

Registered Apprenticeships in Clean Energy: Introduction to the ACE Network





U.S. Department of Labor
Employment and Training Administration

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

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



Apprenticeships in Clean Energy (ACE) Network

- Contract with U.S. Department of Labor to serve as the **Industry Intermediary to the Clean Energy Industry** .
 - Initial 1 year contract with 4 option years (start 6/29/23)
 - Interstate Renewable Energy Council is Prime Contractor
 - Outreach and Engagement to raise awareness of Registered Apprenticeships
 - Technical Support to assist with development of new programs and recruiting and retaining diverse apprentices
- Financial Incentives

Partners

- Institute for Workplace Skills and Innovation America (IWSI)
- Solar Energy Industries Association (SEIA)/Solar & Storage Industries Institute (SI2)
- Building Performance Association (BPA)
- Service Year Alliance (SYA)
- National Association of Workforce Boards (NAWB)
- Center for Renewable Energy Advanced Technological Education (CREATE)
- Renewables Forward
- Historically Black Colleges & Universities Community Development Action Coalition - Clean Energy Initiative (HBCU CEI)
- Arkansas Advanced Energy Foundation (AAEF)
- Where We Go

Tasks

- Develop and Scale Innovative, High-Quality RA Programs
- Leverage Intermediary Subject Matter Expertise
- Increase Access to RA and Increase DEIA in Apprenticeship
- Conduct Sector-based Outreach & Recruitment
- Advance RA Accelerator Models and Registration Support
- Promote Innovation in RA (college credit, competency-based models, youth programs,...)
- Develop Curricula, Related Instruction Outlines, Occupational Outlines, and Competency Models
- Incentivize & Sustain new RA Programs and Partnerships

What are 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.
- **Structured On-the-Job Learning** – 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.

What are Registered Apprenticeships?

- **Diversity** – Regulations ensure RAPs 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 the field and related instruction.
- **Credentials** - Offers a portable, nationally-recognized credential to be issued at the completion of the program; and may include other industry credentials as part of the program (I.E. OSHA 10).

Benefits of Apprenticeships for Employers AND Workers

- **Proven Workforce Development Model** – Concept used by employers since the Middle Ages – Not just for Construction Trades!
- **Effective Recruitment Tool** – Apprenticeships are attractive to job seekers and the labor system supports connecting people to Apprenticeship opportunities, some employers report saving 20% on recruitment costs for apprentices vs. other employees

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**

IRA Labor Provisions ensure GOOD Jobs

- **Prevailing Wages** – combination of the basic hourly wage rate and any fringe benefits rate, paid to workers in a specific classification in the area where the work is performed, as determined by the Secretary of Labor
- **Apprenticeships** – industry-vetted and Department of Labor approved and validated career pathways where individuals learn an occupation through a combination of paid work experience under the guidance of a mentor and classroom instruction, with progressive wage increases

Apprenticeships are Required for Full Value of Inflation Reduction Act Tax Credits

■ Investment Tax Credit

- Base Credit – 6% of Project Costs – No Labor Requirements
- Full Credit – 30% of Project Costs – Prevailing Wage and Apprenticeship Requirements
- Additional Adders: Domestic Content, Energy Communities, etc. – No Labor Requirements

■ Apprenticeship programs must be Registered with the US Department of Labor or a State Apprenticeship Agency

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)

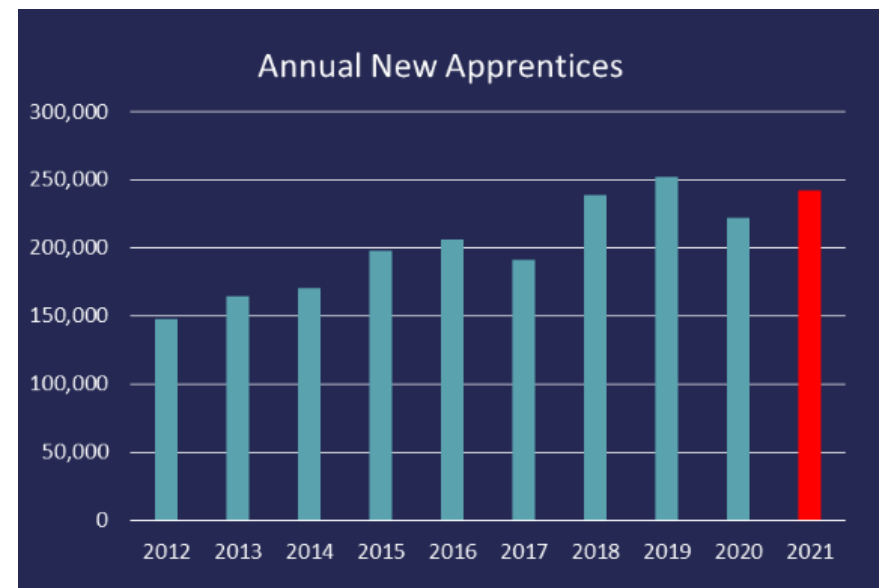
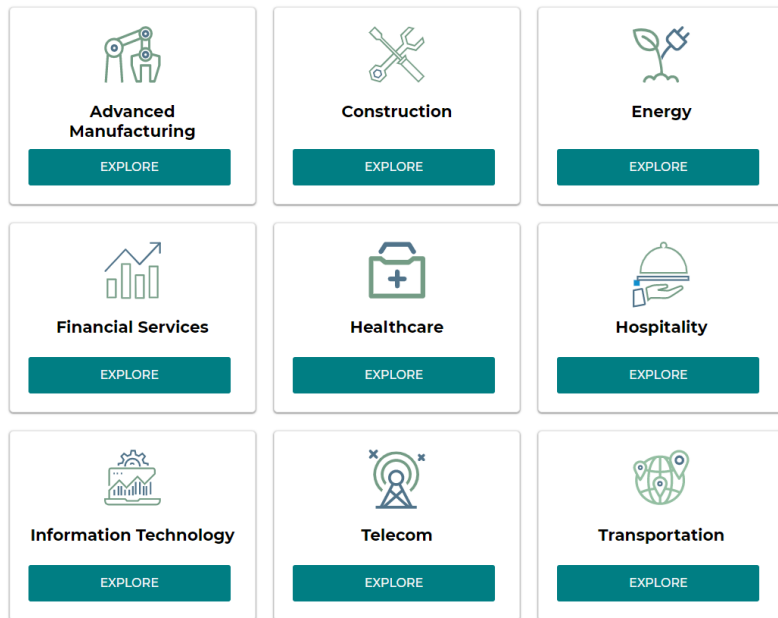
Apprenticeships Requirements Cont.

- Labor Hours Requirement Minimum percentage of project construction, alteration, and repair work must be performed by a registered apprentice
 - 12.5% in 2023; 15% in 2024 and thereafter
- Ratio Requirement: Apprentice-to-Journeyworker ratios as set by the DOL or State Apprenticeship Agency must be maintained on daily basis
- Participation Requirement: the taxpayer and any contractor/sub-contractor with 4 or more workers on site must have at least one apprentice
- Apprentices may be paid wages lower than prevailing wage rates according to the apprenticeship program's approved wage schedule

Apprenticeships Requirements Exemptions

- One Megawatt Exemption: Projects less than 1 MW (AC) are exempt
- Beginning of Construction Exemption: Projects commencing construction prior to January 29, 2023
- Good Faith Effort: Apprenticeship program is contacted and is either unable or unwilling to provide apprentices or is non-responsive after 5 business days
 - Proposed rulemaking includes requirement for additional attempt to obtain apprentices 120 days after first attempt
- Apprenticeship Cure Provision: Penalty payments made to Treasury
 - \$50 / hour for each hour of work that was not performed by an apprentice;
 - \$500 / hour for willful disregard

Apprenticeships are Growing ...and are not limited to Construction Trades!



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

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 FullTime) of on-the-job learning to attain
- Require related instruction to supplement the on-the-job learning (min. 144 hours / year).

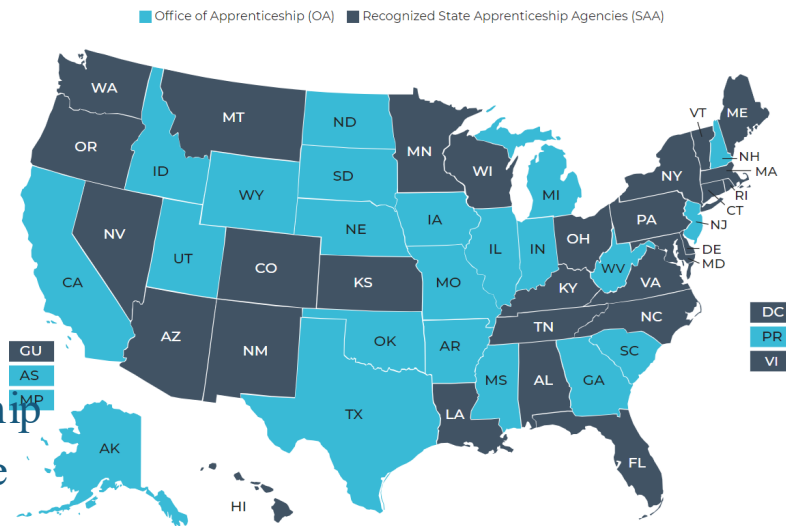
Many Solar Occupations are Apprenticeable

From Accordion Maker to X-Ray Equipment Tester, there are over 1000 approved occupations:
<https://www.apprenticeship.gov/apprenticeship-occupations>

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

Program Standards

- Office of Apprenticeship Standards serve as guidelines for Sponsors to register
- Local Program Standards in each state
www.apprenticeship.gov/apprenticeship-occupations
- National Guideline Standards for Apprenticeship (NGS) are developed by organizations to serve as pre-approved templates aligned with an industry sector



Purpose of National Guideline Standard

- Occupation that is “clearly identified and commonly recognized throughout an industry ,”
- Ensure consistency between program sponsors
 - Can modify up to 25% to meet local/employer needs
 - Recognition and “portability” between employers
- Structured, systematic, standardized training (OJT & RTI) that provides recognition of worker competency
- May serve as basis for licensing by regulators (Note: this is not an official purpose recognized or promoted by DOL.)

Components of an RA Program Standard

- Apprenticeship Approach and Term (timebased, competency-based, or hybrid)
- Work Process Schedule for On-the-Job Training (OJT) & Related Technical Instruction (RTI)
- Minimum Eligibility, Credit for Previous Experience, & Probationary Period
- Ratio of Apprentices to Journeyworkers
- Apprentice Wage Schedule
- Equal Employment Opportunity and Affirmative Action

IREC & SEIA are Here to Help!

■ Solar Ready Veterans Network

- Developing National Guideline Standards for multiple occupations in-demand by Solar Employers
 - Led by Midwest Renewable Energy Association



■ Apprenticeships in Clean Energy Network

- DOL Contracted Industry Intermediary
- Multi-stakeholder partnership to promote Apprenticeships and provide technical and financial support to develop, register, and sustain programs



Contact

■ Richard Lawrence

- Program Director, IREC
- richardl@irecusa.org
- Or Apprenticeships@irecusa.org
- 518-312-5489 (cell)