

Energy Innovation in the FY 2021 Budget: Congress Should Lead

By Colin Cunliff

March 2020

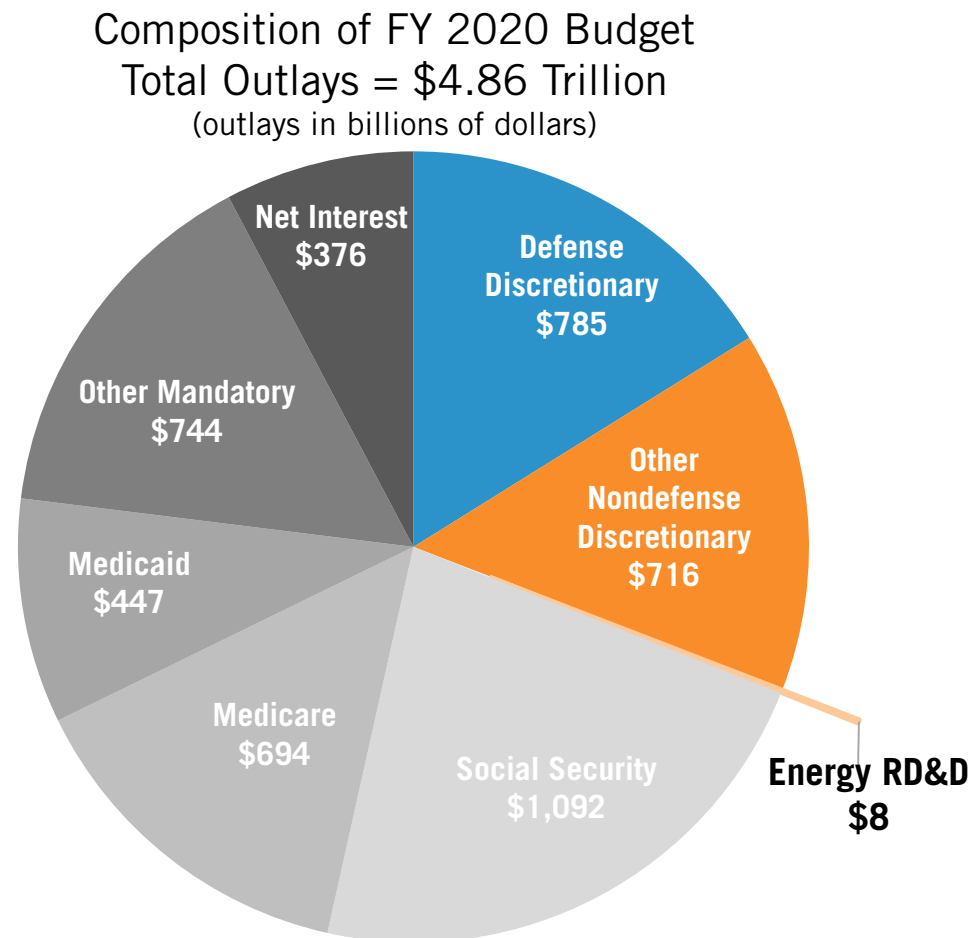
New ITIF Report on U.S. Energy RD&D Spending

- In-depth analysis of all programs and subprograms that make up the clean energy innovation budget.
- Analytical overview, plus 4-page briefs for each of DOE's 19 energy science and technology research programs.
- PDFs available at itif.org/energy-budget.



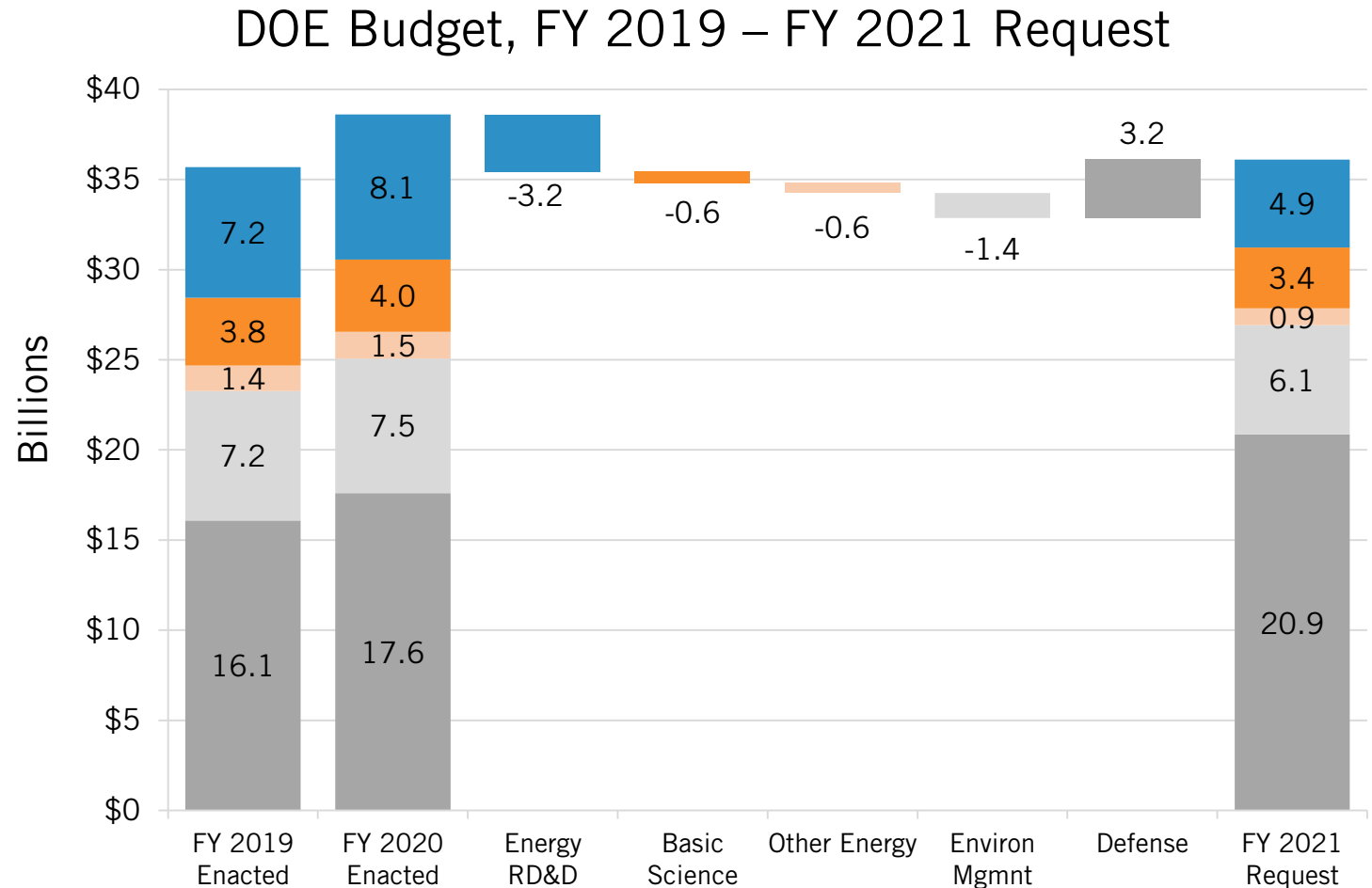
Federal energy RD&D as a share of total outlays in FY 2020

- Energy research comprises just 0.17 percent of total federal outlays.
- Federal energy has declined from 0.14 percent of GDP in 1978 to 0.04 percent in 2019.
- Had investment kept pace with the economy, DOE's RD&D budget today would be \$32 billion.

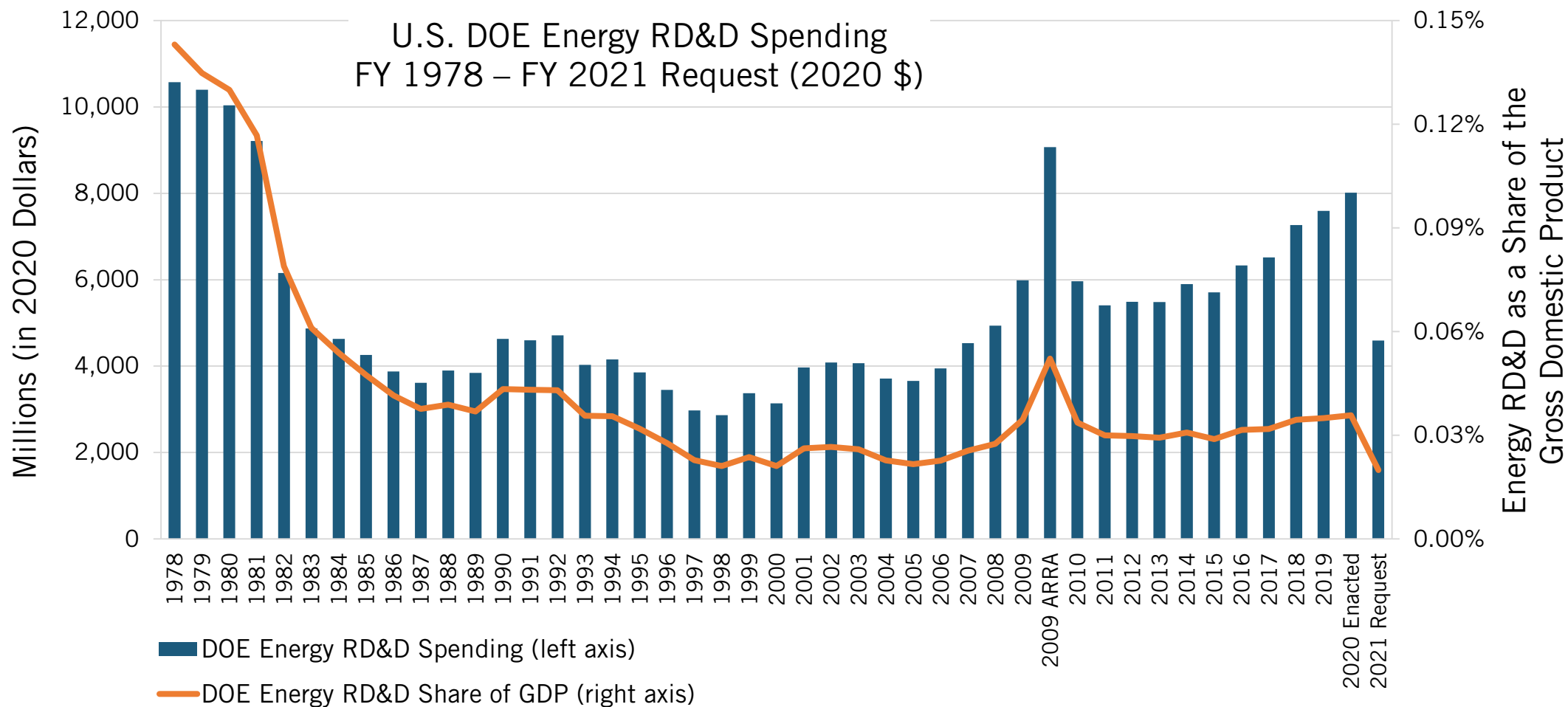


Proposed Changes in DOE's Budget, by Major Function

- Energy research, development, and demonstration (RD&D) accounts for just 20 percent of DOE's total budget
- The proposed cut to energy RD&D would be the largest single-year decrease (40 percent below FY 2020) in the history of the department.



Federal Energy R&D Funding, FY 1978 to FY 2021 Request

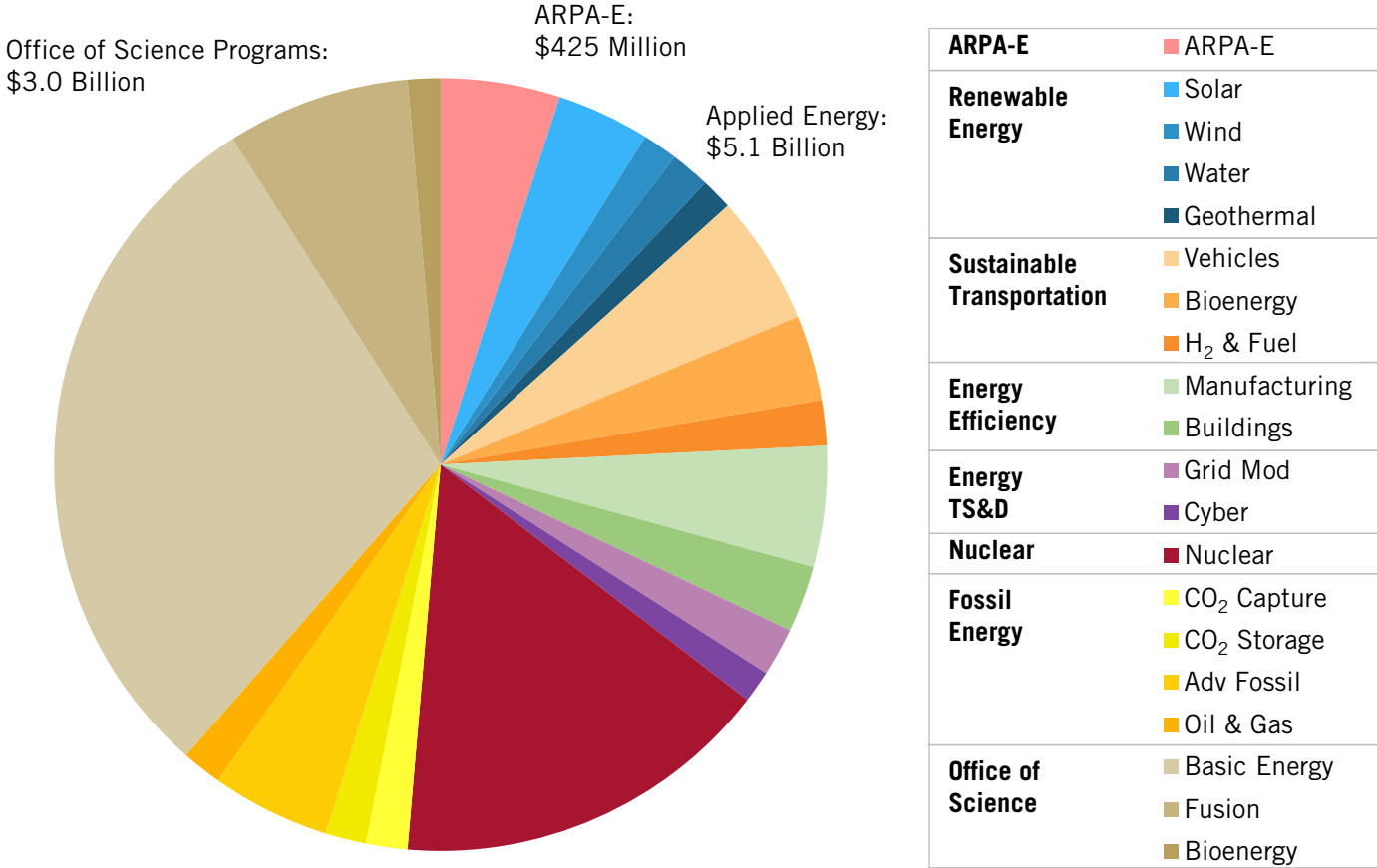


Energy RD&D by Program Office

The report examines the impact of the proposed budget on 19 energy technology RD&D programs in the following DOE offices:

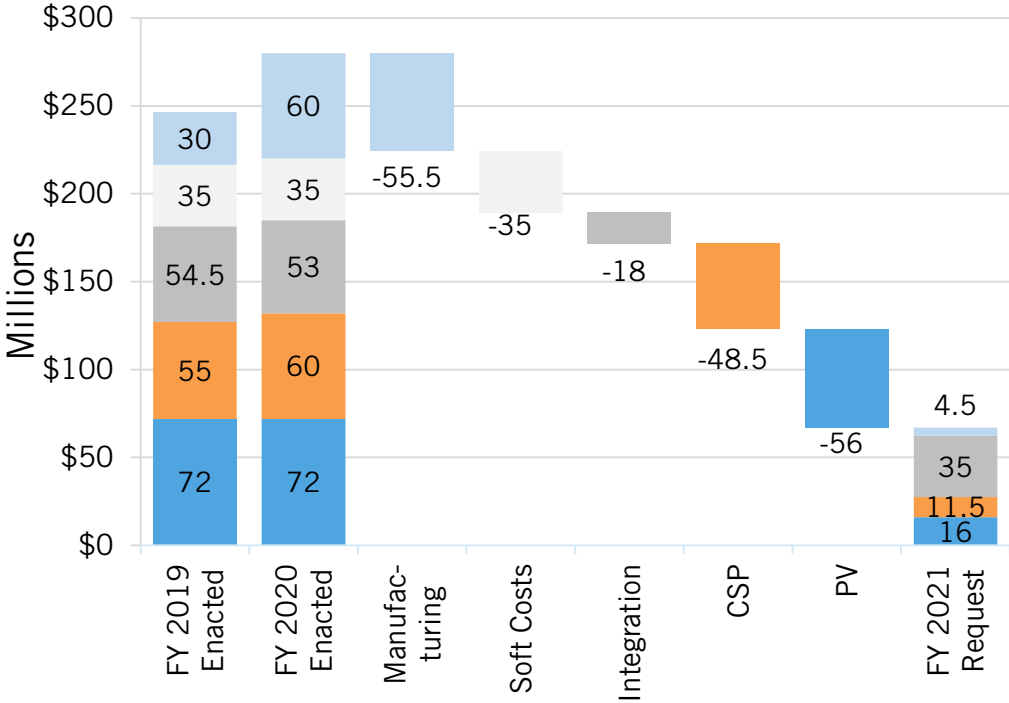
- ARPA-E, Renewable Energy, Sustainable Transportation, Energy Efficiency, Electricity, Nuclear Energy, Fossil Energy, and Science.

DOE Energy RD&D Budget, FY 2020

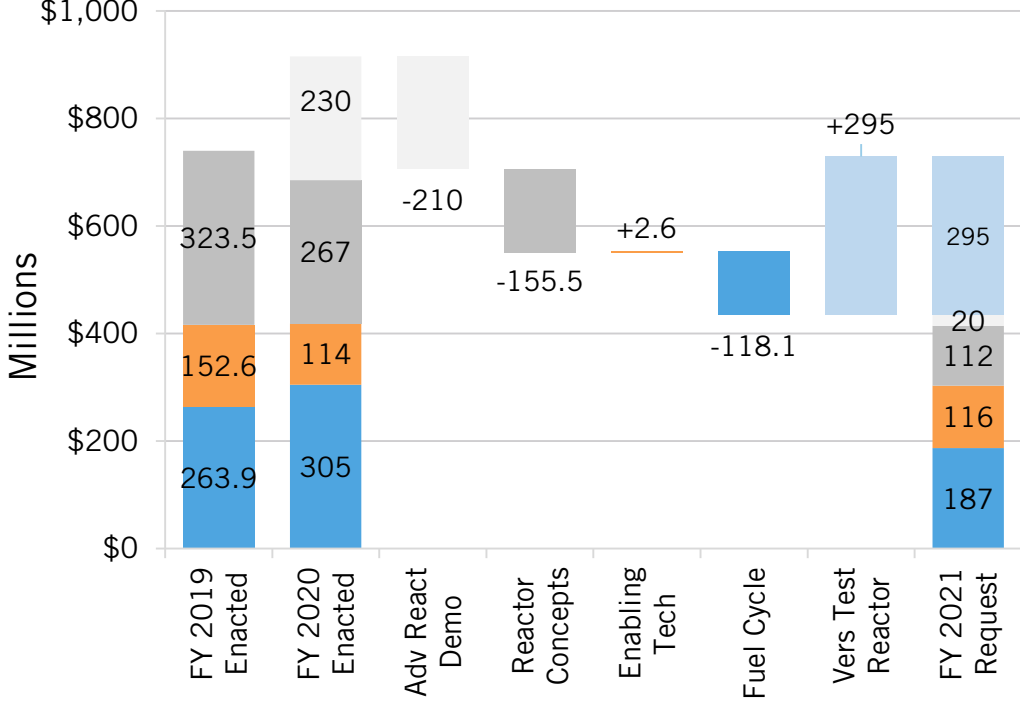


Examples: Solar Energy and Nuclear Energy RD&D

Solar Energy RD&D Proposed Cut: 76 Percent



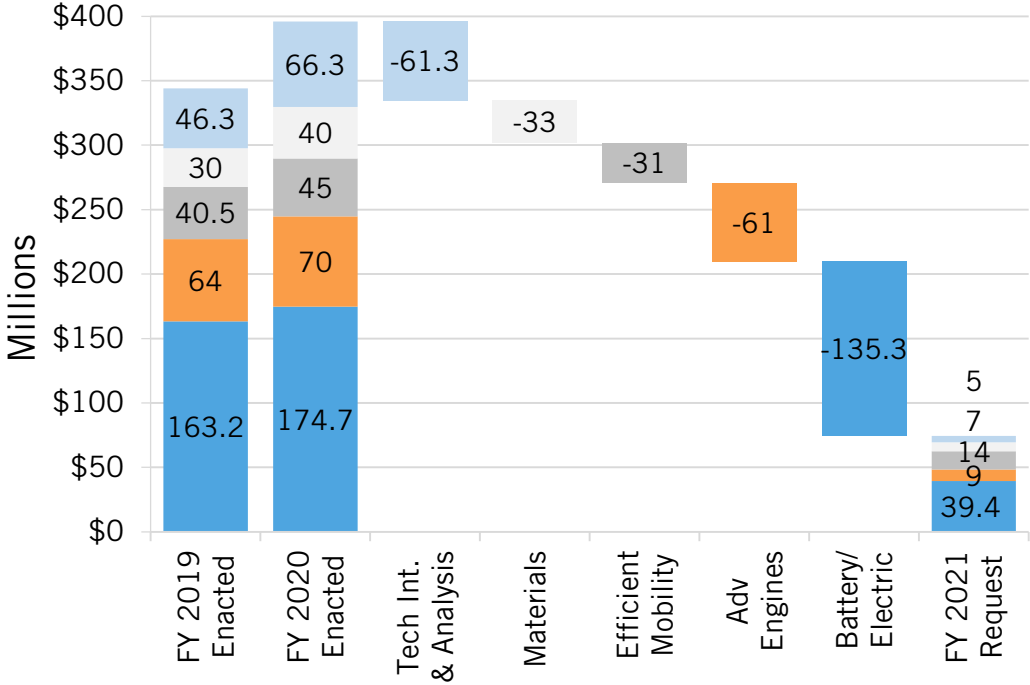
Nuclear Energy RD&D Proposed Cut: 21 Percent



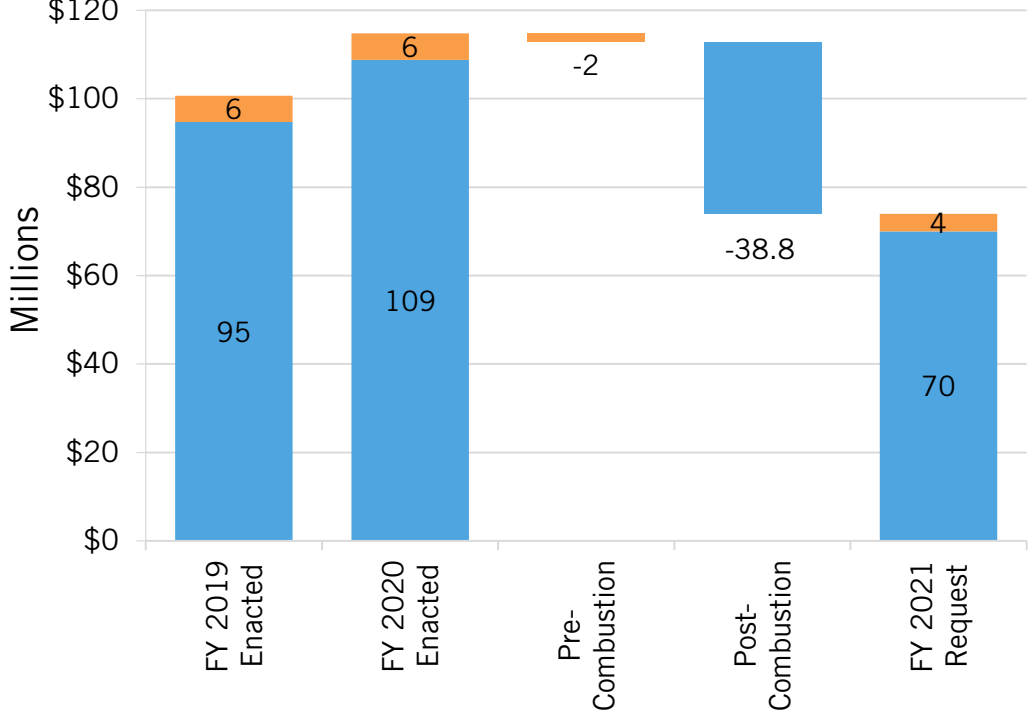
Read the complete series on the U.S. energy budget at itif.org/energy-budget.

Examples: Vehicle Technologies and Carbon Capture RD&D

Vehicle Technologies RD&D Proposed Cut: 81 Percent



Carbon Capture RD&D Proposed Cut: 36 Percent



Read the complete series on the U.S. energy budget at itif.org/energy-budget.

Federal Energy RD&D – Read the Complete Series

Available at itif.org/energy-budget:

- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none">▪ Summary | Transportation | Fossil Energy | Office of Electricity |
| ARPA-E | <ul style="list-style-type: none">▪ Vehicles | <ul style="list-style-type: none">▪ CO₂ Capture | <ul style="list-style-type: none">▪ Grid Modernization |
| <ul style="list-style-type: none">▪ ARPA-E | <ul style="list-style-type: none">▪ Bioenergy | <ul style="list-style-type: none">▪ CO₂ Storage | <ul style="list-style-type: none">▪ Cybersecurity |
| Renewables | <ul style="list-style-type: none">▪ H₂ & Fuel Cells | <ul style="list-style-type: none">▪ Advanced Coal | Office of Science |
| <ul style="list-style-type: none">▪ Solar | Energy Efficiency | <ul style="list-style-type: none">▪ Oil & Gas | <ul style="list-style-type: none">▪ Basic Energy Sciences |
| <ul style="list-style-type: none">▪ Wind | <ul style="list-style-type: none">▪ Advanced Manufacturing | Nuclear | <ul style="list-style-type: none">▪ Fusion |
| <ul style="list-style-type: none">▪ Water | <ul style="list-style-type: none">▪ Buildings | <ul style="list-style-type: none">▪ Nuclear | |
| <ul style="list-style-type: none">▪ Geothermal | | | |

Thank You!

Colin Cunliff | ccunliff@itif.org | [@colin_cunliff](https://twitter.com/colin_cunliff)