

Federal Industrial Energy and Climate Developments

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About ACEEE

- The American Council for an Energy-Efficient Economy is a nonprofit 501(c)(3) founded in 1980. We act as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors.
- Our research explores economic impacts, financing options, behavior changes, program design, and utility planning, as well as US national, state, & local policy.
- Our work is made possible by foundation funding, contracts, government grants, and conference revenue.



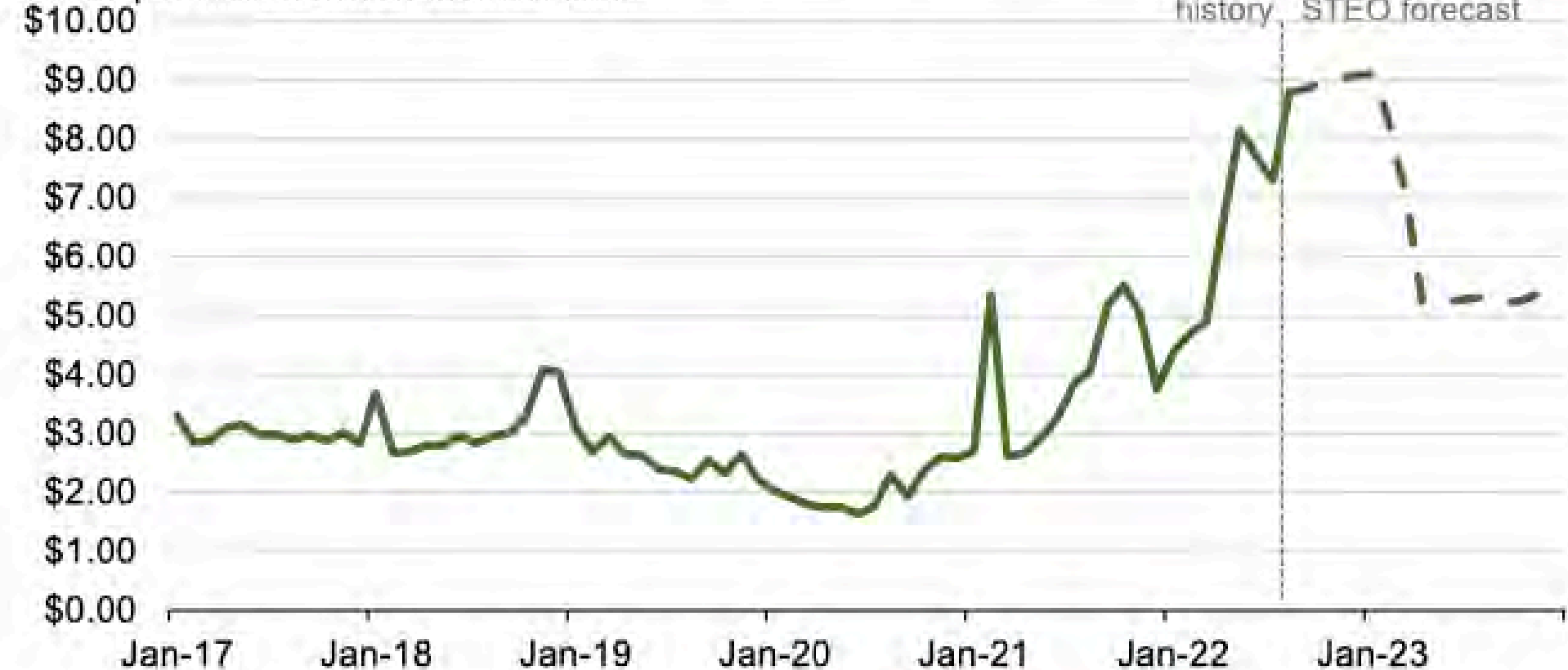
Energy & climate change state of play

- After a decade of low energy prices, oil, gas & electricity increasing
- Climate & geo-political disruptions impacting manufacturing & supply chains
- Globalization of natural gas changing markets
- Climate concerns growing among investors, politicians & companies
- Congress, administration & states taking concrete steps to reduce GHG emissions & address challenges infrastructure
- So much going on—it can be hard to keep track & plan actions

Natural gas prices driving energy markets

U.S. monthly Henry Hub spot price (Jan 2017–Dec 2023)

dollars per million British thermal units



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook (STEO)*, September 2022

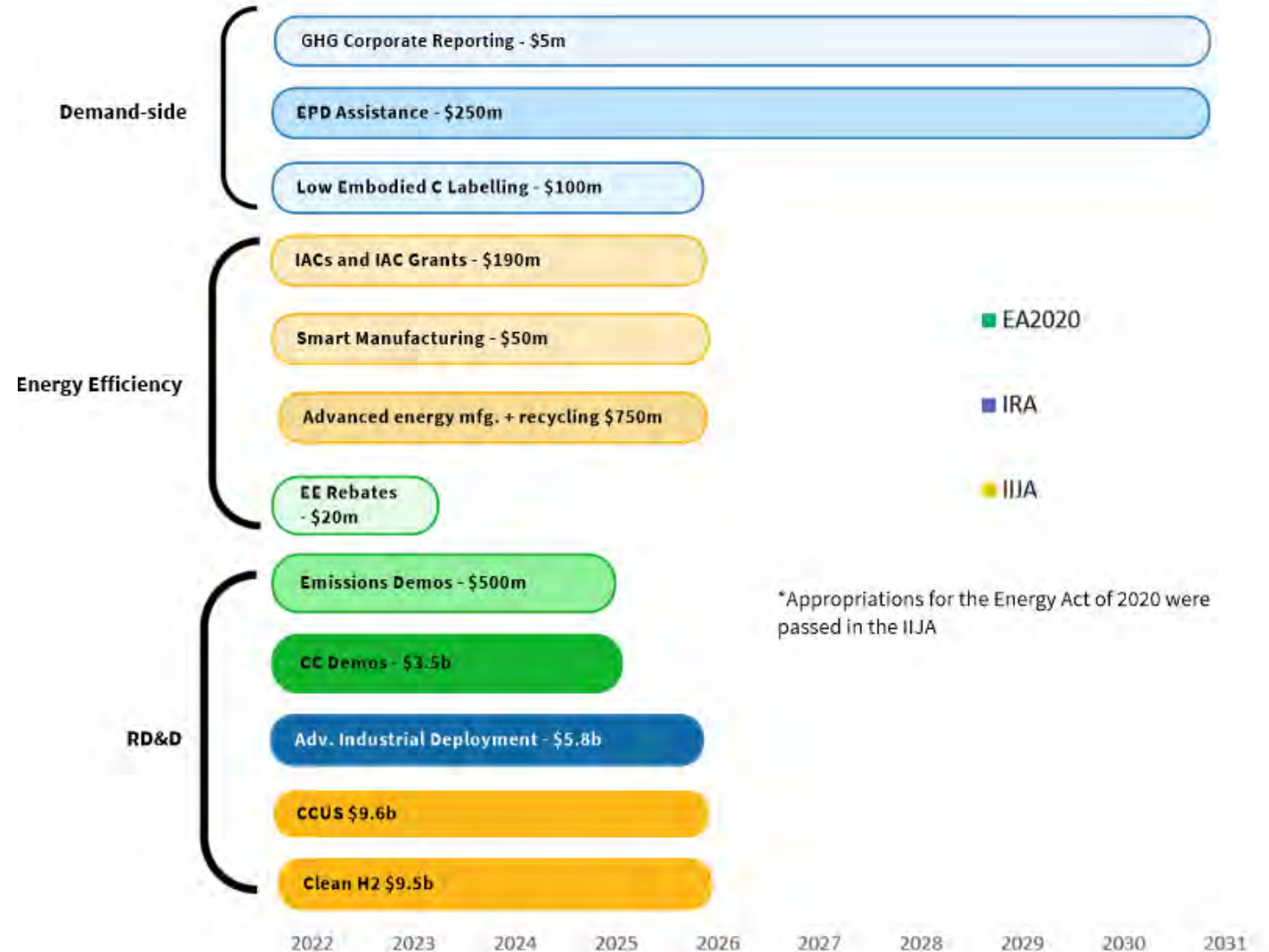
Governments are responding

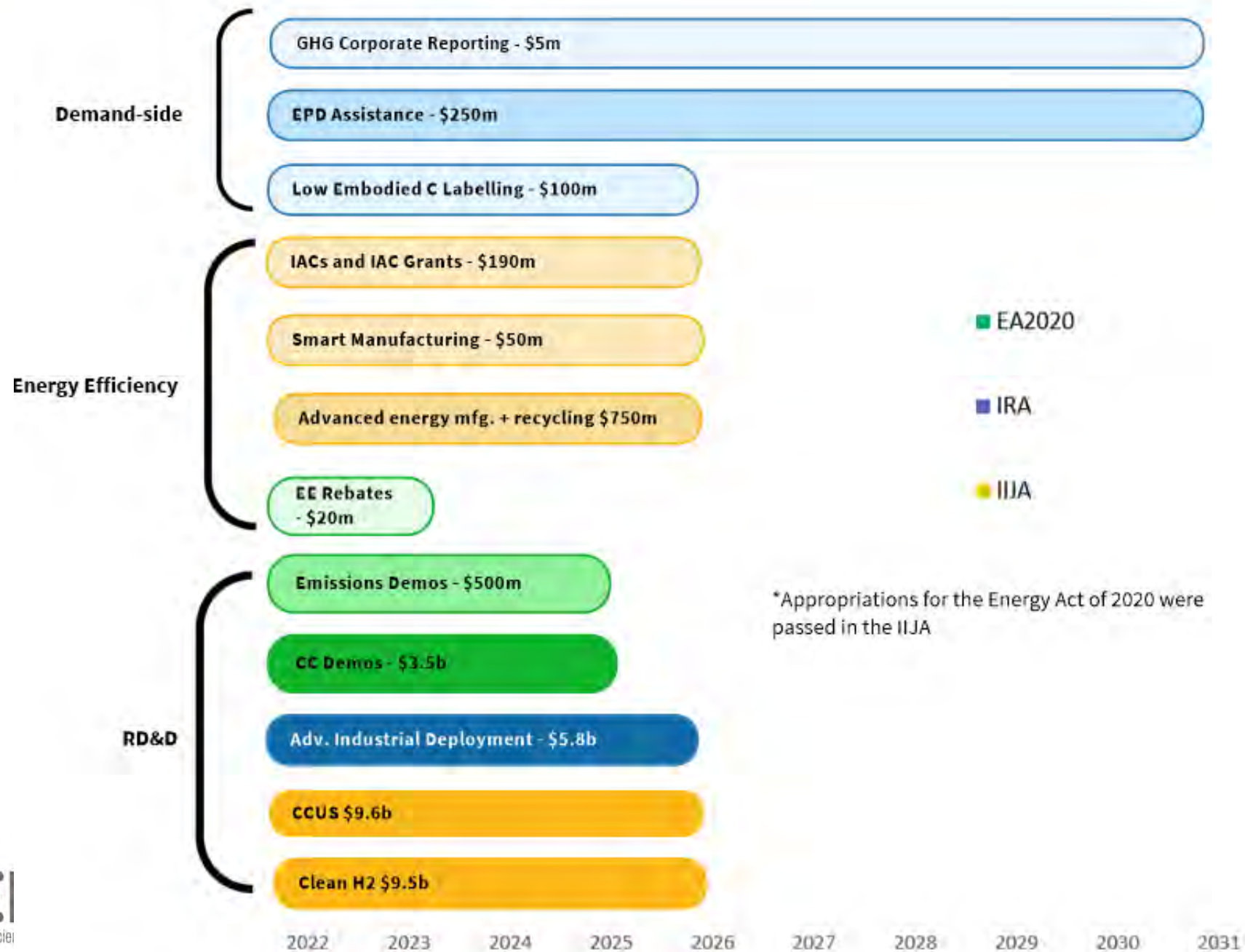
- Industry & supply chains are gaining renewed attention
- Unprecedented, sustained funding being made available
- Growing concerns about security of global manufacturing supply chains
- Addressing climate change an imperative



Major industrial legislative developments

- Energy Act of 2020
- Infrastructure Investment & Jobs Act of 2021
- CHIPS and Science Act of 2022
- Inflation Reduction Act of 2022





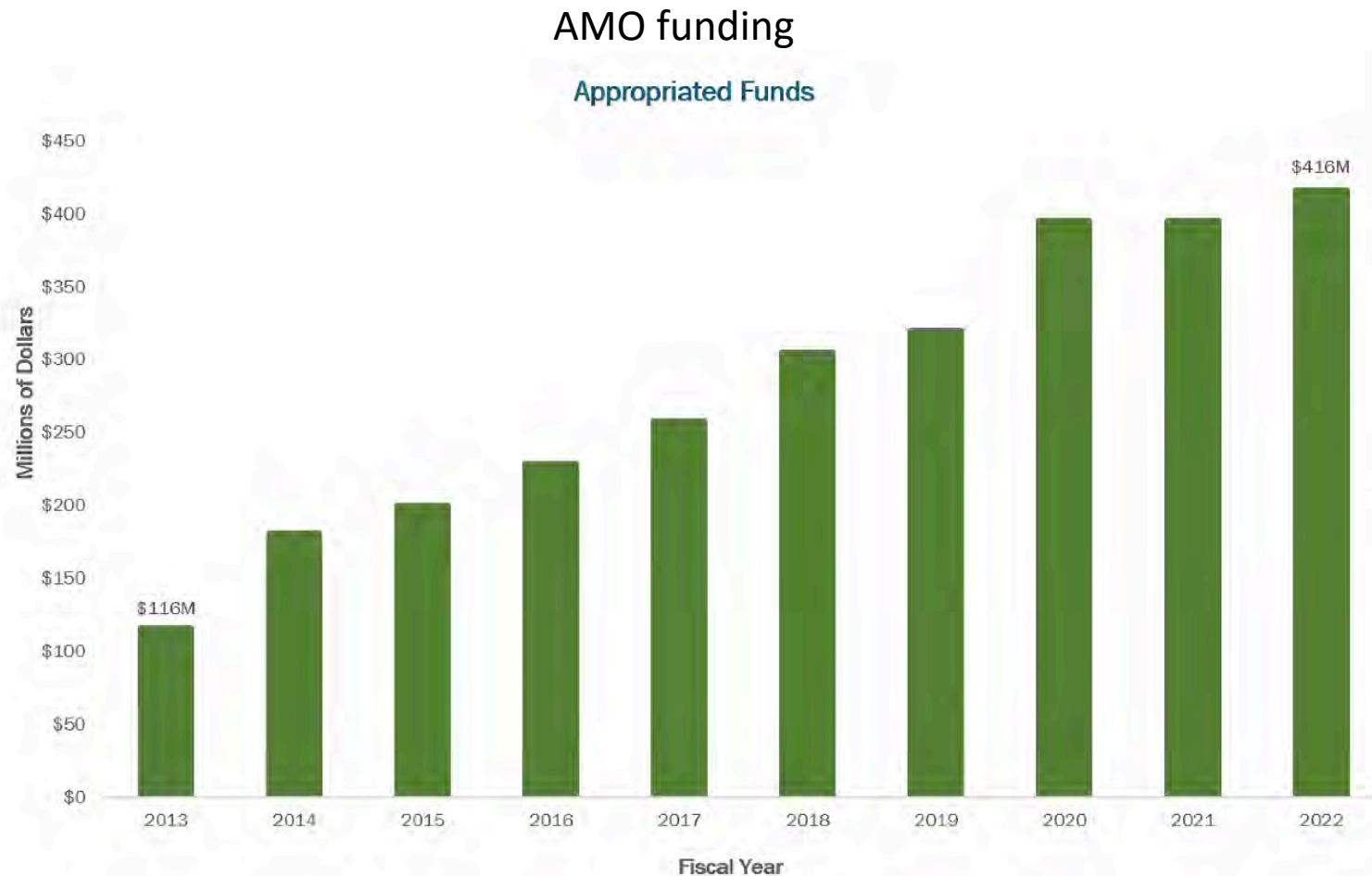
Inflation Reduction Act: Industry Programs

- \$5.8 billion, Advanced Industrial Facilities Deployment Program
 - Accelerated deployment of low-carbon technology in energy-intensive industries
 - Includes: process heat, sustainable chemistry/engineering, energy/materials efficiency, recycling, smart manufacturing, and high-performance computing
 - <https://www.aceee.org/blog-post/2022/08/climate-bill-can-accelerate-transformation-industry>
- \$10 billion, Extension Advanced Energy Project Credit (48C)
 - Re-equips industrial facility to reduce GHGs 20% or more
 - Includes: low-carbon process heat, CCUS, energy efficiency

Additional Industry Related Programs in IRA

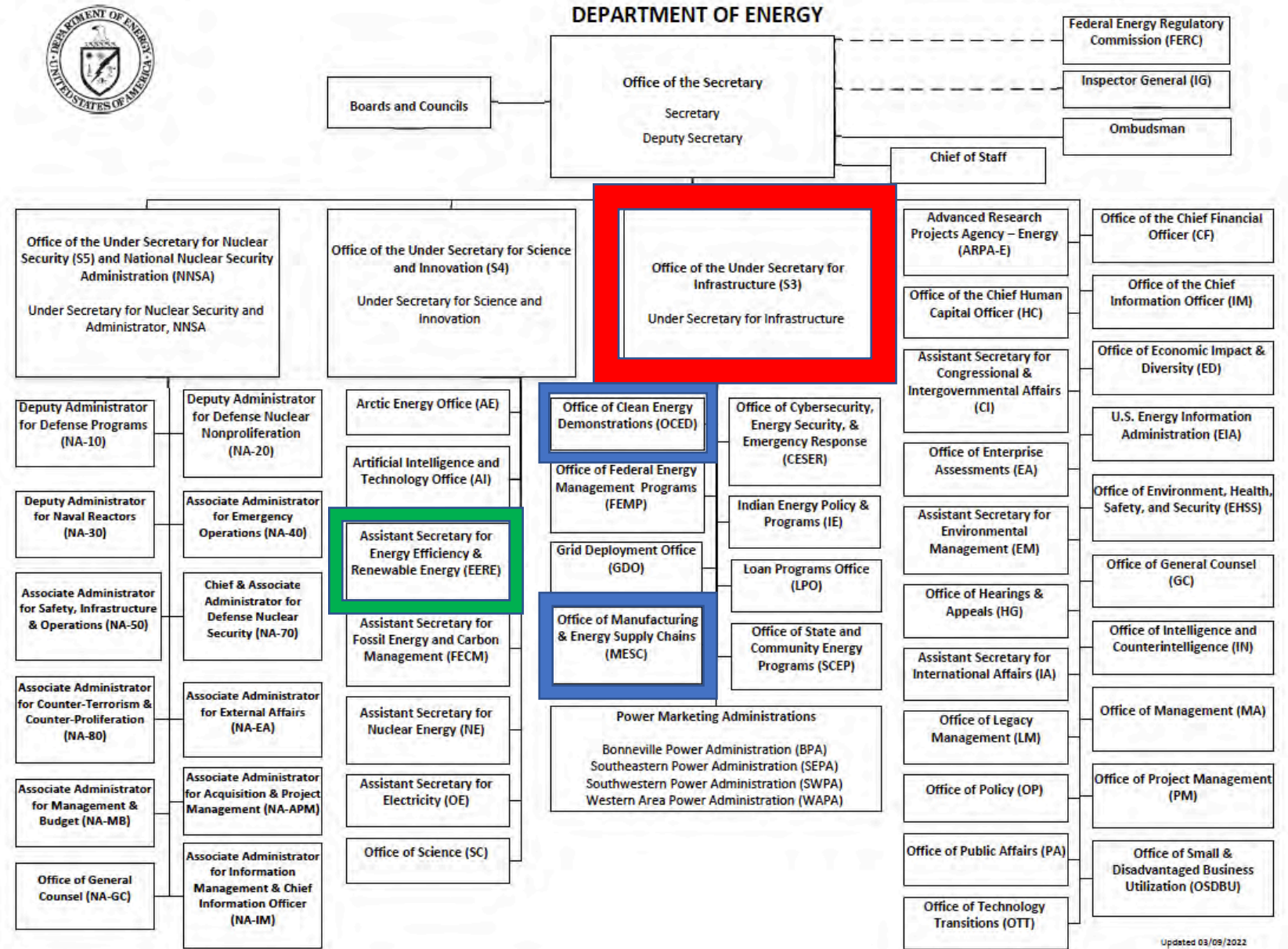
- 45Q Tax credits for CCUS
 - Increase in value of CO₂ abated \$50 to \$85/ metric ton (\$60 if sold for industrial reuse)
- Environmental Product Disclosures (EPD) Assistance
 - \$250 million to support the development, enhanced standardization and transparency, and reporting criteria for environmental product declarations through grants and technical assistance
- Low-embodied carbon labeling for construction materials
 - \$100 million to carry out a program to identify and label construction materials and products that have substantially lower levels of embodied GHGs
- Direct air capture of CO₂
 - \$180/ metric ton for storage (\$130 for utilization)
- Methane mitigation
 - \$1.55 billion, loans, grants, rebates to mitigate methane emissions from oil and gas facilities
- Clean power generation
 - \$60 billion, even split between power generation and production tax credits

DOE's response to increased industrial funding

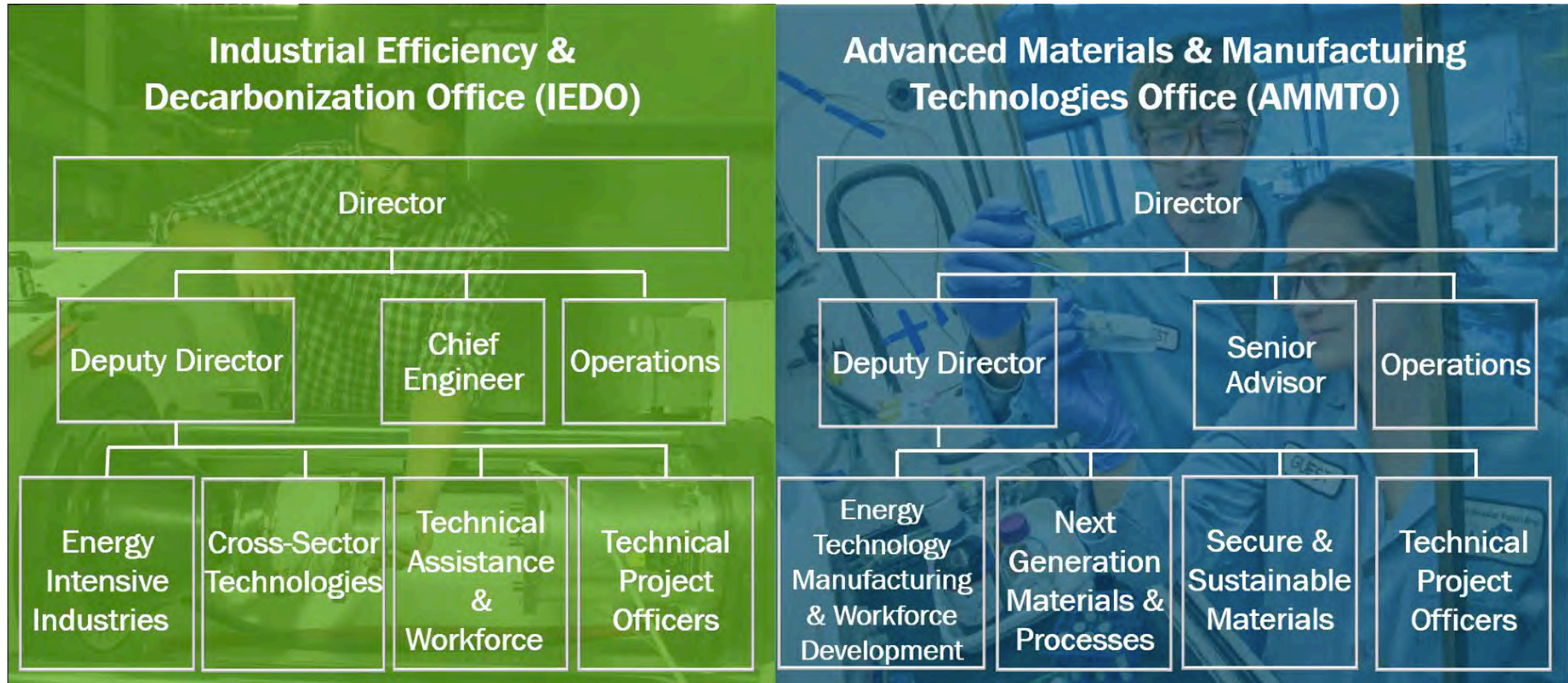


- Funding for industrial work has increased ~8x
- DOE pivoting from focus on energy efficiency to decarbonization & competitiveness
- DOE reorganizing in response to increased funding from recently enacted legislation

DOE reorganized & created new Infrastructure Office



Reorganization of Advanced Manufacturing Office



DOE's Industrial Decarbonization Roadmap

- Roadmap released in Sept 2022
- 4 pillars form basis for decarbonization efforts:

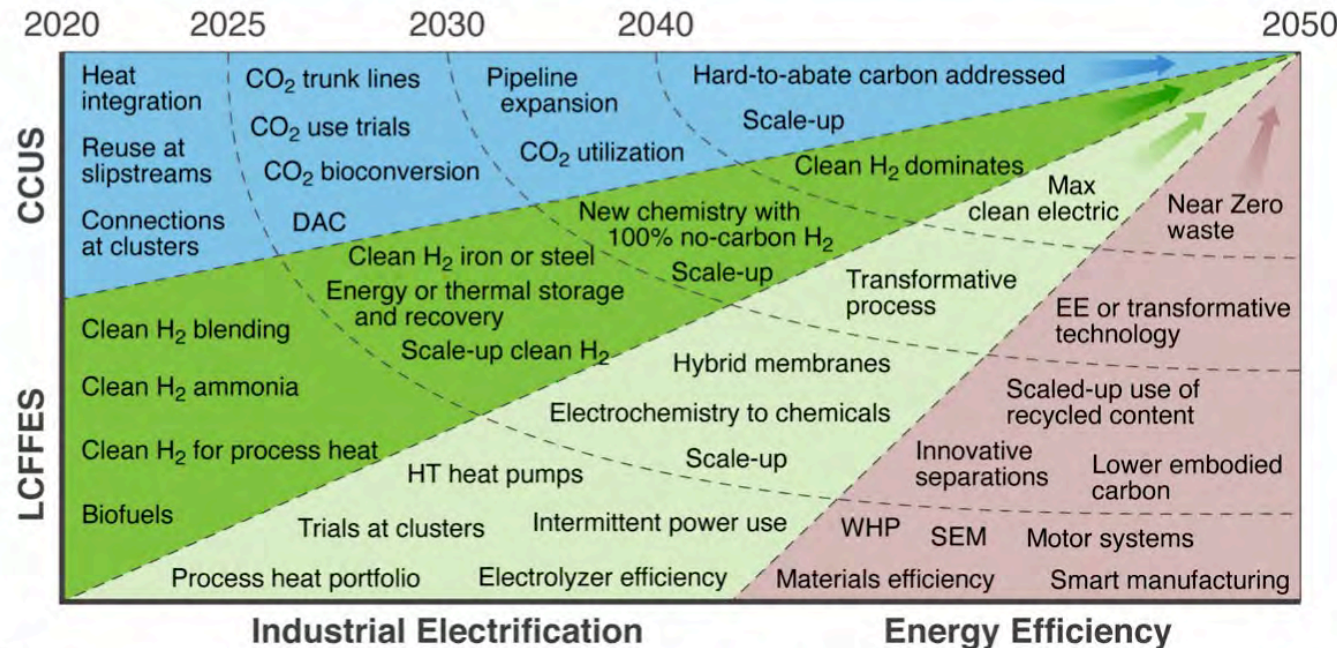
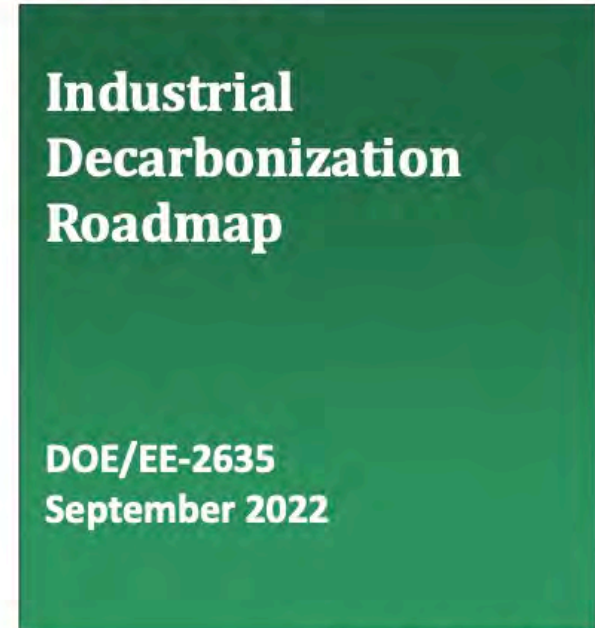


FIGURE 10. LANDSCAPE OF MAJOR RD&D INVESTMENT OPPORTUNITIES FOR INDUSTRIAL DECARBONIZATION ACROSS ALL SUBSECTORS BY DECADE AND DECARBONIZATION PILLAR.



United States Department of Energy
Washington, DC 20585

Where will the opportunities be?

- Technical assistance for opportunity identification, especially from small & medium sized manufactures
- Funding for investments in EE & decarbonization
- Assistance & funding for implementing smart manufacturing
- Support for workforce efforts including apprenticeships
- Co-funding of new technology demonstrations
- Support for on-shoring of clean energy product manufacturing – renewables, electrification & EVs



Tracking developments

A lot is going on, so it can be challenging to stay current on developments & opportunities. Here are some free ways to stay engaged:

- Energy News Network: <https://energynews.us/category/digest/national/>
- AMO News: <https://www.energy.gov/eere/amo/listings/amo-news>
- Be on the lookout for AMO *Industrial Decarbonization Roadmap*
- Follow ACEEE: <http://www2.aceee.org/I/310911/2017-08-25/24dj2>
- Join ACEEE's Industrial Decarbonization Convening: email aHoffmeister@aceee.org to sign up

2022–2023 Upcoming Conferences

Behavior, Energy, and Climate Change	November 13-16, 2022	Washington, DC
Energy Efficiency Policy Forum	December 8, 2022	Washington, DC
Hot Water Forum	March 7-9, 2023	San Diego, CA
Summer Study on Energy Efficiency in Industry	July 11-13, 2023	Detroit, MI
Energy Efficiency as a Resource	October 16-18, 2023	Philadelphia, PA





Questions

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