

## Diversifying the Solar Workforce Through Inclusive Apprenticeships

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**Abstract:** *A recent study from the Department of Energy showed the US solar industry workforce will need to triple by 2035 to meet deployment goals. The solar industry has made progress in recent years as far as building a diverse workforce but more can be done to reach untapped talent pools to support future growth. Approximately 26% of adults in the U.S. have a disability, but only 29.1% are employed. In fact, 10.7 million more employable Americans could enter the job market if companies focus on disability inclusion. Apprenticeship programs provide participants with paid “earn while you learn” training through in-classroom instruction and structured on-the-job training with an experienced mentor. Apprenticeship programs designed to be inclusive of people with disabilities, and underrepresented groups more broadly, can be a low-cost way to help companies of all sizes to diversify their workforce, boost productivity, reduce turnover and absenteeism, enhance their brand images, and more—all factors that can increase a company’s bottom line. The Partnership on Inclusive Apprenticeship (PIA), an initiative funded by the U.S. Department of Labor’s Office of Disability Employment Policy, can support solar employers to advance and enhance inclusive apprenticeship programs.*

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According to the United States Energy and Employment Report (USEER) 2021, much of the clean energy sector experienced job losses during the COVID-19 pandemic, and the solar industry saw an 8% decline in jobs. (U.S. Department of Energy, 2021) In 2020, the industry began rebounding, bringing an influx of 560,000 jobs into the energy sector and a continued need for solar workers (U.S. Department of Energy, 2021). As the nation moves passed COVID-19 pandemic business hurdles, experts anticipate continued growth in solar jobs (U.S. Department of Energy, 2021).<sup>1</sup> A recent study from the U.S. Department of Energy projects that the solar industry will employ between 500,000 and 1.5 million American workers by 2035 (U.S. Department of Energy, National Renewable Energy Laboratory, 2021).

Though increasingly optimistic about the future outlook, many industry leaders face major hurdles to recruit and hire experienced candidates to fill the growing number of clean energy jobs. As outlined in the USEER 2021 report, 88% of companies in the electric power generation sector reported: “It was either somewhat difficult (69%) or very difficult (20%) to find new employees.” (U.S. Department of Energy, National Renewable Energy Laboratory, 2021) At the same time, the energy sector is “less diverse than the nation as a whole,” and employers are seeking ways to build diverse, equitable, inclusive and accessible workplaces (U.S. Department of Energy, National Renewable Energy Laboratory, 2021).

Apprenticeship programs that are designed to be inclusive of people with disabilities — and underrepresented groups more broadly — can play a vital role in building out the solar industry’s future workforce. This talent pipeline offers a cadre of trained and experienced job candidates with diverse skill sets, knowledge and abilities (Accenture, 2021).

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<sup>1</sup> Growth estimates precede the anti-dumping and countervailing duties circumvention trade case that, as of April 2022, sits before the Department of Commerce and has the potential to significantly reduce solar deployment in the years ahead, per industry forecasts (Pickerel, 2022).

## **Bringing in diverse talent through apprenticeship**

About 26% of adults in the U.S. have a disability (US Centers for Disease Control, 2020), but only 29.1% of people with disabilities aged 16-64 are employed (US Bureau of Labor Statistics, 2022). People with disabilities can bring a wealth of untapped talent and diverse perspectives into the clean energy sector, filling jobs ranging from solar power installers to systems engineers and market analysts. In fact, 10.7 million more Americans could enter the job market if companies would expand their focus on full inclusion of workers with disabilities (Accenture, 2018). An apprenticeship program that is designed to be inclusive of people with disabilities can create a diverse talent pipeline of valued workers and help build a more inclusive solar industry.

Apprenticeship programs provide participants with paid “earn while you learn” training through in-classroom instruction and structured on-the-job training with an experienced mentor. Inclusive apprenticeship programs can help take apprenticeships a step further. These programs are specifically designed to be accessible to and inclusive of all trainee workers, including people with cognitive, neurological, physical, mental health and sensory disabilities. In turn, recruiting and hiring these career seekers can help to foster more diverse, equitable, inclusive and accessible workplaces.

Launching an inclusive apprenticeship program can offer a low-cost way to help companies of all sizes diversify their workforces, boost productivity, reduce turnover and absenteeism, enhance their brand images and more. All of these factors can drive a company’s mission and yield key advantages for its bottom line.

## **The value of inclusive apprenticeship**

Creating an inclusive apprenticeship program can represent a low-cost way to build a diverse pipeline of solar workers. “The Value of Inclusive Apprenticeships,” a recently published resource from the Partnership on Inclusive Apprenticeship (PIA), summarizes the crucial advantages that these programs can bring to companies (Partnership on Inclusive Apprenticeship, 2021), including:

**Significant return on investment:** In 2020, the average Registered Apprenticeship program yielded a 170% return on investment for North Carolina employers (NC Department of Commerce, ApprenticeshipNC, 2020). Companies that embraced best practices for employing and supporting more workers with disabilities in their workforce achieved 28% higher revenue, doubled their net income, and attained 30% higher profit margins on average (Accenture, 2018).

**Lower turnover and reduced training costs:** The vast majority of apprentices (89%) maintained their positions, helping their businesses achieve a strong 3-year retention rate (US Department of Labor, 2018). At four Walgreens locations, the three-year average turnover rate was 48% higher for team members without a disability as compared to team members with a disability, saving on recruiting and training costs (American Society of Safety Professionals, 2012).

**A wider talent pool:** As noted earlier, only 29.1% of working-age adults with a disability are employed, compared with 70% of working-age adults without a disability. Nearly 11 million Americans could enter the labor force and pursue jobs, including through apprenticeships, if companies embraced full inclusion of workers with disabilities.

## **A path forward: Steps to creating an inclusive apprenticeship program**

For those companies with an interest in creating inclusive apprenticeship programs, these five steps can help organizations kick start the process and meet their goals to become more diverse, inclusive, equitable and accessible businesses:

### Step 1: Explore

Interested companies can explore how apprenticeship programs can help prepare and train the future workforce by learning more about the value of inclusive apprenticeship programs and how the Partnership on Inclusive Apprenticeship is advancing career paths in the clean energy sector.<sup>2</sup>

### Step 2: Build

Interested companies can learn how to create an apprenticeship program or partner with an existing apprenticeship program.<sup>3</sup> Additionally, many states offer funding sources that can aid businesses in developing programs, providing financial support for solar workforce expansion, apprenticeship training, and work access for job seekers with disabilities. Employers can pursue several tax incentives and grant programs. Learn more about funding an apprenticeship program.<sup>4</sup>

### Step 3: Partner

Interested companies can consider developing a new partnership to create an inclusive program, which may include collaborating with industry partners such as apprenticeship intermediaries.<sup>5</sup> These intermediaries can connect apprentices and employers to help launch, grow and maintain apprenticeship programs. They are often run by industry associations, chambers of commerce, community and technical colleges, community-based organizations, labor-management partnerships and workforce development boards.

### Step 4: Register

Interested companies can find out how to register an apprenticeship program with the U.S. Department of Labor or a state apprenticeship agency.<sup>6</sup>

### Step 5: Launch

Interested companies can begin an apprenticeship program by recruiting and hiring talented career seekers<sup>7</sup> while ensuring such a program meets their accessibility goals by reading “Designing Inclusive Apprenticeships: A Guide for Recruiting & Training Apprentices with Disabilities.”<sup>8</sup>

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<sup>2</sup> See: <https://inclusiveapprenticeship.org/the-value-of-inclusive-apprenticeships/>

<sup>3</sup> See: <https://www.apprenticeship.gov/employers/registered-apprenticeship-program/build>

<sup>4</sup> See: <https://inclusiveapprenticeship.org/the-value-of-inclusive-apprenticeships/#3>

<sup>5</sup> See: <https://www.apprenticeship.gov/employers/registered-apprenticeship-program/build>

<sup>6</sup> See: <https://www.apprenticeship.gov/employers/registered-apprenticeship-program/register>

<sup>7</sup> See: <https://www.apprenticeship.gov/employers/registered-apprenticeship-program/launch>

<sup>8</sup> See: <https://inclusiveapprenticeship.org/guide/>

## Research questions lie ahead

As PIA continues to make progress on advancing workforce development programs among solar energy stakeholders, the team will look to highlight lessons learned and create case studies of how such programs have taken shape. PIA will also appeal to the growing community of workforce development professionals focused on diversity, equity, inclusion, and accessibility for further insights on how to apply best practices for inclusion of underrepresented groups in the solar workforce.

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