

Minnesota

Executive Summary

Minnesota’s clean energy sector is substantial, with 57,351 clean energy jobs located across the state.

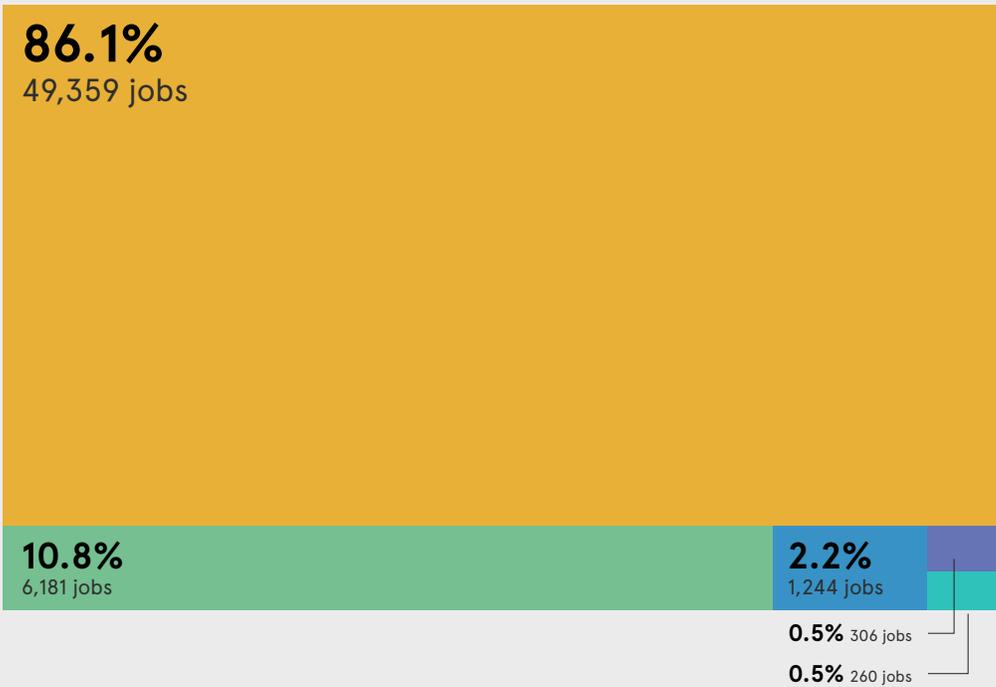
Further, jobs in the sector grew by 5.3% between 2015 and 2016, 3.8 times faster than all other jobs¹. 86% of the clean energy jobs in Minnesota are in the energy efficiency sector. This includes people who manufacture and install Energy Star appliances and high-efficiency lighting and contractors installing advanced building materials. Renewable energy generation jobs including solar wind and other technologies are growing at an incredible pace—more than 11 times faster than the overall job market in Minnesota. Small businesses drive the clean energy sector in Minnesota, with surveys in 2015 showing that nearly 80% of businesses working in clean energy employed fewer than 25 individuals.

¹ Overall employment data comes from the [Bureau of Labor Statistics](#)’ annual average of employment by state.

Sector Breakdown

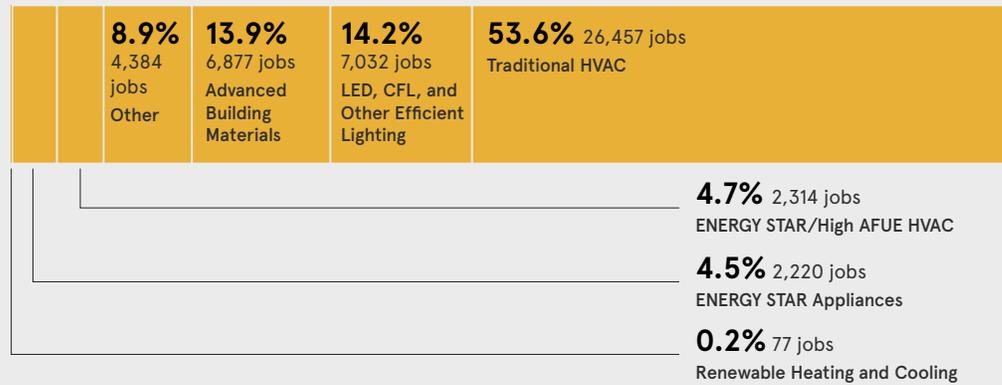
Fig. 1: Clean Energy Technology Sectors, 2016

- Energy Efficiency
- Renewable Energy
- Advanced Transportation
- Clean Fuels
- Advanced Grid



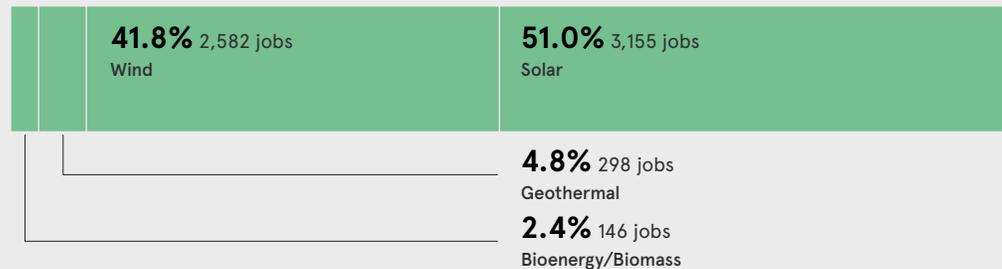
Energy Efficiency employs the highest percentage of clean energy workers in Minnesota and the region overall. These include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of heating, ventilation, and air conditioning (HVAC) systems, and system technicians. The shift in traditional sectors such as HVAC illustrates a transition to embrace the clean energy economy as a business decision. Energy efficiency is an important part of the overall HVAC business and reflects that HVAC is the largest portion of energy efficiency jobs with 26,457 people employed.

Fig. 2:
Energy Efficiency
Subsectors, 2016



Renewable energy generation is the second largest clean energy job sector in Minnesota with 6,181 jobs. Renewable energy generation includes solar, wind, geothermal, and bioenergy technologies. Overall renewable energy generation jobs were also the fastest growing sector. Between 2015 and 2016, renewable energy generation jobs grew by 15.7% in Minnesota—11 times faster than overall job growth in Minnesota over the same time frame.

Fig. 3:
Renewable Energy
Subsectors, 2016

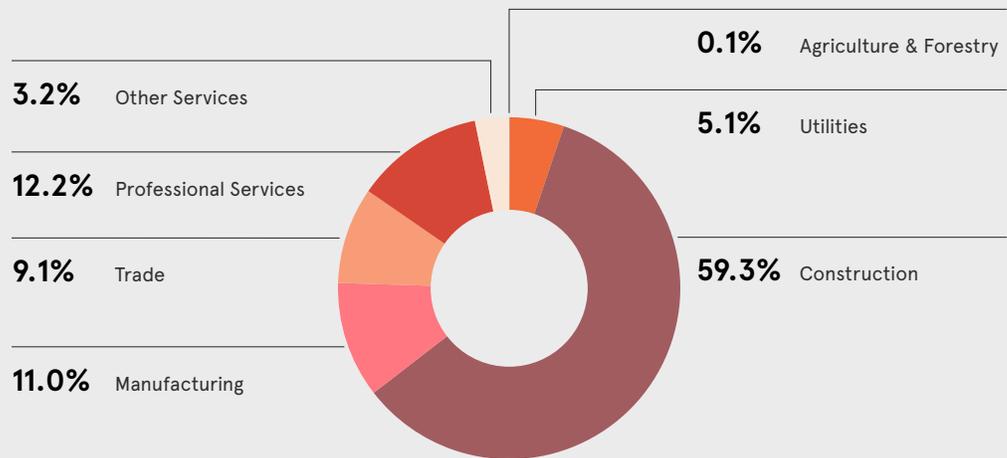


Following those top two sectors are advanced transportation with 1,244 jobs, clean fuels employing 306 Minnesotans, and 260 people working in the advanced grid sector.

Value Chain

Clean energy jobs can also be described by what role they play in the larger economic value chain. This report divides these clean energy jobs into agriculture jobs, utility jobs, construction jobs, manufacturing jobs, trade jobs, professional service jobs, and other service jobs. The divisions in the value chain described here include jobs from multiple technology sectors. For example, construction jobs can include some jobs in the energy efficiency sector as well as jobs in the renewable energy sector and every other technology sector.

Fig. 4: Clean Energy Jobs Value Chain, 2016



Minnesota has the largest percentage of clean jobs in construction in the Midwest with 34,032 jobs representing 59.3% of the clean jobs workforce.

Fig. 5: Top 3 MSAs in Clean Energy Employment, 2016 (job numbers rounded to nearest hundred)

MSA job numbers only include jobs within this state

Metro Area (MSA)	Total Clean Energy Employment	Renewable Energy Employment	Energy Efficiency Employment
Minneapolis-St. Paul-Bloomington, MN-WI MSA	40,100	4,700	33,000
Duluth, MN-WI MSA	1,700	<250	600
St. Cloud, MN MSA	1,300	<250	1,200

Recap

Clean energy jobs are quickly becoming a big part of the overall economy in Minnesota as they grew 3.8 times faster than overall job growth from 2015 to 2016. Of those fast growing jobs, jobs in renewable energy generation like the solar, wind, biomass, and geothermal sectors grew the fastest in the state at 15.7%. In addition, clean jobs in construction represented 59.3% of the state's clean jobs workforce - the largest percentage share in the region. However, clean energy jobs are not just wind and solar jobs. In 2016, there were over 49,000 Energy Efficiency jobs in Minnesota—86% of all clean energy jobs. This includes contractors using high-efficiency lighting and advanced building materials as well as people building and installing Energy Star appliances.

Minnesota is a leader in clean energy policy with the American Council for an Energy Efficient Economy ranking them 10th out of 51—and 1st in the Midwest—on their state energy efficiency policy scorecard.²

² [2016 ACEEE State Scorecard](#)