

R&D Funding Breakdown

Infrastructure Investment and Jobs Act

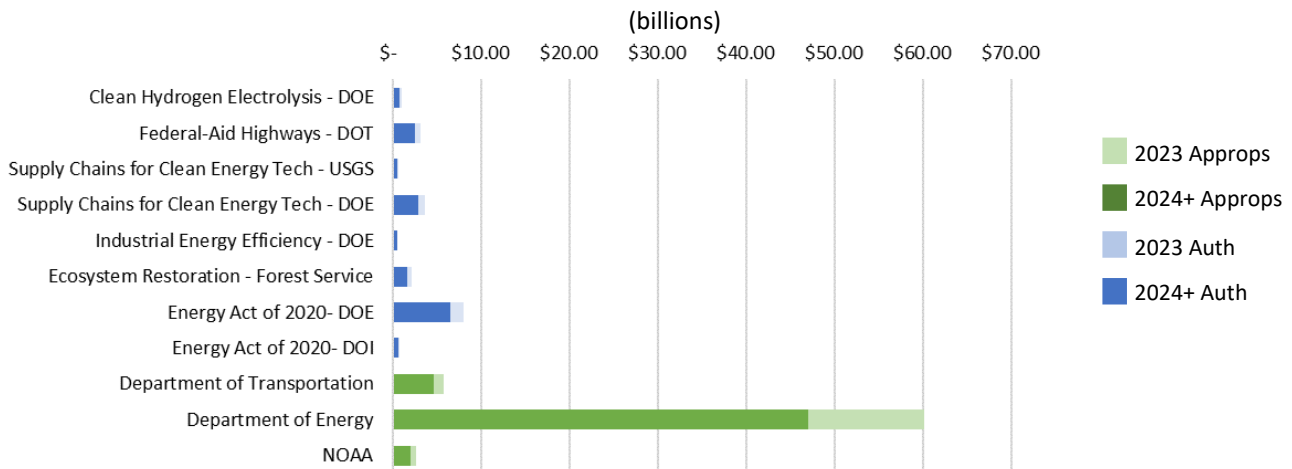
ALESSANDRA ZIMMERMANN | R&D BUDGET AND POLICY PROGRAM | AUGUST 26, 2022

Not all dollar signs written by Congress can be spent—the federal budget is established by two main designations: authorization and appropriation. Authorizations are the process by which Congress allows for changes in or the creation of new programs. Authorized funds identify the amounts that *can* be spent on specific line items, not necessarily how much *will* actually be spent. **Authorizers set the policy for writing the check.**

Appropriated funds identify how much the agencies are allowed to spend. They represent the funds that agencies can transfer out of the Treasury, and are mostly declared in budget bills produced by the Appropriations Committees, though other legislation will sometimes have its own appropriations. **Appropriators write the check.**

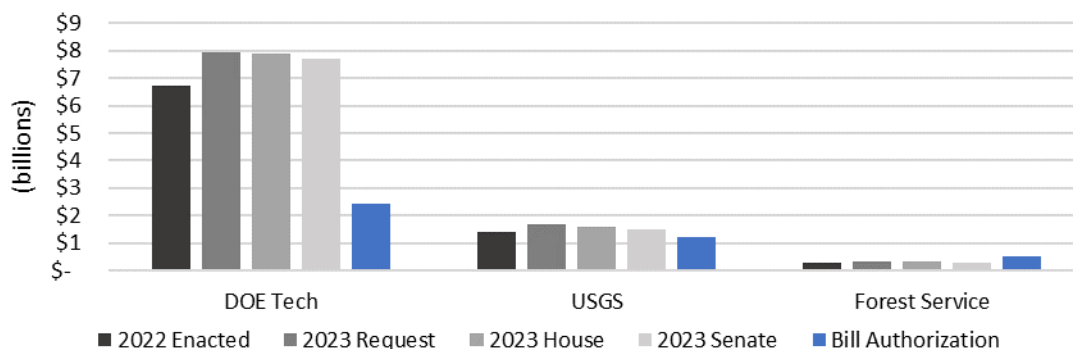
The Infrastructure Investment and Jobs Act is comprised of an authorization section that sets policy for what research agencies may spend if given appropriations, and an appropriations section that disbursed funding across several agencies. The following is the R&D appropriations and authorizations that were included in the IIJA (Public Law 117-58). More detail on what specifically is outlined in the bill is available in the following pages.

Authorized Funding by Section



The authorized funds listed in the graph above will need to be fulfilled through the appropriations cycle. The graph below shows the proposed funding of the relevant agencies in this appropriations cycle. More detail on R&D appropriations can be found on our dashboard at aaas.org/rd.

IIJA vs the Budget*



*- DOT research is authorized through the Highway Trust Fund, which is not part of appropriations



The following tables include the section of the bill that the item was pulled from, a description of the item, the total amount of funding appropriated or authorized, and the amount authorized for the 2023 fiscal year. The last column indicates if this funding is provided to an existing program or if it additionally established a new item.

Authorization				
Section	Item	Total Amount (millions)	2023 Amount (millions)	Funding Status
Clean Hydrogen Electrolysis - DOE		\$ 1,000	\$ 200	
816	Clean Hydrogen Electrolysis	\$ 1,000	\$ 200	New
Federal-Aid Highways - DOT		\$ 3,100	\$ 539	
5506	Advanced transportation research initiative	\$ 50	\$ 10	New
11101	Transportation Resilience and Adaptation Centers of Excellence	\$ 500	\$ 100	Expansion
11101	Open Challenge and Research Proposal Pilot	\$ 75	\$ 15	Expansion
11101	Highway Research and Development Program	\$ 735	\$ 147	Expansion
11101	Technology and Innovation Development Program	\$ 550	\$ 110	Expansion
11101	Training and Education	\$ 128	\$ 25	Expansion
11101	Intelligent Transportation Systems program	\$ 550	\$ 25	Expansion
11101	University Transportation Centers	\$ 405	\$ 81	Expansion
11101	Bureau of Transportation Statistics	\$ 108	\$ 26	Expansion
Supply Chains for Clean Energy Tech - USGS		\$ 627	\$ 64	
40201	Earth Mapping Resources	\$ 320	\$ 64	New
40204	Energy and Minerals Research Facility	\$ 167		New
40205	Rare Earth Elements Demonstration Facility	\$ 140		Expansion
Supply Chains for Clean Energy Tech - DOE		\$ 3,600	\$ 740	
40207	Battery Processing and Manufacturing	\$ 3,000	\$ 600	New
40208	Vehicle Batter Recycling Research	\$ 200	\$ 40	Expansion
40210	Critical Minerals Mining and Recycling Research	\$ 400	\$ 100	Expansion
Industrial Energy Efficiency - DOE		\$ 550		
40521	Industrial Research and Assessment Centers	\$ 550		Expansion
Ecosystem Restoration - Forest Service		\$ 2,130	\$ 533	
40804	Ecosystem Restoration	\$ 2,130	\$ 533	Expansion
Energy Act of 2020- DOE		\$ 8,030	\$ 1,517	
41001	Energy Storage Demonstration Projects	\$ 355	\$ 89	Expansion
41001	Long-duration demonstration initiative and joint program	\$ 150	\$ 38	Expansion
41002	Advanced reactor demonstration program	\$ 3,211	\$ 506	Expansion
41004	Carbon Capture large scale pilot programs	\$ 937	\$ 200	Expansion
41004	Carbon Capture Demonstration Projects Program	\$ 2,537	\$ 500	Expansion
41006	Hydropower and Marine Energy	\$ 36	\$ 9	Expansion
41006	National Marine Energy Centers	\$ 40	\$ 10	Expansion
41007	Geothermal Energy	\$ 84	\$ 21	Expansion
41007	Wind Energy	\$ 180	\$ 45	Expansion
41008	Industrial Emissions Demonstration Projects	\$ 500	\$ 100	Expansion

Authorization (continued)

Section	Item	Total Amount (millions)	2023 Amount (millions)	Funding Status
Energy Act of 2020- DOI		\$ 811	\$ 164	Expansion
41003	National Geological and Geophysical Data preservation program	\$ 10	\$ 5	Expansion
41003	Rare earth mineral security	\$126	\$ 24	Expansion
41003	Critical material innovation, efficiency and alternatives	\$ 600	\$ 100	Expansion
41003	Critical material supply chain research facility	\$ 75	\$ 35	Expansion

Appropriation

Section	Item	Total Amount (millions)	2023 Amount (millions)	Funding Status
Department of Transportation		\$ 5,750	\$ 1,150	
Title VIII	Infrastructure improvements -FAA	\$ 5,000	\$ 1,000	Expansion
Title VIII	Crash Data research - NHTSA	\$ 750	\$ 150	Expansion
Department of Energy		\$ 60,175	\$ 13,110	
Title III	Energy Efficiency and Renewable Energy program	\$ 16,300	\$ 3,260	Expansion
Title III	Cybersecurity, Energy Security and Emergency Response program	\$ 500	\$ 100	Expansion
Title III	Electricity	\$ 8,100	\$ 1,620	Expansion
Title III	Nuclear Energy	\$ 6,000	\$ 1,200	Expansion
Title III	Fossil Energy and Carbon Management program	\$ 7,500	\$ 1,500	Expansion
Title III	Office of Clean Energy Demonstrations	\$ 21,500	\$ 5,375	Expansion
Title III	Appalachian Regional Energy Hub Initiative	\$ 25	\$ 5	Expansion
Title III	Modeling and Assessing Energy Infrastructure Risk	\$ 250	\$ 50	Expansion
NOAA		\$ 2,600	\$ 520	
Title II	Operations, Research, and Facilities	\$ 2,600	\$ 520	Expansion