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A Clean Power Future Will Jumpstart America's Next Generation Workforce



The 2021 *Clean Energy Labor Supply* report from BW Research Partnership, released by American Clean Power Association, details current clean energy employment and unionization rates, revealing how many Americans across the country are already working in good-paying, clean energy jobs. Based on two scenarios of renewables deployment — 50% and 70% of electricity generated from renewables by 2030 — the study projects the number of workers that will be needed to meet these goals and highlights those occupations where high demand for workers could result in labor gaps.



Accelerating the growth of clean energy is the best strategy to benefit American workers

Increasing clean energy and battery storage capacity to account for 50 or 70 percent of electricity over the next decade would:

- **Create 5 to 6 million job-years* during development and construction of clean power projects. (500K-600K jobs by 2030.)**

Manufacturing sector jobs = **38%** of total job-years

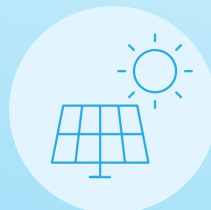
Construction jobs = **21%** of total job-years

- Provide 362,000 to 437,000 additional direct job-years in the long-term operations and maintenance (O&M) of projects
- Support 3.5 to 4.3 million additional job-years in the supply chain in the 25 years following construction

* A job-year represents one year of work for one person. For example, a new construction job that lasts five years is considered five job-years.

Clean Power = Jobs

over **415,000** people worked in wind, utility and distributed solar, and battery storage in 2020.



231,474
Solar* jobs



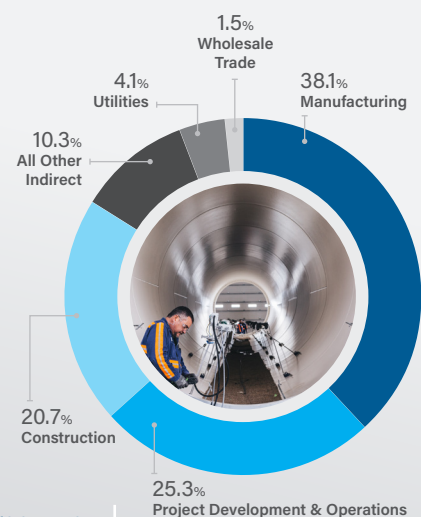
116,801
Wind jobs



66,749
Battery storage jobs

* Majority-time solar workers, those that spend 50 percent or more of their labor hours on solar-related work

Clean Energy job growth would be the highest among the manufacturing sector and those working in project development and operations



Average distribution of job creation by industry across both scenarios



Clean Energy Jobs are Quality Jobs That Pay Well

These jobs would be geographically spread across the country and will offer workers above-average wages.

Across the top 35 in-demand clean power occupations, a majority support an annual wage that is higher than the national average of **\$56,310**

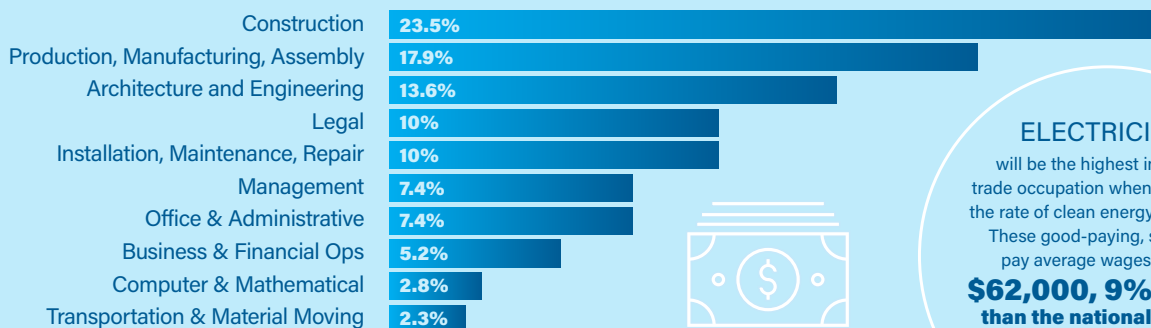


Clean Power Momentum Continues

Despite the pandemic, the clean power industry had its strongest year ever in 2020. There is **over 173,000 MW of clean power capacity operating in the U.S.**, more than double the U.S. capacity five years ago. Coupled with increased demand for clean energy, this growth will only continue as there's more than 84,000 MW of land-based and offshore wind, utility scale solar and battery storage in the near-term pipeline — which all require a variety of workers.

Clean Power Jobs Will Span 35 Different In-Demand Occupations

Thirty-five in-demand occupations will see increased job growth with a ramped up clean power buildout including:



ELECTRICIANS

will be the highest in-demand trade occupation when accelerating the rate of clean energy deployment. These good-paying, skilled jobs pay average wages of nearly **\$62,000, 9% higher than the national average.**

Unionization rates for solar, wind, and battery storage are higher than the national private sector average

Union rates are expected to grow when the need for more trade workers increases as additional renewables are deployed.

Clean Power Union Rates:
OVER 10%*
union coverage

Average Private Sector Union Rates:
7.2%
union coverage across the private sector

* Workers are counted as covered by a collective bargaining agreement if they are union members or if they are not members but say they are covered by a union contract.

Construction (13.4% union coverage) and **manufacturing** (9.3% union coverage) jobs have even higher unionization rates, suggesting an opportunity for labor.

Electricians (32.4% union coverage) and **metal fabricators and fitters** (21% union coverage) have among the highest rates of union coverage.

Offshore wind manufacturing and assembly will involve the use of many skilled trades workers, including many types currently used in the fossil fuel industry.

The collective challenge the nation will face will be filling these clean power jobs

Achieving America's decarbonization goals requires an "all-hands-on-deck" approach to recruit and train the next generation of the clean power workforce. Meeting the projected high demand for jobs will create numerous opportunities for the skilled labor workforce to flourish.

Over 40,000 electricians, nearly 9,000 welders, 7,000 wind turbine technicians, and many others across the trades will need to be trained this decade to meet America's decarbonization goals.

Filling these supply gaps will require efforts from across the workforce development system—community colleges, labor unions, non-profits, vocational training programs, and other providers.