 billion in 2017 and the same amount on an annualized basis for 2018; that amount includes funding for construction and upgrades of equipment and research facilities. Under current law, no specific sums are authorized to be appropriated to DOE for those purposes after 2018.

H.R. 4376 would authorize appropriations totaling \$971 million over the 2018-2022 period for the following specific projects:

- \$282 million for upgrades to the Advanced Light Source;
- \$269 million for upgrades to the Linac Coherent Light Source II; and
- \$420 million for construction of the Facility for Rare Isotope Beams.

The bill also would authorize the appropriation of \$53 million in 2023 and \$6 million in 2024 for those projects.

According to DOE, the upgrade of the Advanced Light Source is in the design phase, and the upgrade of the Linac Coherent Light Source II and construction of the Facility for Rare Isotope Beams are nearing completion. In 2017, the agency spent \$300 million for those two projects.

Based on historical spending patterns, CBO estimates that if the authorized amounts are appropriated, implementing H.R. 4376 would cost \$836 million over the 2018-2022 period and \$194 million after 2022.

PAY-AS-YOU-GO CONSIDERATIONS: None.

INCREASE IN LONG-TERM DIRECT SPENDING AND DEFICITS

CBO estimates that enacting H.R. 4376 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2028.

MANDATES

H.R. 4376 contains no intergovernmental or private-sector mandates as defined in UMRA.

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