

ADDRESSING SKILLED WORKER SHORTAGE WITH REGISTERED APPRENTICESHIPS






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Scaling the solar workforce to meet accelerating demand over the next decade and beyond will require the industry to standardize pathways to solar careers. Apprenticeships are a time-tested and powerful tool for workforce development, but are not currently widely used in the solar industry. Apprenticeship programs that are registered with the Department of Labor offer many benefits for solar companies and their apprentices.







What is a Registered Apprenticeship?

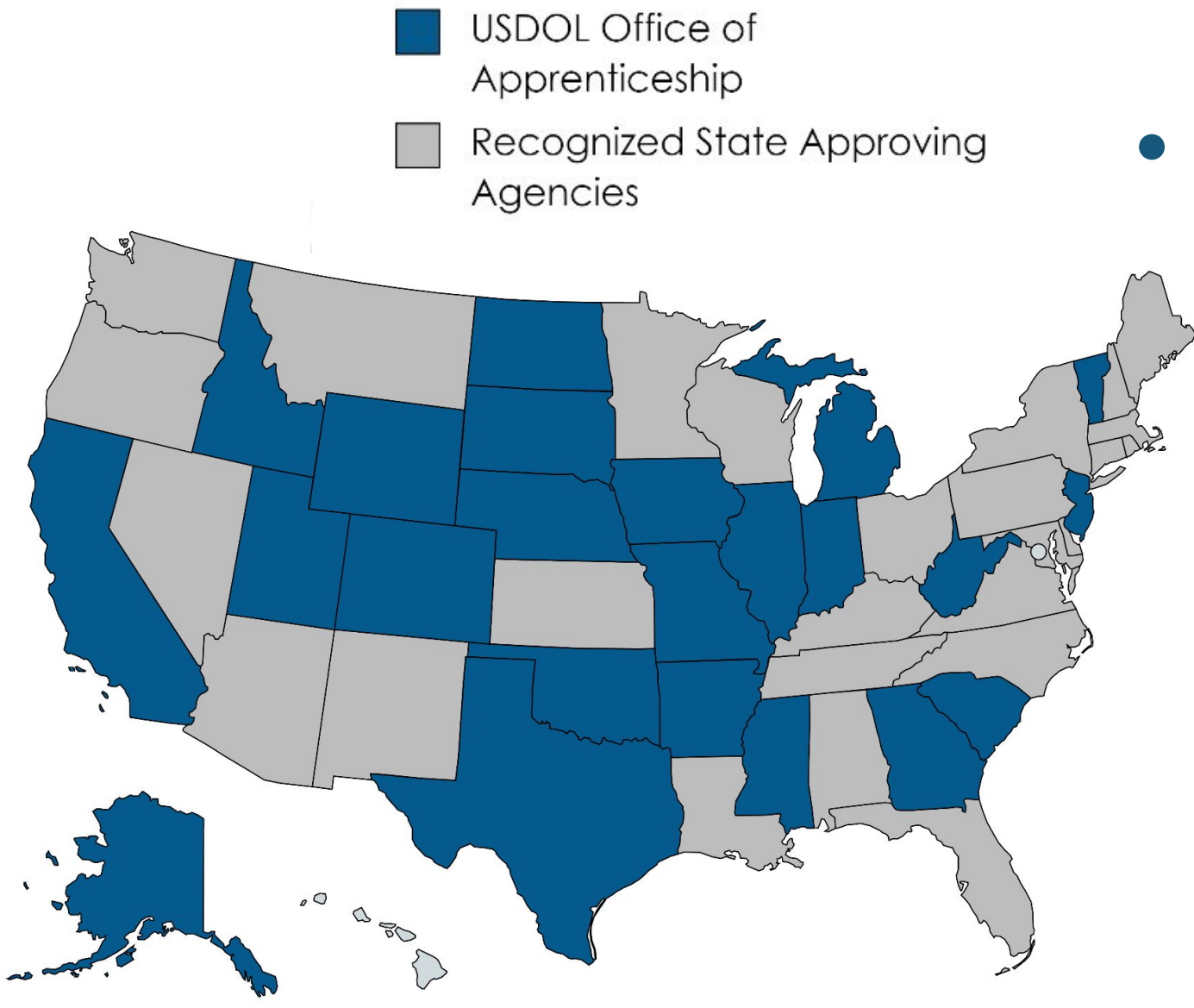
An apprenticeship is an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce through customizable training, and individuals learn the trade and earn industry credentials through paid work experience and related instruction. A [Registered Apprenticeship Program \(RAP\)](#) is a model of apprenticeship that has been validated by the U.S. Department of Labor or a State Apprenticeship Agency.

Key Components of a Registered Apprenticeship

- **Paid Job:**
Apprentices are paid employees who produce high-quality work while they learn on-the-job. Apprentices are paid less than fully trained workers but receive wage increases at predetermined stages as they gain knowledge, skills, and experience through the apprenticeship program.
- **On-the-Job Learning:**
Apprenticeship programs develop skilled workers through structured learning in a work setting. The learning may be completed through either a **time-based** program that defines how many hours the apprentice must spend performing certain types of work throughout the program, or through a **competency-based** program where the apprentice systematically demonstrates their ability to perform all of the different work tasks of the occupation (or a hybrid of the two models).
- **Classroom Learning:**
In addition to on-the-job learning, apprentices must also complete predetermined related instruction to support and improve job-related skills through instruction in a formal classroom setting (virtual, in-person, or by correspondence).
- **Mentorship:**
Provides apprentices with the support of a skilled worker to assist and enhance critical hands-on learning.
- **Credentials:**
Apprenticeships offer a portable, nationally-recognized credential, issued at program completion. Apprentices are also often required to complete industry recognized credentials as part of the program requirements.

Benefits of Registered Apprenticeships to Employers and Workers

- **Effective Recruitment Tool:**
Attractive to job seekers making a career transition, and early-career workers. Particularly effective for veterans, who can apply GI Bill toward housing & training supplies while enrolled in a RAP.
- **Skilled Workforce:**
Recruit and develop a highly skilled workforce through customized high-quality training.
- **Diversity:**
The “earn while you learn” model can reduce barriers for candidates from underserved backgrounds, and credentials support career advancement.
- **Demonstrate Qualification:**
Can be used to document worker qualification and meet licensing requirements.
- **Improve Retention:**
Approx. 94% of apprentices remain with employer following completion of program.
- **Financial Incentives & Technical Support:**
Substantial federal & state funding is available for employers and sponsors.



How to Start an Apprenticeship Program

- 1. Identify the “Apprenticeable” Occupation(s)** for which you have hiring needs. Over 1000 occupations have been approved by the Department of Labor. If the occupation is not yet approved, another related or similar occupation may be able to be modified.
- 2. Determine the Appropriate “Sponsor.”** An apprenticeship sponsor is the entity that registers the program and is responsible for the administration and operation of the program. A wide variety of entities may sponsor programs for employers to participate in, including educational institutions, community based organizations, trade associations, employer consortiums, and unions—or a single employer can sponsor their own program.
- 3. Develop a Work Process Schedule & Training Plan.** The WPS defines the number of OJL hours that must be completed in each major task category the apprentice needs to learn how to do. The training plan defines the related instruction to be completed.
- 4. Develop Program Requirements and Policies** including eligibility requirements, credit for prior experience & education, program format & duration, wage progression schedule, ratio to journeyworkers, complaints, non-discrimination, and diversity goals.
- 5. Register the Program** with a State Apprenticeship Agency or U.S. Department of Labor, and the Department of Veterans Affairs to ensure veterans can access their GI Bill benefits.



“Apprenticeable” Occupations

- To be recognized as “apprenticeable,” an occupation must meet four federal requirements:
- 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 of on-the-job learning to attain; and
 - Require related instruction to supplement the on-the-job learning (with a “recommended” minimum of 144 hours of training per year)."

Solar apprenticeship programs are limited because the U.S. Department of Labor does not currently recognize the occupation of Solar Installer (or any solar-specific occupation) as “apprenticeable.” In some states, programs are approved by a State Approving Agency. For example, Florida recently registered an solar installer apprenticeship program aligned to the state’s solar contractor license. Adjacent occupations such as construction craft laborer, home performance laborer, weatherization technician, and energy auditor have been modified toward a solar installation apprenticeship. Traditional construction occupations, such as electrician, roofer, operating engineer, carpenter, and iron worker may also have roles on solar installations.

Employer Interest in Solar Industry Apprenticeships

Earlier this year, IREC and SEIA held a session for solar industry employers to learn more about why they are interested in registered apprenticeships. Here’s what they said:

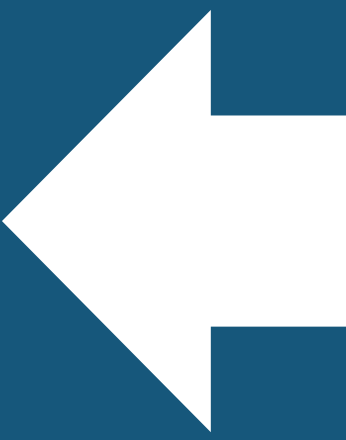
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 - To establish consistent career paths for installers and create experienced employees
 - High quality, standardized training for installers
 - Improve safety and quality performance
 - To promote excellent workmanship and pride in work
 - Attract, retain & develop talent; qualify for federal tax credits
 - Develop and sustain a pipeline of high quality, trained installers
 - To support standardization and living wages for residential installers
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Example Solar Industry Apprenticeships			
Sponsor	Occupation(s)	Duration	Scope
Oregon RE-JATC / OSSIA	Renewable Energy Technician (modified from Wind Turbine Technician)	2 years	Renewable energy projects up to 50 kW in Oregon
ReVision Energy	Inside Wireman Residential Wireman	4 years 2 years	Electrical Electrical (residential only)
Adaptive Construction Solutions	Energy Utilities Installer (modified from Home Performance Laborer / Weatherization Technician)	1 year	Construction laborer on utility-scale energy projects
P4A / UWA	Renewable Energy Specialist (modified from Energy Auditor)	2.5 years	Installation and maintenance of utility scale solar, storage, and wind (on & off-shore)
FSEC / FlaSEIA	Solar Energy Technician	2 years	Solar PV and Thermal in FL

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Are you interested in developing solar industry apprenticeships? Scan & let us know! We'll be in touch to connect you with additional resources and next steps.