U.S. DEPARTMENT OF ENERGY | Office of Energy Jobs

DOE's Workforce Strategy to Support the Clean Energy Transition

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Agenda

- Context
  - About the Office of Energy Jobs
  - DOE Workforce activities pre- and post-BIL and IRA
  - 21st Century Energy Workforce Advisory Board;
    - DOE Core Workforce Principles
    - Leaning in on sectoral workforce development approaches
- BIL and IRA Programs in H2 and Carbon Management
- Questions

Success is...

- Greater clarity on DOE's expanding and sharpening workforce strategy.
- An understanding of how to contribute to occupational training related to carbon capture and hydrogen workforce investments.

About the Office of Energy Jobs (OEJ)

The Office of Energy Jobs (OEJ) works to:

1) Ensure high quality energy jobs for a diverse American workforce.
2) Advance worker organizing and collective bargaining in the energy sector.
3) Coordinate effective workforce development strategy.
4) Foster robust labor and workforce stakeholder engagement.
5) Conduct research and analysis on energy employment and workforce topics.

DOE is sharpening its workforce strategy to support the scale of need and opportunity.

Big picture:

- In ten years before BIL/IRA (FY2011-22), 80% of DOE's $2.3 billion in workforce development investments targeted undergraduate and graduate students, predominantly related to nuclear energy and advanced computing technology.
- Looking ahead, the vast majority of energy jobs now and over the next ten years do not require a 4-year degree.
- Many of these jobs focus on constructing, manufacturing, maintaining and operating clean energy infrastructure and supply chain inputs.
- With BIL and IRA, DOE has begun to expand its workforce development investments, but more will need to be done to capitalize on the opportunity to connect millions of U.S. workers to energy careers.

DOE’s Workforce Development Investments and Activities Now with BIL/IRA implementation

1. **Continued, expanded, and new direct investments** in workforce development (grants or other forms of direct financial assistance).

2. **Incentives in federal energy investments** to spur workforce development activities, investments and partnerships (DOE’s Community Benefit Plans; IRA clean energy tax credits).

3. **Initiatives focused on capacity building for workforce intermediaries** to boost connections, overcome barriers and fill in areas of critical need to prepare and connect workers to energy careers.

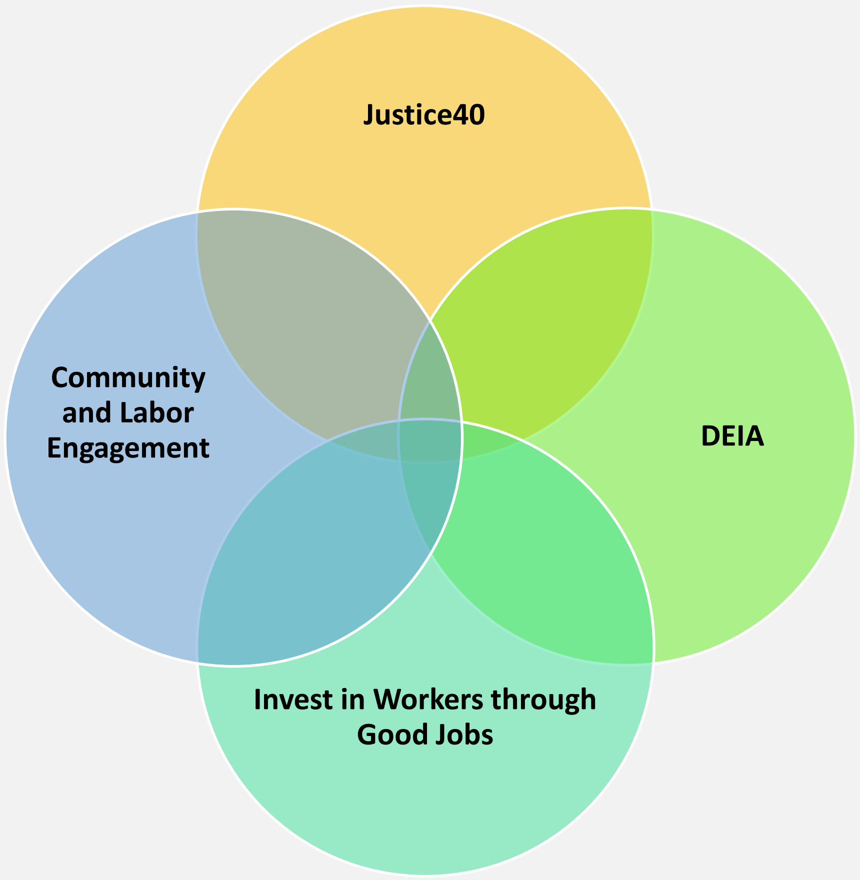
1. Direct investments in workforce development (grants or other forms of direct financial assistance).

- **Continuation or expansion of existing programs** that were operating before BIL/IRA to support direct training and education, faculty development. E.g.:
    - Expansion of 45+ year Industrial Assessment Center program that made funding available to additional types of training institutions (labor organizations, community and technical colleges, trade schools), and funding process less burdensome and more accessible.
- **Entirely new (and one-off) programs dedicated to workforce development**:
    - Going through state agencies, predominantly state energy offices: $200 million to support training of residential energy efficiency and electrification contractors; $40 million to support training of energy auditors.
    - Support for workforce programs, not directed through state agencies: $13.5 million for workforce partnerships geared towards solar deployment; funding for a small number of projects supporting EV infrastructure training through Joint Office of Energy and Transportation.
- Continued and new **competitions and fellowships** related to postsecondary degrees.

→ **Key takeaways**: DOE has begun to expand its investments that go beyond the postsecondary space, but those investments have generally been **one-time infusions of funding** and **narrow in focus** (i.e. not designed to support programming that equips workers with broad skills and knowledge applicable to multiple technologies).

2. Incentives in federal energy investments to spur workforce development activities, investments and partnerships.

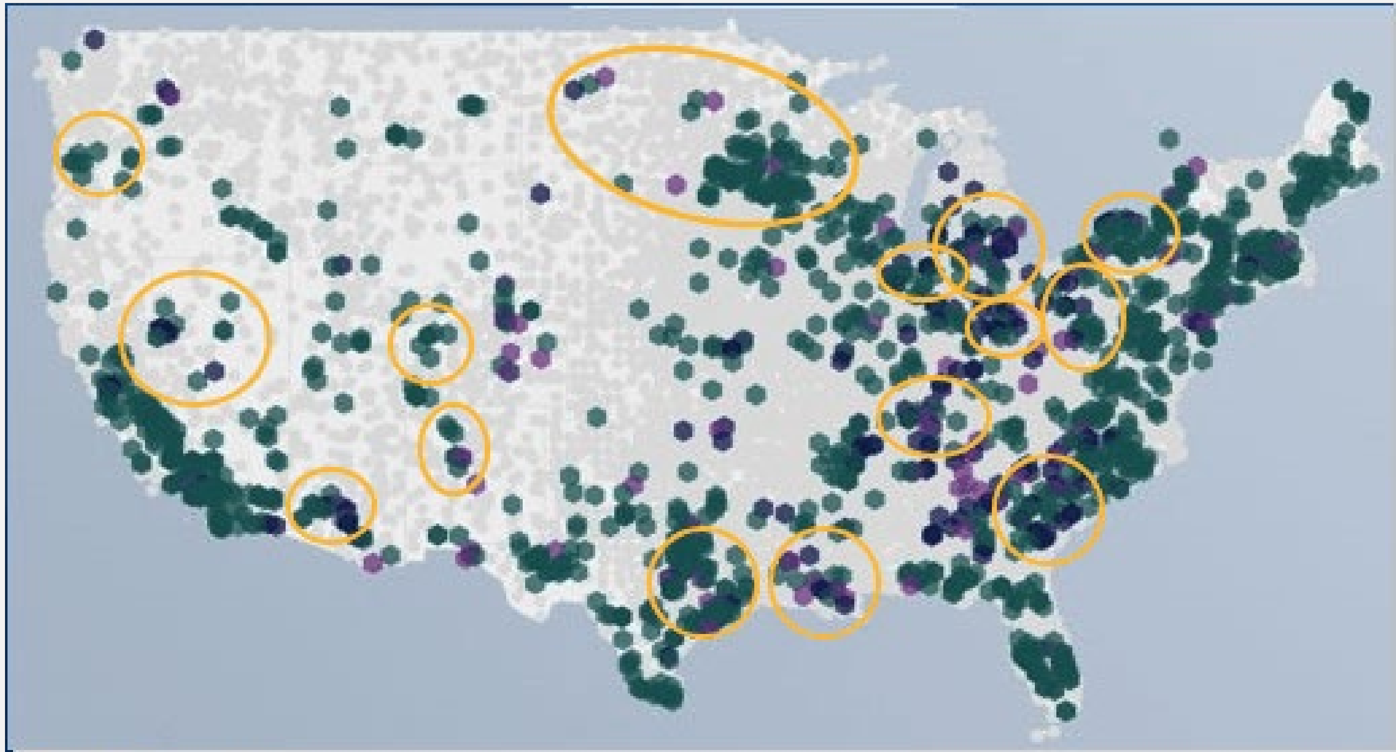
- **Community Benefit Plans:** All BIL and IRA competitive grants and loans require projects to incorporate a Community Benefits Plan (CBP), which should detail workforce development activities, partnerships and investments related to the project.
  - A complete application must have a CBP (generally weighted at 20% of the technical merit score).
  - A competitive application will explain how the project will support good quality jobs and take steps to attract and retain a skilled workforce inclusive of underrepresented and disadvantaged communities.
  - This applies to large share of the nearly $100 billion in grants to be administered by DOE through the BIL + IRA, and the $350 billion in new loan authority and guarantees to be dispersed by DOE's Loan Programs Office.



3. Capacity building for workforce intermediaries to fill in areas of critical need to prepare and connect workers to energy careers.

- **Community Workforce Readiness Accelerator for Major Projects (RAMP) initiative: a placed-based initiative that** seeks to catalyze effective, inclusive workforce strategies to connect local and underrepresented workers to good jobs on large clean energy infrastructure and supply chain projects in Target Geographies funded by the Investing in America suite of laws.

  - **Goals of RAMP:**
    - Build local workforce capacity.
    - Connect workers to jobs and reduce barriers to opportunities.
    - Provide skills training for in-demand jobs.



Target Geography | A region where there are large or concentrated public and private investments in clean energy, driven by BIL and IRA, that will drive additional demand for skilled workers

21st Century Energy Workforce Advisory Board

- A Federal Advisory Committee directed by Congress to develop a strategy for the Department to support the development of a skilled energy workforce.
- The Board's recommendations were submitted to the Department in September 2024.

Read the report: [Strategy for a 21st Century Energy Workforce]

Strategic Recommendations I:

Issue an agency directive adopting eight principles for all DOE workforce activities.

USE DATA	Begin with analysis that gathers crucial data, including on labor market demand and supply, track record on what the Department is doing, as well as equity and quality in energy jobs.
PRIORITIZE CAREERS	Prioritize broad occupational training for careers, rather than task training for unique jobs.
BREAK DOWN SILOS	Break down silos across workforce efforts that focus on specific technologies or tasks.
BOOST CAPACITIES	Leverage, partner with, and boost the capacity of existing workforce and education infrastructure, including union-sponsored pre-apprenticeship, apprenticeship, and labor management partnerships, to impact job quality and equity.
INCENT EMPLOYERS' ROLE	Use every tool in DOE's toolbox to incentivize employer commitment to direct hiring, retention, and career path strategies.
PRIORITIZE PARTNERSHIPS	Focus on supporting partnerships over standalone programs.
DRIVE JOB QUALITY AND EQUITY	Drive employer commitment to and investment in job quality and equity.
MEASURE, EVALUATE, ADJUST	Choose meaningful metrics—then measure early, evaluate often, and make timely adjustments to meet mission-critical goals.

Zooming in on Strategy III:
Build and support sector initiatives and intermediaries

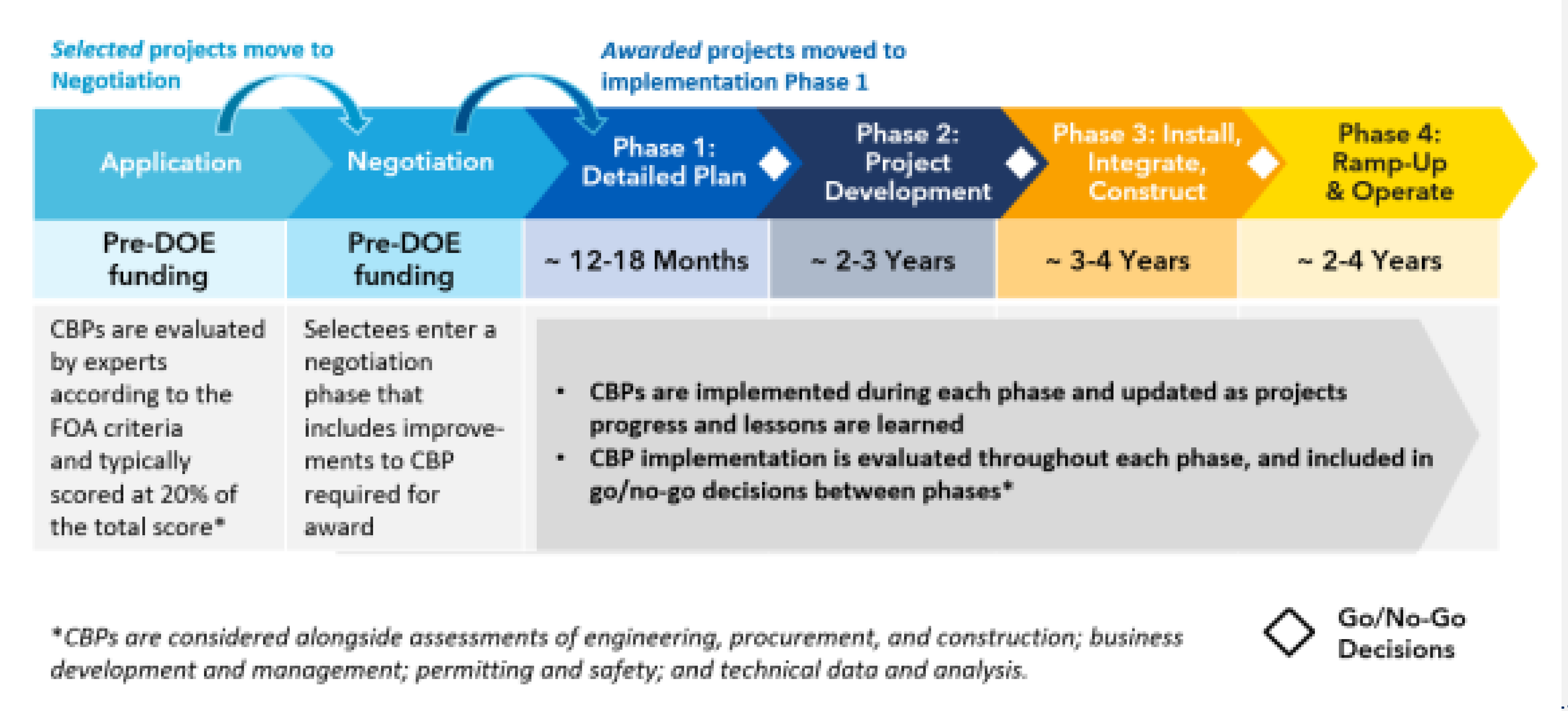
Build new sector initiatives, support existing sector partnerships, and build up the capacities of stakeholders and workforce intermediaries to execute these strategies.

- **Rather than making scattered investments in disconnected, "one-off" programs, DOE can leverage its relationships and convening power** to catalyze efficient, sustained, sector infrastructure to address opportunities in the energy transition strategically and at scale.
- DOE is well-positioned to build the capacity of institutions (workforce intermediaries) to play a leadership role in industries and occupations of critical importance to the energy transition.
- Successful sector initiatives are aimed at supporting both the **needs of workers** (i.e., job quality and workforce pathways) **and employers** (i.e., contributing to the competitiveness of high-road employers).

BIL and IRA Programs in H2 and Carbon Management

- BIL and IRA include demonstration and deployment programs and tax credits (45Q, 45V) to incentivize carbon management and hydrogen technologies.
- Demonstration and deployment programs are competitive grants that private-sector partners can apply for up to 50% cost share to scale clean energy technologies.
- Several offices at DOE are funding work in this area. Largest projects in the Office of Clean Energy Demonstrations include:
  - Hydrogen Hubs ($8 billion)
  - Carbon Management ($7 billion)
  - Industrial Demonstration Projects ($6.3 billion)

Phased Approach in Hydrogen and Carbon Management Investments



Phased Approach in Hydrogen and Carbon Management Investments (continued)

- Demonstration and Deployment projects are still being selected and awarded, providing time to ensure that workers are prepared for job tasks related to new fuels and industries.
- Analysis of hydrogen economy jobs indicates overlap with existing oil and gas and skilled trades occupations.
- Center for Hydrogen Safety is one source of safety training and information about key hazards, risks, and accidents that have occurred in hydrogen jobs.
- **More work is needed to work with employers to understand training needs and how hydrogen and carbon management safety training can be incorporated into apprenticeship curriculum in relevant regions.**

Questions?

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