

**S. 384, a bill to require the Secretary of Commerce, acting through the Director of the National Institute of Standards and Technology, to help facilitate the adoption of composite technology in infrastructure in the United States, and for other purposes**

As ordered reported by the Senate Committee on Commerce, Science, and Transportation on July 10, 2019

By Fiscal Year, Millions of Dollars	2019	2019-2024	2019-2029
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Deficit Effect	0	0	0
Spending Subject to Appropriation (Outlays)	0	50	not estimated
Statutory pay-as-you-go procedures apply?	No	<b>Mandate Effects</b>	
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. 384 would require the National Institute of Standards and Technology (NIST, within the Department of Commerce) to implement recommendations from a report on the use of fiber-reinforced composite materials in infrastructure projects. The report recommends that NIST test the composites' durability and develop industry standards for their use in infrastructure projects; establish a clearinghouse for information on their design, manufacture, and use; and disseminate educational and training information to academia and private industry.<sup>1</sup>

Using information from NIST, CBO expects the agency would complete most of that work by 2023. CBO estimates that NIST would need to hire 20 employees including scientists, engineers, and software developers at an average annual cost of \$240,000 per employee, totaling about \$22 million over the 2019-2024 period. CBO expects that research grants and contracting costs would total about \$6 million a year, or \$24 million over that same period. Finally, CBO estimates that materials and equipment would cost roughly \$4 million in the first few years. In total, and assuming appropriation of the estimated

1. See Richard J. Sheridan and others, *Road Mapping Workshop Report on Overcoming Barriers to Adoption of Composites in Sustainable Infrastructure*, NIST SP-1218 (National Institute of Standards and Technology, December 2017), <https://go.usa.gov/xyJt7>.

amounts, CBO estimates that implementing S. 384 would cost \$50 million over the 2019-2024 period.

The costs of the legislation (detailed in Table 1) fall within budget function 370 (commerce and housing credit).

**Table 1.**  
**Estimated Increases in Spending Subject to Appropriation Under S. 384**

	By Fiscal Year, Millions of Dollars						2019-2024
	2019	2020	2021	2022	2023	2024	
Estimated Authorization	0	13	13	12	12	0	50
Estimated Outlays	0	10	13	12	12	3	50

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