

At a Glance

H.R. 2225, National Science Foundation for the Future Act

As ordered reported by the House Committee on Science, Space, and Technology on June 15, 2021

By Fiscal Year, Millions of Dollars	2021	2021-2026	2021-2031
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Increase or Decrease (-) in the Deficit	0	0	0
Spending Subject to Appropriation (Outlays)	0	44,670	75,871

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 2032?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No

The bill would

- Authorize appropriations totaling about \$80 billion over the 2022-2026 period for activities of the National Science Foundation (NSF)
- Establish a science and engineering directorate within the NSF
- Create new and codify existing NSF grant programs

Estimated budgetary effects would mainly stem from

- Spending of the authorized amounts

Detailed estimate begins on the next page.

Bill Summary

H.R. 2225 would authorize appropriations totaling \$79.7 billion over the 2022-2026 period for activities of the National Science Foundation (NSF). The bill also would establish a science and engineering directorate within the NSF, create new grant programs, and codify existing ones.

Estimated Federal Cost

The estimated budgetary effect of H.R. 2225 is shown in Table 1. The costs of the legislation fall within budget function 250 (general science, space, and technology).

Table 1.							
Estimated Increases in Spending Subject to Appropriation Under H.R. 2225							
	By Fiscal Year, Millions of Dollars						
	2021	2022	2023	2024	2025	2026	2021-2026
Section 4 Authorizations							
Authorization	0	12,505	14,621	15,945	17,005	17,939	78,015
Estimated Outlays	0	1,710	6,060	9,620	12,100	13,970	43,460
Advanced Technological Education ^a							
Authorization	0	150	0	0	0	0	150
Estimated Outlays	0	18	53	39	23	15	148
Section 6 Authorizations ^a							
Authorization	0	357	250	250	250	250	1,357
Estimated Outlays	0	45	158	210	231	248	892
Section 8 Authorizations ^a							
Authorization	0	47	9	9	9	9	83
Estimated Outlays	0	12	18	15	12	12	69
Entrepreneurial Fellowships ^a							
Authorization	0	100	0	0	0	0	100
Estimated Outlays	0	25	35	20	10	10	100
Other Activities							
Estimated Authorization	0	*	*	*	*	*	1
Estimated Outlays	0	*	*	*	*	*	1
Total Changes							
Estimated Authorization	0	13,159	14,880	16,204	17,264	18,198	79,706
Estimated Outlays	0	1,810	6,324	9,904	12,376	14,255	44,670

Components may not sum to totals because of rounding; * = between zero and \$500,000.

a. The bill would authorize the appropriation of specific amounts over the 2022-2026 period for multiple programs but does not specify amounts for any year in that period. For this estimate, CBO has assumed that the full amount will be provided in 2022. That assumption reflects \$150 million for Advanced Technological Education, \$107 million for Section 6 Authorizations, \$38 million for Section 8 Authorizations, and \$100 million for Entrepreneurial Fellowships.

Basis of Estimate

For this estimate, CBO assumes that the legislation will be enacted late in fiscal year 2021 and that the authorized amounts will be appropriated in each year. Estimated outlays are based on historical spending patterns for the affected and similar programs.

H.R. 2225 would authorize appropriations totaling \$79.7 billion over the 2022-2026 period. Assuming appropriation of those amounts, CBO estimates that implementing the bill would cost \$44.7 billion over that same period and \$75.9 billion over the 2022-2031 period.

Section 4 Authorizations

Multiple provisions in section 4 would authorize the appropriation of specific amounts for each fiscal year for the NSF, including amounts for the new science and engineering directorate. Most of those amounts would be allocated to the NSF's research programs but smaller amounts would be available for education grants, major research equipment, and agency operations. In 2021, the agency received appropriations totaling \$8.4 billion. CBO estimates that implementing section 4 would cost about \$43.5 billion over the 2022-2026 period.

Advanced Technological Education

Section 5 would authorize the appropriation of \$150 million over the 2022-2026 period for the agency's Advanced Technological Education grant program. The bill does not specify how much should be appropriated in each year so for this estimate, CBO has assumed that the full amount would be appropriated in 2022. In 2021, the NSF allocated \$75 million for that program. CBO estimates that implementing the provision would cost \$148 million over the 2022-2026 period.

Section 6 Authorizations

Multiple provisions in section 6 would authorize the following appropriations:

- \$107 million for science, technology, engineering, and mathematics (STEM) grants to tribal colleges and universities over the 2022-2026 period. The bill does not specify how much should be appropriated in each year so for this estimate, CBO has assumed that the full amount would be appropriated in 2022.
- \$150 million annually for grants to develop innovative approaches to engage and retain students from diverse backgrounds in STEM programs.
- \$100 million annually for grants to build research capacity at certain minority-serving institutions of higher education.

CBO estimates that implementing those provisions would cost \$892 million over the 2022-2026 period.

Section 8 Authorizations

Section 8 would authorize the appropriation of \$38 million over the 2022-2024 period for the NSF to establish a pilot program to ensure the security of data from federally supported research. The bill does not specify how much should be appropriated in each year so for this estimate, CBO has assumed that the full amount would be appropriated in 2022. H.R. 2225 also would authorize the appropriation of \$9 million annually over the 2022-2026 period for the NSF to develop a demonstration project to link data across the federal government. CBO estimates that implementing those authorizations would cost \$69 million over that period.

Entrepreneurial Fellowships

Section 9 would authorize the appropriation of \$100 million over the 2022-2026 period for entrepreneurial fellowships. The bill does not specify how much should be appropriated in each year so for this estimate, CBO has assumed that the full amount would be appropriated in 2022. CBO estimates that implementing the provision would cost \$100 million over the same period.

Other Activities

The bill would require the Government Accountability Office to report to the Congress on certain NSF processes and on precision agriculture technologies. H.R. 2225 also would direct the National Institute of Standards and Technology and other agencies to consult with the NSF on several programs authorized under the bill. Based on the costs of similar tasks, CBO estimates that implementing those provisions would cost \$1 million over the 2022-2026 period; any spending would be subject to the availability of appropriated funds.

Pay-As-You-Go Considerations: None.

Increase in Long-Term Deficits: None.

Mandates: None.

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