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Infrastructure Investment and Jobs Act: Summary of Industrial/Manufacturing, CCUS, and Hydrogen Provisions

Rodney Sobin
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Infrastructure Investment and Jobs Act

- H.R. 3684 became Public Law No. 117-58 on Nov. 15, 2021
- In addition to energy, covers transportation, natural resources, water and wastewater, broadband – 1039 pages
- See NASEO summary for list of energy-related sections: https://www.naseo.org/news-article?NewsID=3644
- Coverage here:
  - Industrial energy efficiency
  - Other manufacturing and industrial provisions
  - CCUS and related infrastructure
  - Hydrogen
- Additional funding potentially available through separate reconciliation package

+ Industrial Energy Efficiency

Amount	Program	Notes
$550 million	Future of Industry Program and Industrial Research and Assessment Centers (§40521)	- Supports Industrial Assessment Centers (IAC), tech assistance to small/medium manufacturers and water/wastewater facilities. - Expands IACs to trade schools, community colleges, union training programs; est. Centers of Excellence; workforce training support (50% cost-share) - $400 million grant program (max. $300,000 each; 50% cost-share) for implementing IAC recommendations
$50 million	State Manufacturing Leadership (§40534)	- Funds state smart manufacturing technology implementation programs and programs to provide high-performance computing access to small-/medium-sized manufacturers - Competitive funding, up to $2 million each, at least 30% state cost share
n/a	Sustainable Manufacturing Initiative (§40522)	- DOE will provide onsite technical assessments for energy, water, and resource efficiency, pollution prevention and waste reduction.

Other Manufacturing and Industrial Provisions

Amount	Program	Notes
$140 million	Rare Earth Elements Demonstration Facility (§40205)	- Fund with an academic partner a facility to demonstrate integrated rare earth element extraction, separation, and refining
$6.135 billion	Battery processing and manufacturing (§40207)	- Support domestic supply chain for battery production - $60 million for battery recycling RD&D programs (states eligible) - $50 million for state and local programs - 50% cost-share requirement
$200 million	EV battery recycling/second-life applications program (§40208)	- RD&D of second-life applications/technologies, and process for final recycling/disposal - Includes funding for grant program

Other Manufacturing and Industrial Provisions (continued)

Amount	Program	Notes
$750 million	Advanced Energy Manufacturing and Recycling Grant Program (§40209)	- Funding for advanced energy manufacturing and recycling facilities in "covered census tracts" (those in or adjacent to coal mine closures or coal-fired generator retirements) - Includes renewables, grid mod, fuel cells, microturbines, energy storage, EV, energy efficiency, CCUS, etc. low-carbon/low-emission tech.
$400 million	Critical Minerals Mining and Recycling Research (§40210)	- Grants for critical minerals R&D - Grants (not exceeding $10 million per project) for pilot projects for development, processing, and recycling of critical minerals and metals in the United States; - To advance innovative critical minerals mining, recycling, and reclamation strategies and technologies
$500 million	Industrial Emissions Demonstration Projects (§41008)	- Authorizes appropriations for industrial emissions demonstration projects under EISA 2007 454(a)(3) (42 USC 17113(d)(3))

Carbon Capture, Utilization, Sequestration, and Transportation Infrastructure

	Program	Notes
$~310 million	Carbon Utilization Program (§40302)	- Grant to states, localities, public utilities or agencies to procure and use commercial and industrial products that use or are derived from captured CO_2 that reduce net lifetime GHG emissions
$100 million	Carbon Capture Technology Program (§40303)	- Amends EPACT 2005 to add support of front-end engineering and design for CO_2 transport infrastructure for CCUS
$2.1 billion	Carbon Dioxide Transportation Infrastructure Finance and Innovation (§40304)	- "CIFIA" program of federal loans (up to 80% project cost) for CO_2 transport infrastructure (pipeline, ship, rail, other) - Grants to incrementally expand capacity to meet projected future (up to 20 years) demand (up to 80% of cost differential)

Carbon Capture, Utilization, Sequestration, and Transportation Infrastructure (cont'd)

	Program	Notes
$2.5 billion	Carbon Storage Validation and Testing (§40305)	- Commercialization program to fund development of new or expanded large scale carbon sequestration and associated infrastructure
$75 million	Secure Geologic Storage Permitting (§40306)	- $25 million ($5m ea. year FY '22-26) to EPA for (UIC) Class VI well permitting - $50 million from EPA to states with Class VI well primacy to establish and operate permitting programs
$3.5 billion	Carbon Removal (§40308)	- For 4 Regional Direct Air Capture (DAC) hubs of at least 1 million metric ton [per year] capacity - Preference for regions with existing or recently closed carbon-intense fuel production or industry - At least two in economically distressed regions with high fossil fuel resources - Priorities for skills and employment development and scalability

Carbon Capture, Utilization, Sequestration, and Transportation Infrastructure (cont'd)

	Program	Notes
$3.474 billion	Carbon Capture Demonstration and Pilot Programs (§41004)	- Authorizes appropriations for EPACT 2020 for carbon capture large-scale pilot projects ($937 million) and demonstration projects ($2.537 billion) over FY '22-25.
$115 million	Direct Air Capture Technologies Prize Competitions (§41005)	- Authorizes appropriations for EPACT 2020 for prize competitions for precommercial ($15 million) and commercial ($100 million) DAC projects for FY '22.

Hydrogen:
Additional Clean Hydrogen Programs (§40314)

	Amends EPACT 2005 to add	Notes
$8 billion	Sec. 813 Regional Clean Hydrogen Hubs	- For at least 4 Regional Clean Hydrogen Hubs to demonstrate production, processing, delivery, storage, and end-uses of H_2 - At least 1 hub ea.to demo fossil-, renewable-, nuclear-derived H_2; at least 1 ea. to demo electric generation, industrial, transportation end-uses - As practicable, at least 2 in natural gas-rich regions - Priorities for skill and employment development
$500 million	Sec. 815 Clean Hydrogen Manufacturing and Recycling	- RD&D for advancing manufacturing and recycling of technologies for H_2 production, processing, delivery, storage, and end-uses.
$1 billion	Sec. 816 Clean Hydrogen Electrolysis Program	- RD&D, commercialization, and deployment program to advance electrolyzers and related components and technologies.

Contact Information

Rodney Sobin, Senior Program Director
(rsobin@naseo.org)

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