C3 SOLUTIONS

Research and Development Drives Economic, Environmental Progress

The Challenge: Research and development at the private and public levels spurs scientific discoveries and technological breakthroughs to improve our knowledge base, human wellbeing, and the environment. At the federal level, many commercial breakthroughs originating from taxpayer-funded research have come through collaborative relationships with the private sector. Policy reforms should identify and remove barriers for commercialization of federally funded research and development.

The Opportunity: Commercial breakthroughs that create jobs, drive economic growth, and reduce the risks of climate change will come from a variety of research channels. Federal research expenditures should take on endeavors of national significance and focus on efforts that are not being undertaken by the private sector. One cannot overlook the leading role the private sector plays in climate entrepreneurship. From individual financiers to large corporate R&D investments, the private sector invests heavily in climate innovation research, development, and early-stage startups. Removing barriers to private R&D and providing consistent expenditures for public R&D will accelerate the deployment of next-generation technologies, strengthen American energy security, reduce global emissions, and strengthen the resilience of communities.

The Solutions: To encourage more private sector R&D and to spur innovative breakthroughs originating from federally funded research, Congress and the administration should:

- Make immediate expensing permanent and apply it to longer asset class lives and research and development.
- Reform the research and development tax credit.
- Maintain support and continue to fund key programs at the Department of Energy.
- Identify and remove barriers for the commercialization of federally funded research and development.

Key Facts:

- According to the National Science Foundation's 2020 report on research and development trends, R&D conducted in the U.S. in 2017 totaled $547.9 billion. Businesses spent $400 billion on R&D while higher education spent $71 billion, and the federal government spent$53 billion.
- In 2018 federal R&D directly and indirectly supported 1.6 million jobs, $126 billion in labor income, $197 billion in added economic value, and $39 billion in federal and state tax revenue.

- In the Information Technology and Innovation Foundation's (ITIF) 2021 Global Energy Innovation Index, the United States ranked 17 out of 34, a 13-place drop from its ranking in 2016.
- The U.S. ranks seventh overall in ITIF's Entrepreneurial Experimentation and Market Formation subindex.

Legislation to Follow:

Legislation	Bill Number(s)	House Sponsor	Senate Sponsor	House Cosponsor(s)	Senate Cosponsor(s)
ALIGN Act	S.1166 and H.R.2558	Arrington (R-TX-19)	Toomey (R-PA)	Nunes (R-CA-22), Buchanan (R-FL-16), Smith (R-NE-3), and more	Barrasso (R-WY), Blunt (R-MO), Braun (R-IN), and more
American Innovation and Competitiveness Act	H.R.1304	Larson (D-CT-1)		Panetta (D-CA-20), DelBene (D-WA-1), Estes (R-KS-1), and more	
American Innovation and Jobs Act	S.749		Hassan (D-NH)		Young (R-IN), Cortez-Masto (D-NV), Portman (R-OH), and more
BIOCHAR Act	H.R.2581	Herrell (R-NM-2)		Westerman (R-AR-4), Newhouse (R-WA-4), Gosar (R-AZ-4)	
DOE Science for the Future Act	H.R.3593	Johnson (D-TX-30)		Lucas (R-OK-3), Bowman (D-NY-16), Weber (R-TX-14)	
Energizing Technology Transfer Act	H.R.4606	Ross (D-NC-2)		Meijer (R-MI-3)	