

Minnesota: Home to 61,047 Clean Energy Jobs

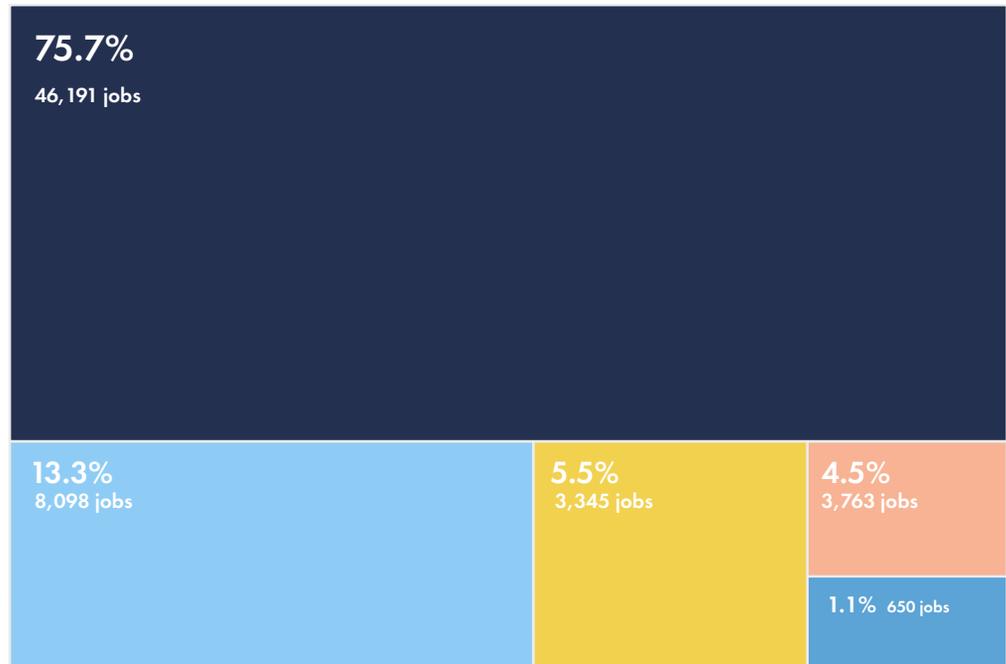
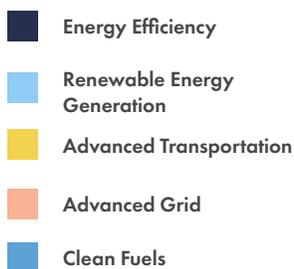
LED BY RENEWABLES, CLEAN ENERGY JOBS IN MINNESOTA GROW 4.7 PERCENT

Clean energy is a major employer in Minnesota with 61,047 jobs. The industry added 2,737 jobs in Minnesota in 2018, a 4.7 percent increase. This was ahead of the region-wide average increase of about 4 percent. Clean energy jobs in Minnesota grew nearly 2.5 times as fast as the overall state job market (which grew 1.9%). Minnesota also experienced the region's strongest renewable energy generation job growth -- 11.8 percent -- despite the sector struggling on the national level.

Energy efficiency jobs continue to be the largest sector for Minnesota clean energy employment with 3 out of every 4 clean energy jobs in the state. Clean energy employers in Minnesota also have a positive outlook for the next year: they project adding more than 4,400 jobs, a 7.3 percent growth rate.

SECTOR BREAKDOWN

Fig. 1:
Clean Energy Technology
Sectors, 2018



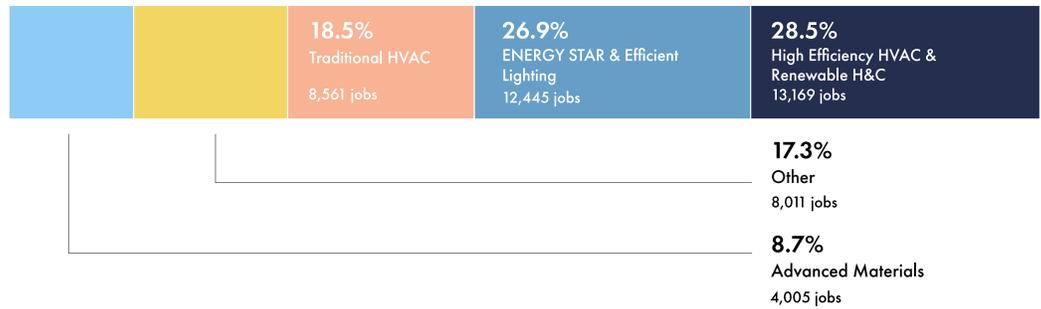
1. Unless otherwise stated, all data is based on the 2019 USEER. Energy Futures Initiative. (2019). The U.S. Energy Employment Report. Washington, DC. www.usenergyjobs.org. The Data provided relies on thousands of data points provided via survey. EFI, NASEO and BWRP have made every effort to supply current and accurate information but assume no responsibility or liability for any decisions based upon the information presented. For more information on the survey methodology see cleanjobsmidwest.com/about.

ENERGY EFFICIENCY CONTINUES TO LEAD CLEAN ENERGY JOBS IN MINNESOTA

More Minnesotans work in energy efficiency -- 46,191 -- than any other clean energy sector. The Minnesota energy efficiency sector added 1,332 jobs in 2018, a growth rate of 3 percent.

What do energy efficiency workers in Minnesota do? They manufacture ENERGY STAR-rated appliances and install efficient lighting systems; tweak traditional heating, ventilation, and air conditioning (HVAC) systems; build renewable heating and cooling systems, and handle advanced building materials. Other jobs employ people who develop software and contractors who diagnose, adjust, and verify HVAC efficiency.

Fig. 2:
Energy Efficiency Subsectors,
2018

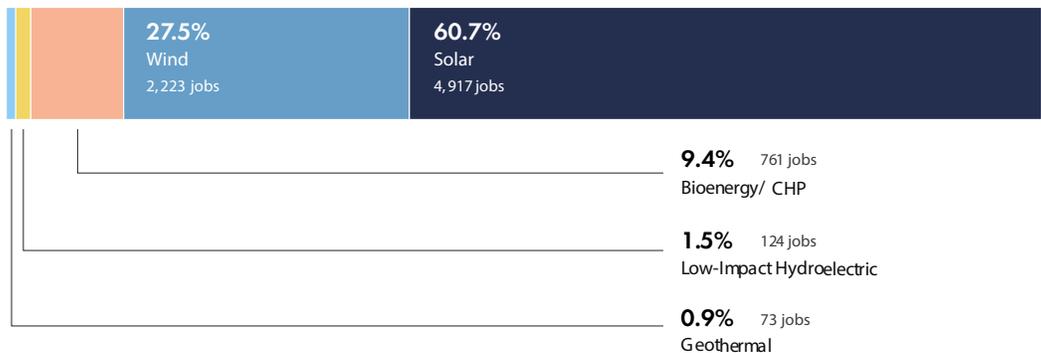


2. <https://mn.gov/commerce/media/news/?id=17-373200>

SOLAR SHINES AS RENEWABLE ENERGY GENERATION JOBS SURGE

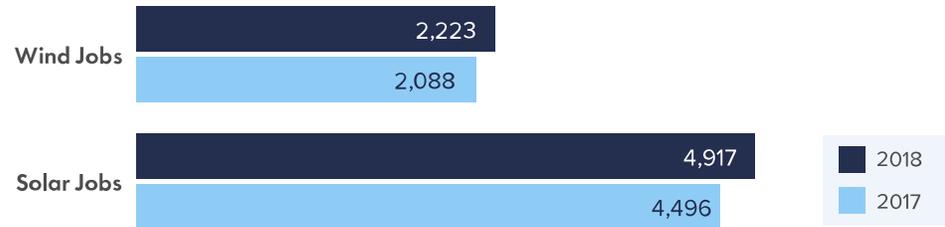
Renewable energy employs 8,098 workers, the second-largest sector in Minnesota's clean energy industry. The sector added 857 jobs for a robust 11.8 percent growth rate. In a year where national renewable energy employers actually shed jobs, such substantial year-over-year growth underscores the relative health of Minnesota's renewables sector where favorable economics and planned retirements of older coal plants drove investment in new renewable capacity. Minnesota added 285 MW of solar capacity in 2018,² and is home to more than 100 community solar projects.

Fig. 3:
Renewable Energy Subsectors,
2018



Solar and wind are the two largest employers in the sector. Solar employs 4,917 people. The subsector added 421 jobs in 2018, 9 percent more than in 2017. New Minnesota solar jobs account for more than half of all the solar jobs added across the Midwest in 2018. Wind also experienced strong growth. It now employs 2,223 people, 135, or 6.5 percent, more than the previous year. Jobs in renewables encompass other diverse industries including geothermal, bioenergy, and low-impact hydroelectric power.

Fig. 4:
Wind and Solar Jobs, 2018
and 2017 data



PLUG-IN HYBRIDS, EVS POWER ADVANCED TRANSPORTATION’S JUMP IN JOBS

Advanced transportation is Minnesota’s third-largest clean energy sector with 3,345 jobs. After decreases in 2017, the sector in 2018 added 482 jobs in the state, a 16.8 percent growth rate. The plug-in hybrid vehicles sub-sector added 166 jobs; it now employs 698 Minnesotans, nearly a third more than in 2017. EV jobs, meanwhile, grew by about a quarter to 896 workers. Other sub-sectors in advance transportation include alternative fuels vehicles and fuel cell vehicles.

ENERGY STORAGE LEADS THE ADVANCED GRID SECTOR.

Advanced grid jobs employ 2,763 Minnesotans. These jobs grew by 2.3 percent adding 62 jobs. As the fourth-largest clean energy employer in the state, the sector includes jobs in energy storage, smart grid, microgrid, and other grid modernization work. Energy storage jobs are the largest employer in the sector with 1,862 jobs adding 12 in the past year.

CLEAN FUELS JOBS LEVEL

650 Minnesotans work in clean fuel jobs. These jobs stayed relatively static, adding just 3 jobs for a 0.6 percent increase. The clean fuels sector encompasses non-corn ethanol, non-woody biomass, and other technologies not yet in wide commercial production, including algal biofuel, syngas, bioheat blends, landfill gas, and advanced biofuels.

Fig. 5:
Top 3 MSAs in Clean
Energy Employment, 2018

Metro Area (MSA)	Total Clean Energy Employment	Renewable Energy Employment	Energy Efficiency Employment
Minneapolis-St. Paul-Bloomington, MN-WI MSA	37,368	6,072	27,300
St. Cloud, MN MSA	3,161	1,022	1,866
Duluth, MN-WI MSA	1,963	82	1,646

CLEAN ENERGY INDUSTRY OUTLOOK

3. U.S. Bureau of Labor Statistics Local Area Unemployment Statistics, 2018 Preliminary data

4. 2019 US Energy and Employment Report. This figure does not include gas station workers.

Clean energy is becoming an increasingly important industry in Minnesota's overall labor market. In Minnesota in 2018, clean energy jobs grew by 4.7 percent. By contrast, the state's overall job growth was just 1.9 percent. In total, clean energy jobs now constitute more than 2 percent of all jobs in the state.³

Looking ahead, clean energy jobs are expected to grow faster in Minnesota than the Midwestern regional average. North Star State clean energy employers anticipate adding jobs at a 7.3 percent clip in 2019. Regionwide, the anticipated growth rate is a notch lower at an even 7 percent.

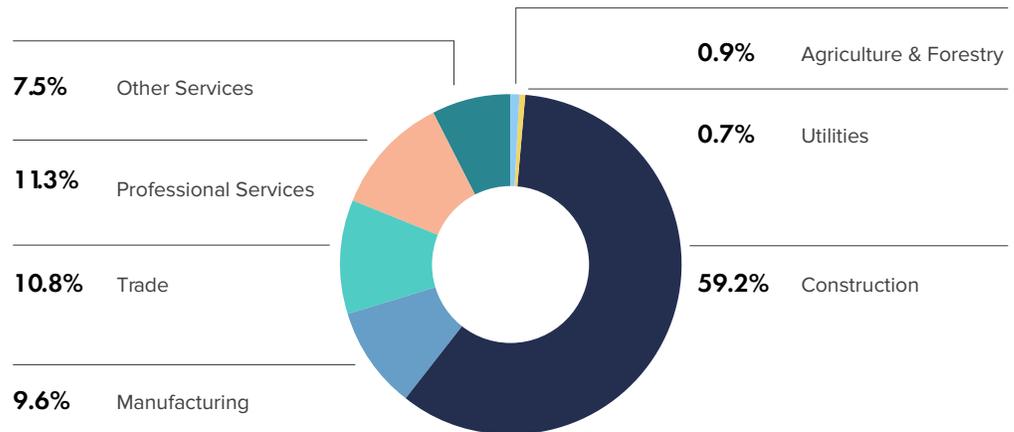
COMPARING CLEAN ENERGY JOBS TO FOSSIL FUEL JOBS

In 2018, 10,525 Minnesotans worked in fossil fuel energy jobs in industries like coal, natural gas, and oil.⁴ That's less than one-fifth the number of clean energy workers. Electric power generation jobs using fossil fuels employed 2,311 people. By contrast, renewable energy generation employed more than 8,000. Coal jobs in Minnesota also drew a stark contrast with renewables -- they dropped 3.1 percent compared to the significant surge in renewable energy jobs.

VALUE CHAIN

Clean energy jobs can also be categorized by the role they play in the value chain. This report divides the clean energy jobs value chain into the following categories: agriculture, utility, construction, manufacturing, trade, professional service, and other service jobs. Each category captures jobs from multiple different clean energy sectors. For example, construction jobs can include energy efficiency jobs and renewable energy jobs.

Fig. 6: Clean Energy Jobs Value Chain, 2018



When Minnesota clean energy jobs are broken down by their placement in the value chain, construction makes up 59.2 percent of the jobs, just slightly behind North Dakota for the highest proportion of construction jobs, while professional services represent 11.3 percent.

DEMOGRAPHICS

In Minnesota, racial and ethnic minorities make up 34.7 percent of clean energy employees, and women are 27.2 percent of the clean jobs workforce.

5. 2018 Bureau of Labor Statistics Current Population Survey (CPS) <https://www.bls.gov/cps/demographics.htm>

Currently, 11.7 percent of the state's clean energy workers are veterans. By comparison, veterans make up 6 percent of the national labor force.⁵ The large ratio of veterans transitioning to clean energy jobs are in part the result of the U.S. Department of Defense's long-standing commitment to investing in renewable energy, energy efficiency and training programs that prepare veterans for private-sector employment in industries like solar.

SMALL BUSINESS

Small businesses drive the state's clean energy sector – 72.3 percent of Minnesota's clean energy businesses employ fewer than 20 individuals.

SUMMARY

While energy efficiency jobs continue to dominate Minnesota's overall clean energy industry labor market, it was renewable energy and advanced transportation that experienced the most substantial relative year-over-year sector job growth. In fact, Minnesota's solar sub-sector was responsible for more than half of all new solar jobs in the entire Midwestern region in 2018. Meanwhile, fueled by growth in EVs and plug-in hybrid vehicles, jobs in the state's advanced transportation sector jumped nearly 17 percent.

With 4.7 percent overall clean energy job growth -- higher than the regional average -- and an anticipated 2019 growth rate even higher (7.3 percent), the state is becoming an increasingly significant player in one of the most dynamic industries in the Midwest's economy.

The data and analyses presented in this report by Clean Energy Trust and Environmental Entrepreneurs are based on data collected for the 2019 U.S. Energy Employment Report (2019 USEER), produced by the Energy Futures Initiative (EFI) in partnership with the National Association of State Energy Officials (NASEO) and collected and analyzed by BW Research Partnership (BWRP).

2019 CLEAN JOBS MIDWEST

