

Solar Workforce Development

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SEIA's Key Priorities for the 2020s



Enacting smart, effective state-level policies



Streamlining permitting, interconnection and transmission buildout



Scaling a diverse workforce



Strengthening political engagement and influence



Fostering a robust domestic supply chain and life-cycle view of manufacturing

Many Type of Roles in Solar Industry



Above Photo: SOLV Energy



Photo: Riley Neugebauer, Solar for Women
www.solarforwomen.com



U.S. Solar Workforce Stats & Future Needs

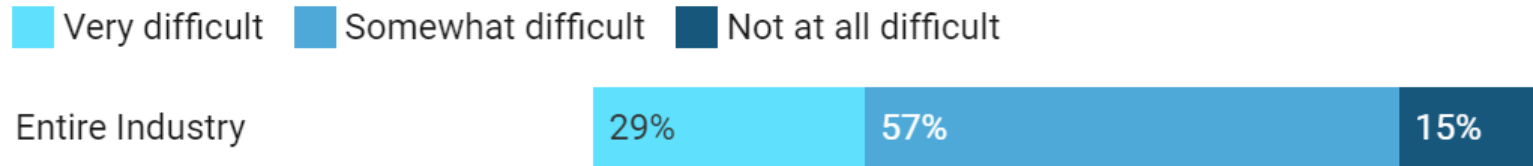
- **280,000 solar workers** as of end of 2023
 - 6% increase from 2022
- Solar industry employment expected to expand to **500,000 by 2033**
- U.S. solar manufacturing workforce is set to triple to over **100,000 jobs by 2033**
- **Less than half** (43%) of workers hired in 2023 work in a role that requires bachelor's degree
- 33% of workforce in installation & repair roles in 2023



Difficulty Finding Qualified Workers - 2023

- 86% of all solar firms responding to 2023 Job Census said it was either “**very difficult**” or “**somewhat difficult**” to find qualified solar workers.

Level of Difficulty Finding Qualified Solar Workers, 2023



Top Workforce Challenges

- Need pipeline of **local/regional talent** to keep up with hiring needs as industry grows rapidly.
- Need more tools to help attract, train, and retain diverse talent for **all types of roles at all levels**. Particular challenges for **management roles, engineers/scientists, and construction/field roles** such as solar installers and electricians*

* Most difficult positions to fill at solar firms is part of IREC's *National Solar Jobs Census 2023* available at <http://www.SolarJobsCensus.org>

Skilled Trades Interest Growing

“The number of students enrolled in **vocational-focused community colleges rose 16%** last year to its highest level since the National Student Clearinghouse began tracking such data in 2018.

The ranks of students studying **construction trades rose 23%** during that time, while those in programs covering HVAC and vehicle maintenance and repair increased 7%.”

Source: Chen, Te-Ping, “[How Gen Z Is Becoming the Toolbelt Generation](#)”. Wall Street Journal. April 1, 2024.

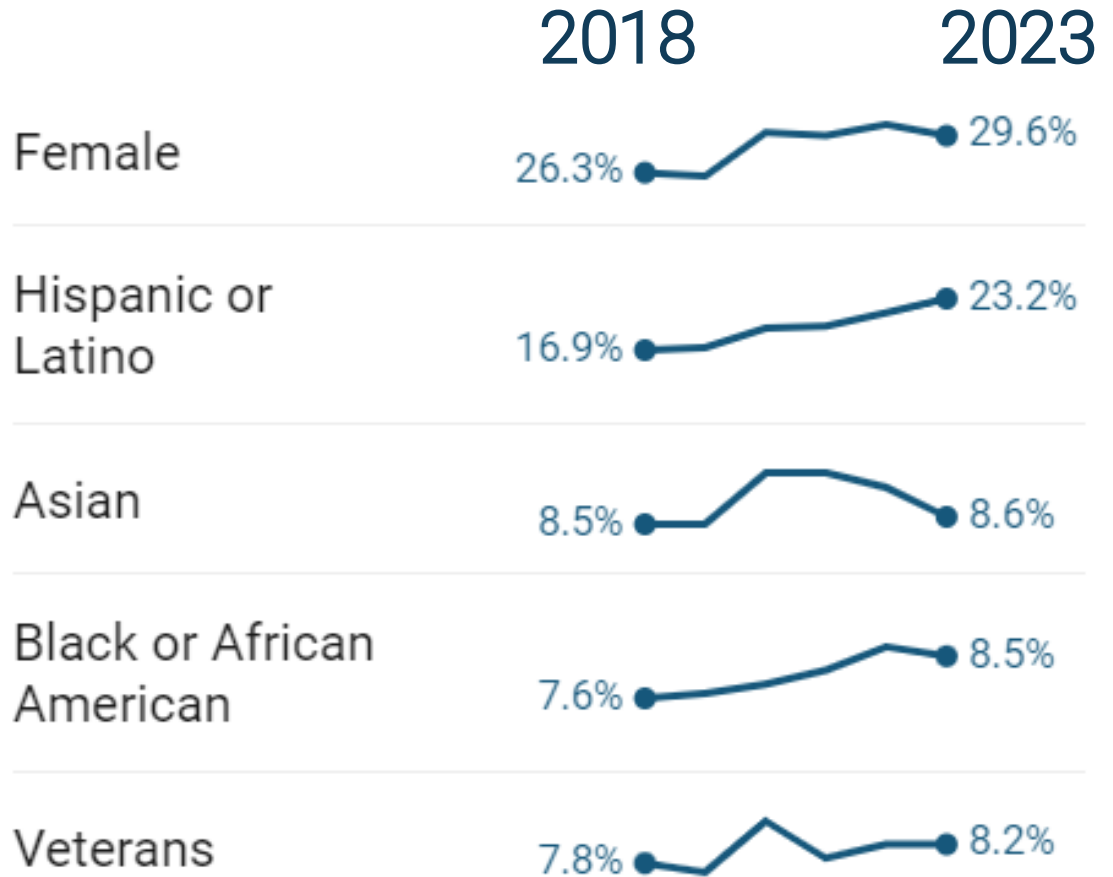
Powering the Solar+ Decade | 12/13/2024



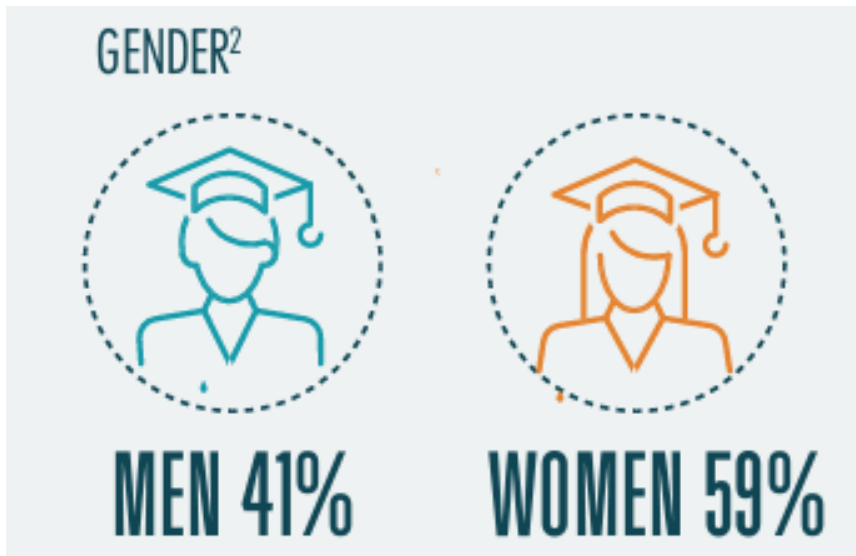


U.S. Solar Job Demographics

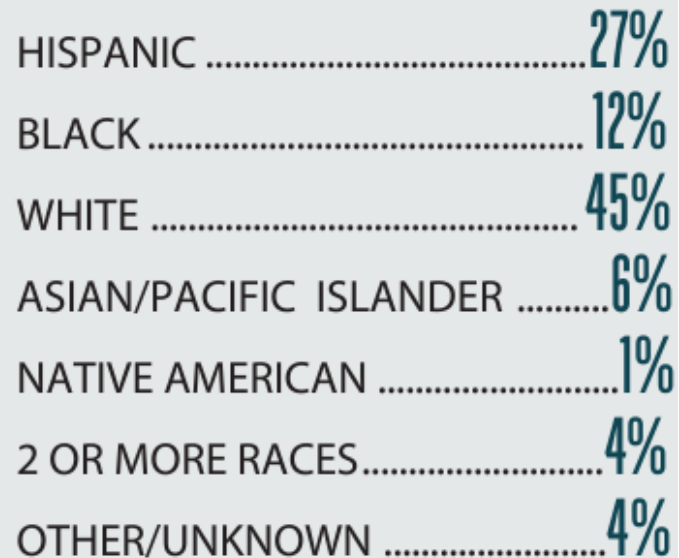
2018 - 2023



Selected Data from American Association of Community Colleges' 2023 Fast Facts Infographic



DEMOGRAPHICS OF STUDENTS ENROLLED FOR CREDIT²



Source: https://www.aacc.nche.edu/wp-content/uploads/2023/03/AACC2023_FastFacts.pdf with original source noted as *NCES (2023). IPEDS Fall 2021 Enrollment Survey [AACC analysis]*.

SEIA Member Engagement



SEIA's IRA Apprenticeship Task Force

- **SEIA Member only** group (Watt level & above) seeking to identify areas of collaboration around registered apprenticeships and develop tools/resources to assist members in securing tax credits and center quality, safe apprentice experiences.
- Meetings include speakers and peer experience sharing.
- Email workforce@seia.org for questions or to join this group.



SEIA's Workforce Development Committee

The purpose of the **SEIA member only** committee is to facilitate further education to SEIA members about workforce development tools, resources, strategies, partnerships, incentives, etc., and to build a workforce development brain trust that can support SEIA and its members.

Email workforce@seia.org for questions or to join this group.

Apprenticeship Collaboration with Community Colleges



Inflation Reduction Act of 2022

- Requires companies building solar, storage, and other clean energy projects that are larger than 1 MW in size must comply with the Inflation Reduction Act's **Prevailing Wage & Registered Apprenticeship Requirements** in order for these projects to receive full value of clean energy tax credits.*

*More information and resources on these requirements:
<https://seia.org/prevailing-wage-apprenticeships-ira/>

What is a Registered Apprenticeship Program?

- **Registered Apprenticeship Programs (RAPs)** prepare workers for careers while meeting the needs of businesses for a highly skilled workforce.
- **“Earn while you learn”** model – **Paid job** from day one for apprentices.
- Two Key components:
 - **On-the-Job Learning Work Process Schedule** (at least 2,000 hours) under supervision of mentor/journeyworker
 - **Related Instruction** (144 hours/year min.)



Photo: Solar Energy International

Registered Apprenticeship Program Types

Joint Labor–Management 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 (Non-Joint)



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

Employer–Sponsored



Create, register, and administer an apprenticeship program in-house as an employer-sponsored program.



Community Colleges' involvement in Apprenticeship

1. College may **Sponsor** (i.e. Administer) a Group Apprenticeship Program with multiple employers to consolidate administrative burden
2. College may be a **provider of Related Instruction** (i.e. classroom instruction). New trend is some colleges are beginning to offer apprentices credit for Related Instruction in Apprenticeship Programs
3. College may **provide recruitment support** for apprentice candidates



Apprenticeships in Clean Energy (ACE) Network

ACE Network is a U.S. Dept. of Labor funded initiative to promote apprenticeships.

- **NO COST technical assistance & financial support** to companies and organizations looking to **register, join, or expand** Registered Apprenticeship Programs.
- Open to ALL clean energy companies and other potential sponsor organizations (colleges, unions, trade associations, etc)
- Click on ***Sign Up Now*** at:
<https://irecusa.org/programs/ace-network/>
 - *Note that you are interested in Community College partnerships*



Apprenticeships in Clean Energy (ACE) Network

A national coalition of industry, training, and workforce development leaders who are expanding Registered Apprenticeships for clean energy led by the **Interstate Renewable Energy Council (IREC)**.

irecusa.org/programs/ace-network/



Questions?



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