

# Reaching Across the Oil Aisle

How conventional energy construction companies can help solve the solar labor shortage.

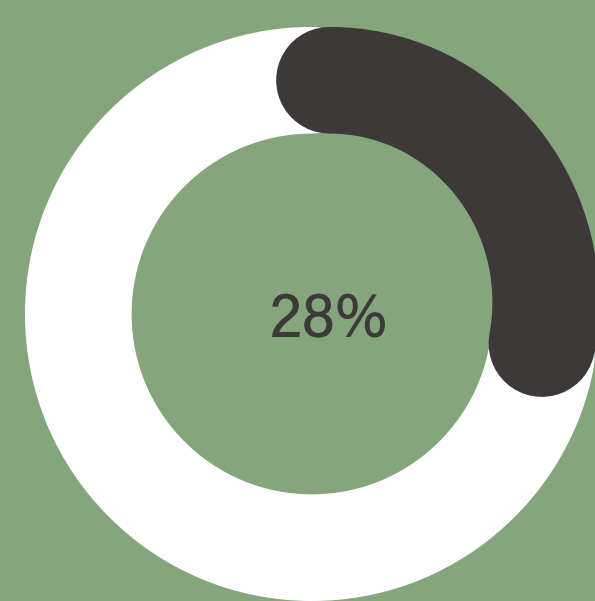
The current shortage of skilled labor poses a major barrier to the deployment of PV projects and is affecting developers, EPCs, GCs, and subcontractors alike. Though the conventional and renewable energy sectors have historically been positioned in opposition to one another, reaching across the oil aisle may just be the unlikely solution needed to overcome one of our most pressing problems as an industry.

Our team at Benchmark Electrical Solutions has been using this approach with great success, and believe this strategy will be essential to securing the future of America's renewable energy industry.

The prospects of the solar industry are, in a word, bright. From a national perspective, The Inflation Reduction Act (IRA), signed into law last year, accounts for \$370 billion in solar, wind, and electric vehicle subsidies.

The act will create nearly 537,000 jobs per year for a decade, according to The White House. According to one analysis (Source: BW Research), 152,000 of these jobs, or roughly 28%, will be in renewable and carbon-free power and transmission.

Jobs Created by the IRA per Year



■ Renewable and carbon-free power and transmission  
■ Other

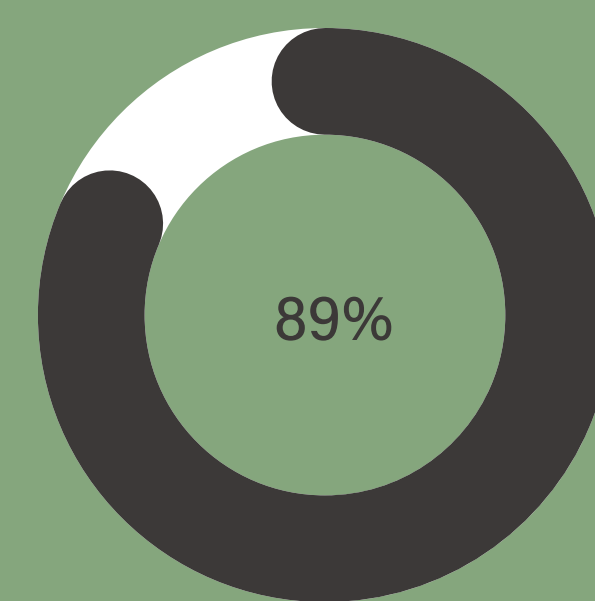
The variance of this statistic would be more worrisome if we couldn't all agree on one critical underlying factor:

Regardless of how many jobs will actually be created in solar construction over the next decade, we don't know where we'll get the people to fill them.

The solar labor shortage has become a widely discussed topic in the aftermath of the IRA, though the problem didn't begin then.

The IREC disclosed that 89% of solar firms reported having difficulty finding qualified applicants in 2021, and since then, the problem has persisted.

Solar Firms



■ Solar Firms Reporting Difficulty Finding Qualified Applicants  
■ Other

According to Ryan Kennedy at PV USA Magazine, although the Department of Labor reports over 600,000 registered apprentices nationwide, solar industry members still say there are not enough apprentice programs across the nation to meet demand for their solar jobs. Many forward-thinking professionals in our industry are attempting to combat this issue by establishing solar-specific training

programs and offering more attractive pay and benefits to retain employees. And while these approaches certainly help to address the problem, there is one important stone left unturned: the skilled workers of the oil and gas sector.

My experience has shown that construction groups who have, thus far, primarily served the oil and gas sector can provide us with some of the experienced labor forces we need, as well as processes, safety programs, capital, and IP.

While larger conventional energy groups can weather the clean energy transition by developing internal renewables divisions (Exxon Mobil, Chevron, BP, etc.), the companies that have spent decades constructing their facilities are facing a less certain future. And though the idea of conventional energy workers transitioning into the renewables space isn't a new one, it is a fraught one. The cultural narrative of competition between these two groups is potent, and the increasing politicization of renewable energy has only contributed to the tension.

But what if rather than competing, they collaborated?

In February, the New York Times published an article in which they interviewed more than a dozen energy workers and executives who switched to renewable construction for various reasons, citing greater stability, newer technology, and rising concern about the climate as motivating factors. Meanwhile, the solar industry undeniably struggles with a lack of experience, processes, best practices, and most importantly, manpower.

It appears that what each group needs, the other has in spades.

And the experience translates. The article also quotes Miguel Febres, a petroleum engineer who worked in the oil industry for 19 years and is now a planner for wind and solar projects at Enel, saying

"The basics are the same. We install foundations, we install turbines, we build roads, we lay cables."

Rather than trying to reinvent the wheel, or worse, poach resources, the solar and conventional energy industries should attempt a maneuver rarely seen in corporate America: working together. Renewables work can provide the existing energy industry with a path forward, diverse revenue streams, and greater stability of work. The existing energy industry can provide solar construction groups with hard-won experience, tested best practices and processes, and manpower. The clearest benefit to this approach is that more solar will get built. A more subtle advantage is that, by pushing forward the transition to clean energy together, we help depoliticize this important issue.

This is the path we have taken at Benchmark Electrical Solutions, with great success.

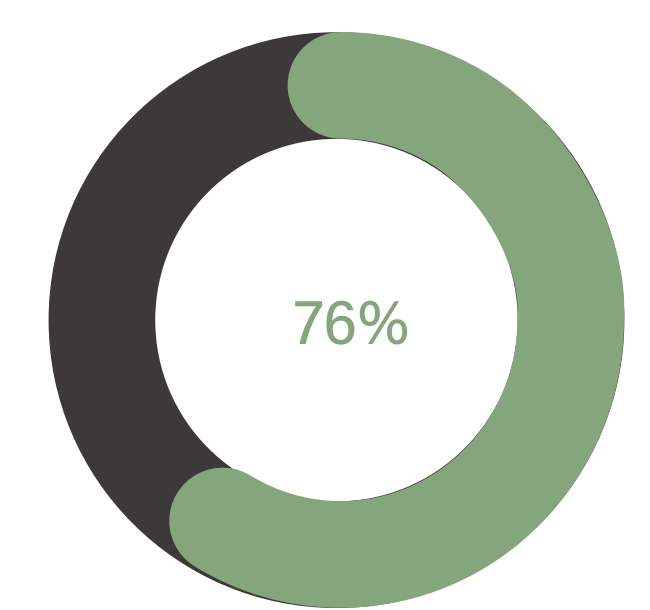
Lillian Bacon  
NABCEP Associate  
Solar Division Manager,  
Benchmark Electrical Solutions

So exactly how many jobs do we need to fill?

Solar installers and skilled electricians make up a crucial percentage of this sector.

The 2021 Clean Energy Labor Supply Report by American Clean Power (ACP) asserts that in the last quarter of 2020 majority-time solar workers made up roughly 76% of all solar, wind, and battery storage workers across the United States.

Solar, Wind, and Battery Storage Workers (last quarter of 2020)



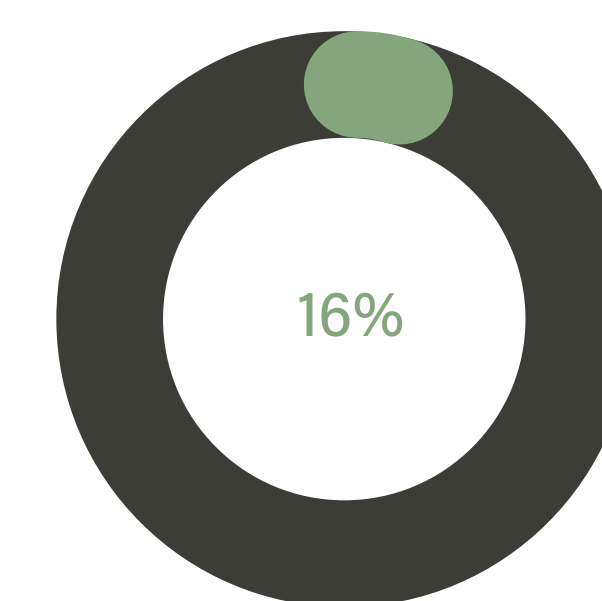
■ Majority-time solar workers  
■ Other

Based on these statistics, 115,520 of the jobs created yearly by the IRA would be in the solar sector.



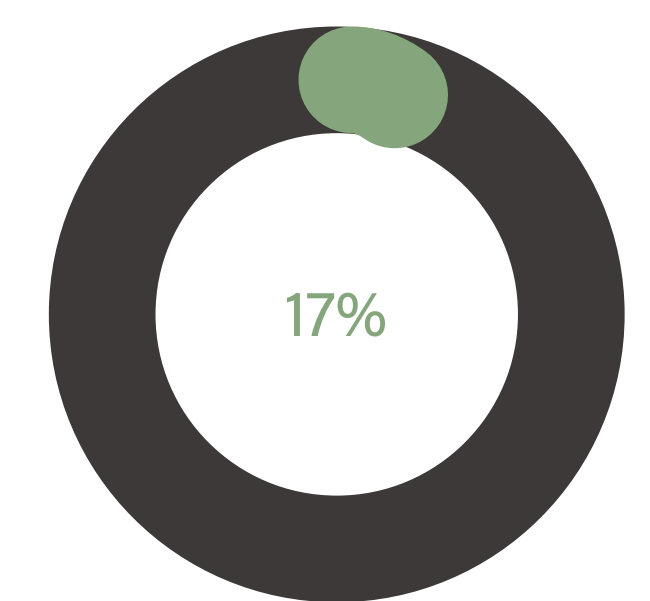
ACP's predictive analysis finds that construction jobs will make up 16% and 17% of job growth in the distributed and utility-scale solar markets, respectively.

Distributed Solar Market Job Growth



■ Construction Jobs  
■ Other

Utility-Scale Solar Market Job Growth



■ Construction Jobs  
■ Other

Split the difference, and you'll find the anticipated need for new PV installers and electricians would be roughly 19,000 jobs per year. This figure varies widely depending on the source consulted. APC itself claims the industry will only require 10,345 new PV installers total before 2030, roughly 1,500 per year. The Interstate Renewable Energy Council's (IREC) National Solar Jobs Census says solar energy jobs increased 9% in 2020. Use this to calculate yearly job creation without accounting for the impact of the IRA, and the result is 20,000 jobs.



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