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Growing the Clean Energy Workforce through Apprenticeship

REV 2024



Panelists

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IREC builds the foundation for rapid adoption of clean energy and energy efficiency to benefit people, the economy, and our planet.



Funding and Disclaimer

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DOE Award # DE-EE0010493 - Solar Ready Veterans Network

DOL Contract # 1605C2-23-C-0015 – Apprenticeships in Clean Energy Network

Apprenticeships in Clean Energy (ACE) Network

U.S. Department of Labor contracted **Clean Energy Industry Intermediary**

- Outreach and Engagement to raise awareness of Registered Apprenticeships
- Technical Support to assist with development of new programs and recruiting and retaining diverse apprentice
- Financial Incentives

Apprenticeships in Clean Energy (ACE) Network

A national coalition of industry, training, and workforce development leaders who are expanding Registered Apprenticeships for clean energy.



A proven workforce solution for clean energy that benefits employers and workers

- Apprenticeships are a **time-tested tool for workforce development**, used throughout history to train people in occupations that require extensive practical experience to master.
- Through a customizable, employer-driven, earn-while-you learn training model, Registered Apprenticeships help **address critical workforce challenges** while creating inclusive pathways to family-sustaining careers in a wide variety of industries.
- Registered Apprenticeships are a **key solution to develop, scale and sustain the pipeline of highly qualified and diverse talent needed to keep pace with accelerating clean energy workforce needs.**

Registered Apprenticeship (RA)

- A **Registered Apprenticeship (RA)** is an apprenticeship program that has been validated to meet the standards defined by the U.S. Department of Labor and/or a State Apprenticeship Agency.
- Upon the completion of an RA, the individual is issued a nationally-recognized credential by the DOL that recognizes them as a skilled practitioner of the occupation.
- An RA typically takes between 1-5 years to complete. In many ways, the credential earned is **similar to a college degree** in a particular field of study.

Key Components of Registered Apprenticeships

- **Industry-Led.** Apprenticeable occupations are industry-vetted and approved to ensure alignment with business needs.
- **Paid Job.** Apprentices are paid employees who produce high-quality work while they learn skills that enhance their employers' needs.



Key Components of Registered Apprenticeships

- **Structured On-the-Job Learning.** An apprenticeship develops skilled workers through structured learning in a work setting under supervision of a skilled mentor.
- **Supplemental Education.** Related instruction supports attainment of job knowledge and skills through virtual or in-person classroom education.



Key Components of Registered Apprenticeships

- **Diversity.** Regulations ensure RAs have strong non-discrimination, anti-harassment, and equal employment opportunity recruitment practices.
- **Quality and Safety.** Apprentices are covered by workplace protections on the job and taught safety practices in their field training and related instruction.



Key Components of Registered Apprenticeships

- **Credentials.** Offers a portable, nationally-recognized credential to be issued at the completion of the program.
- May include other industry credentials as part of the program (i.e., OSHA, NABCEP, BPI, GWO, NCCER).



Benefits of Apprenticeships for Employers AND Workers

- **Increased Worker Productivity** – Apprentices are supervised and trained through a formal process that leads to increased productivity during and after the apprenticeship period. 75% of employers reported increased productivity.
- **Customized Training** – Industry-wide standardization that is adapted to local market conditions and delivered by employers through on the job instruction

More Benefits of Apprenticeships

- **Reduced Turnover and Improved Retention** – 94% of apprentices remain with employer following completion of program
- **Diversity** – “Earn while you learn” model can reduce barriers for diverse candidates; diversity goals are required for program registration
- **Regulatory Compliance** - Apprenticeship programs can be used to document worker qualification and meet licensing requirements
- **Financial Incentives & Technical Support**

Meeting Federal & State Apprenticeship Requirements

- The federal IRA requirements are focused on the **manual labor** for **commercial and utility-scale projects (>1MW)**.
- Registered Apprenticeships are also an effective workforce development tool for other occupations. This includes those working in the residential sector, and occupations outside of manual construction trades.
- **Over 1,000 Occupations are recognized as being “Apprenticeable”**

US DOL Criteria for “Apprenticeable” Occupation

- Involve skills that are customarily learned in a practical way through a structured, systematic program of on-the-job supervised learning
- Be clearly identified and commonly recognized throughout an industry
- Involve the progressive attainment of manual, mechanical or technical skills and knowledge which, in accordance with the industry standard for the occupation, would require the completion of at least 2,000 hours (1 year Full-Time) of on-the-job learning to attain
- Require related instruction to supplement the on-the-job learning (min. 144 hours / year).

Common Occupations in Solar + Storage Construction

Job Role	Apprenticeable Occupation	Duration
Solar Electrician	Electrician	4 years
High Voltage Electrician	Electrician (Substation)	3 years
Assembler / Installer / Panelizer	Construction Craft Laborer	2 years
Equipment Operator	Operating Engineer	4 years
Assembler / Piledriver	Carpenter	4 years
Racking Fabricator	Iron Worker	4 years

There are many more apprenticeable occupations outside of construction relevant to this industry

Common Occupations in Energy Efficiency / Building Performance

Job Role	Apprenticeable Occupation	Duration
Weatherization Technican	Home Performance Laborer	1 year
Energy Auditor	Energy Auditor and Analyst	1-2 years
Insulation Installer	Insulator	4 years
Carpenter	Carpenter	4 years
HVAC Technician	Heating & Air Conditioning Mechanic & Installer	4 years

There are many more apprenticeable occupations outside of construction relevant to this industry

IRA Provisions with Labor Requirements

- Prevailing Wages and Apprenticeships
 - Advanced Energy Project Credit
 - Alternative Fuel Refueling Property Credit
 - Carbon Oxide Sequestration Credit
 - Clean Fuel Production Credit
 - Clean Hydrogen Production Credit
 - Energy Efficient Commercial Buildings Deduction
 - Investment Tax Credit
 - Production Tax Credit
- Prevailing Wages Only
 - New Energy Efficient Home Credit
 - Zero-Emission Nuclear Power Production Credit

Base Credits are just 20% of what is available if labor provisions are met, or in other words paying prevailing wage and having apprentices will earn 5X the base credit.

Solar ITC

- Base Credit: 6% of project costs
- w/Labor Req: 30% of costs

Solar PTC

- Base Credit: 0.3 cents / kWh (0.5 cents adjusted for inflation)
- w/Labor Req: 1.5 cents / kWh (2.6 cents adjusted for inflation)

Inflation Reduction Act Labor Requirements

- **Labor Hours Requirement:** Projects need 15% of construction labor hours to be provided by registered apprentices.
- **Participation Requirement:** Any contractor with 4 or more employees performing work on the project must have at least 1 Apprentice.
- **Ratio Requirement:** Must maintain apprentice to journeyworker ratios set by RA program (typically 1:1 for construction occupations).
- **Wages:** ALL “laborers and mechanics” must be paid prevailing wages. Apprentices may be paid wages set by RA program.

Registered Apprenticeship Program Types

Joint Labor - Mgmt. Sponsored

Participate in an apprenticeship program in collaboration with a labor union through a Project Labor Agreement, becoming a union signatory contractor, or other arrangement.

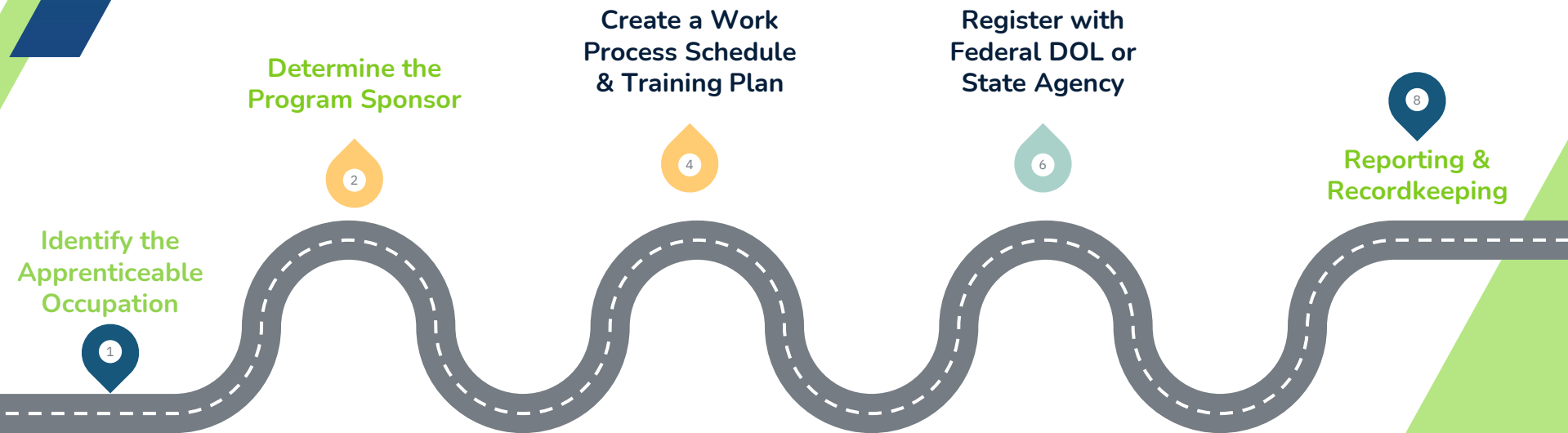
Group-Sponsored

Participate in a group apprenticeship program sponsored by an organization such as educational institution, community-based organization, trade association, or employer consortium

Employer-Sponsored

Develop and administer an apprenticeship program in-house as an employer-sponsor. Related Instruction may be provided in-house, by an educational institution, and/or by other training provider

Steps to Launch or Participate in an RA Program



* Employers using a group-sponsored program will skip steps 3,4, 5, and 6

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Sign Up Today!

irecusa.org/programs/ace-network

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Electrician Apprenticeships to meet License
Requirements, and Apprenticeships in other
occupations to grow business



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