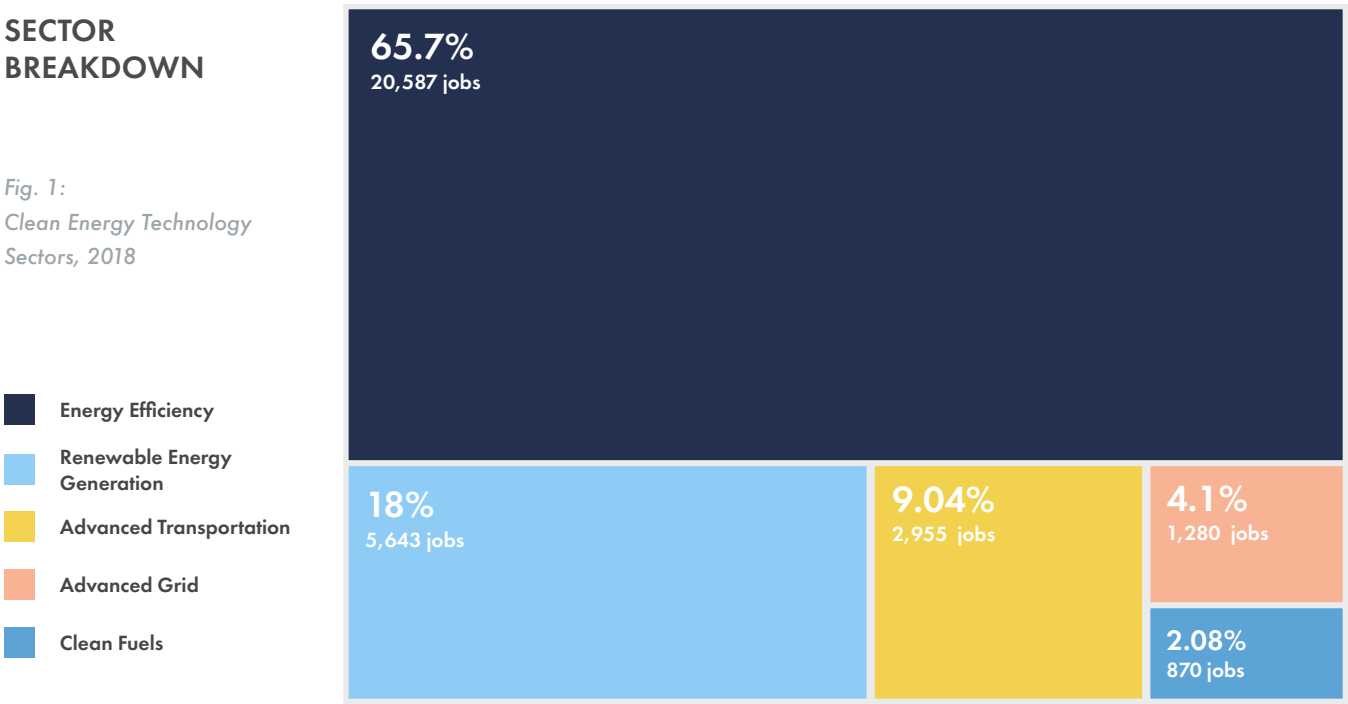
Iowa: Home to 31,335 Clean Energy Jobs

IOWA'S CLEAN ENERGY JOBS GROW BY 4 PERCENT

Clean energy is a major employer in Iowa with 31,335 jobs.[1] In 2018, the industry added more than 1,000 jobs.[1] That's a 3.6 percent growth rate, and it's right in line with the regional average. Energy efficiency continues to be the largest clean energy employer in Iowa; the sector is home to nearly two out of every three clean energy jobs in the state. Despite state policy headwinds, especially in the energy efficiency sector, Iowa clean energy employers have a positive outlook for the next year. Combined, these employers expect to add more than 2,400 clean energy jobs in 2019 – an almost 8 percent anticipated gain.

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.

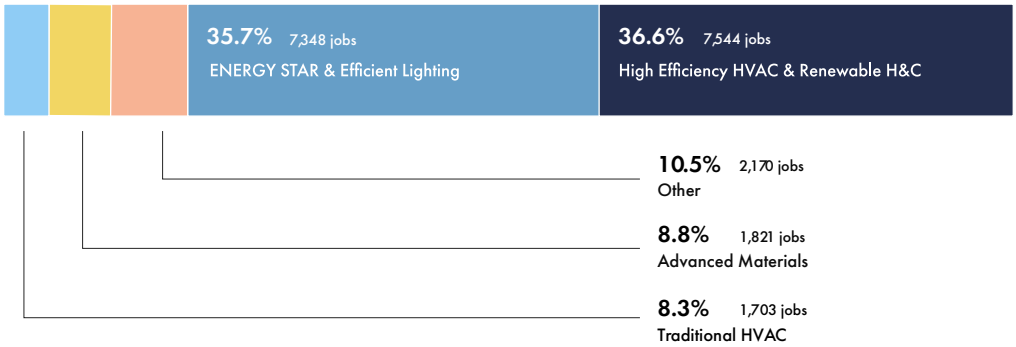
ENERGY EFFICIENCY CONTINUES TO LEAD CLEAN ENERGY JOBS

20,587 Iowans work in energy efficiency. That's more than any other industry in the clean energy sector, and it's enough to fill Carver Hawkeye Arena to the rafters, with thousands more outside still trying to get in. In 2018, Iowa employers created 893 energy efficiency jobs (a 4.5 percent growth rate).

Energy efficiency workers are active throughout the value chain. They manufacture ENERGY STAR-rated kitchen appliances; install efficient lighting systems at car dealerships; implement software that optimizes traditional heating, ventilation and air conditioning (HVAC) systems in high schools, and handle advanced building materials at new office towers.

The Iowa clean energy labor market is likely to be impacted in the coming years by recent state legislation (SF 2311) that will curtail energy efficiency investments as many rebate programs end this year.

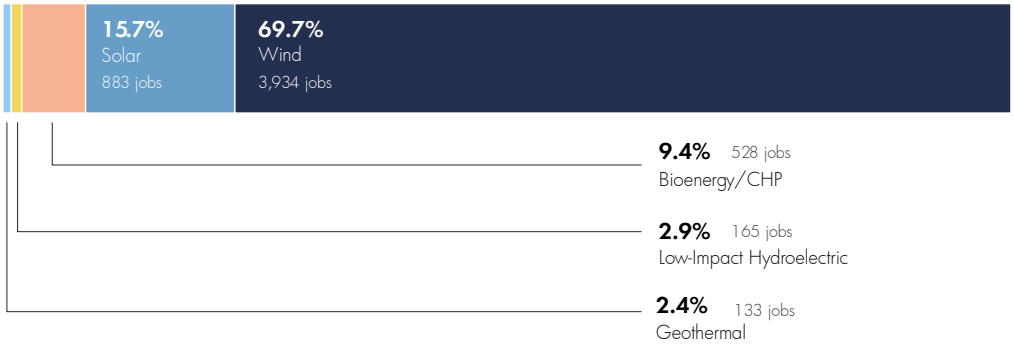
Fig. 2: Energy Efficiency Subsectors, 2018



RENEWABLE ENERGY JOBS: WIND AT IOWA'S BACK

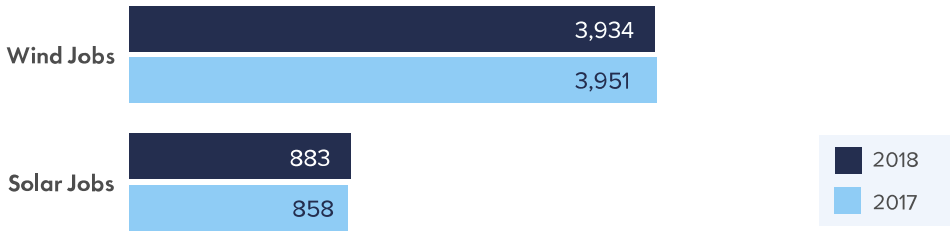
Renewable energy generation is Iowa's No. 2 clean energy employer with 5,643 jobs. This is a noteworthy divergence from broader regional data, which shows renewables as the No. 3 employer of clean energy workers across the Midwest.

Fig. 3: Renewable Energy Subsectors, 2018



A big reason for Iowa's relatively high ranking of in-state renewables jobs: 3,934 Iowans work in wind generation, the state's leading renewables sub-sector. Only three other states in the region support more wind jobs than Iowa, despite the Hawkeye State's No. 8 population ranking. There are also many other jobs that contribute to the wind generation sector but are not included in this report because they are identified in traditional energy sectors. This includes workers that manufacture control systems which are used for wind and other energy sources. Iowa's solar industry now employs 883 people. The sub-sector's growth gives it fourth-highest rate in the region and far outshining national solar job growth.

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



Other job-creating industries in the renewables sector include: geothermal, bioenergy and low-impact hydroelectric power. Geothermal had a growth rate in Iowa of more than 5 percent; the technology now accounts for 133 jobs. Bioenergy/CHP counts 528 jobs in Iowa.

ADVANCED TRANSPORTATION JOBS SPIKE 8 PERCENT

Advanced transportation jobs in Iowa grew by 8.3 percent, a gain of 226 jobs. Two vehicle styles were primarily responsible for the growth -- plug-in hybrid vehicles and electric vehicles (EVs). 1,286 Iowans now work on hybrid electric vehicles. Another 617 work on plug-ins. All told, advanced transportation is the third-largest employment sector in Iowa's clean energy industry.

ENERGY STORAGE LEADS ADVANCED GRID SECTOR IN IOWA

Advanced grid work accounts for 1,280 Iowa jobs. Jobs in the sector have grown 1.9 percent since 2017, and it's now the fourth-largest clean energy employer statewide. Advanced grid encompasses jobs in energy storage (703 jobs), microgrid (200), smart grid (175), and other grid modernization work (202).

CLEAN FUELS JOBS DECLINE

870 Iowans work in clean fuels jobs, a 2.3 percent decrease from 2017. Clean fuels include non-corn ethanol, non-woody biomass, and other technologies not yet in wide commercial production like algal biofuel, syngas, bioheat blends, and landfill gas.

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

Metro Area (MSA)	Total Clean Energy Employment	Renewable Energy Employment	Energy Efficiency Employment
Des Moines-West Des Moines, IA MSA	6,530	991	4,502
Cedar Rapids, IA MSA	2,679	531	1,709
Davenport-Moline-Rock Island, IA-IL MSA	1,511	309	957

CLEAN ENERGY INDUSTRY OUTLOOK

Clean energy jobs make up almost 2 percent of all jobs in the state.[2] And they're growing faster than the national average. The state's clean energy employers anticipate a hiring spree in 2019 when they expect to add almost 8 percent more jobs industry-wide.

It may be too soon to tell the impact of SF 2311 on investments and, in turn, jobs in Iowa's energy efficiency sector as the bill took effect in January 2019 after the surveys for this report were completed.

According to the American Council for an Energy Efficient Economy (ACEEE), Iowa dropped to 24th in the nation in its 2018 State Energy Efficiency Scorecard, experiencing the largest point drop of any state. ACEEE's point scale dinged Iowa because SF 2311 energy efficiency spending caps that will result in fewer measures, programs and investment.[3]

COMPARING CLEAN ENERGY JOBS TO FOSSIL FUEL JOBS

In 2018, 7,404 Iowans worked in jobs in fossil fuel energy industries like coal, natural gas, and oil. While significant, it's still less than a quarter the number of Iowa's clean energy workers. Electric power generation jobs using fossil fuels puts 2,352 people to work. By comparison, there are more than 5,600 jobs in Iowa's renewable energy generation sector alone. Overall coal jobs in Iowa dropped by a little more than 5 percent.

VALUE CHAIN

Clean energy jobs can 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.

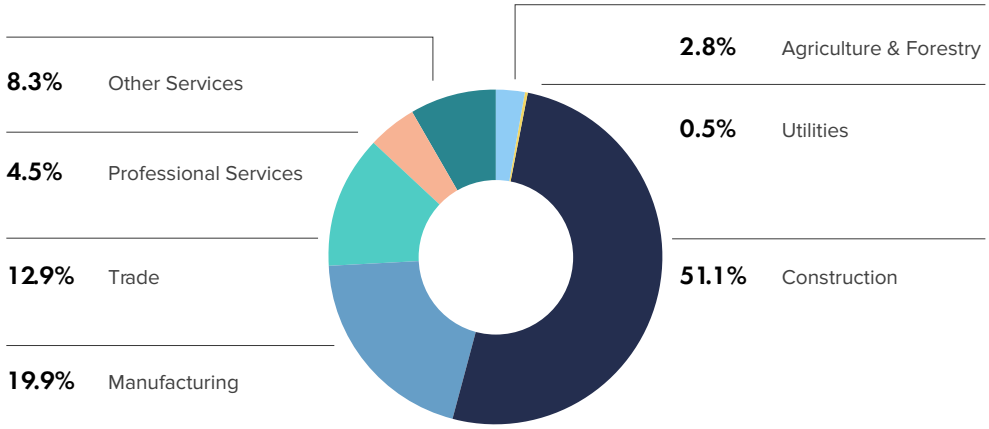


Fig. 6: Clean Energy Jobs Value Chain, 2018

When Iowa clean energy jobs are broken down by their placement in the value chain, construction makes up 51.1 percent of the jobs, while manufacturing represents 19.9 percent.

2. U.S. Bureau of Labor Statistics Local Area Unemployment Statistics, 2018 Preliminary data
3. 2019 US Energy and Employment Report. This figure does not include gas station workers.

DEMOGRAPHICS

In Iowa, almost 11 percent of 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 is in part the result of the U.S. Department of Defense's ongoing investments in technologies like renewable energy and energy efficiency for national security and budgetary reasons. The military has also funded training programs that prepare veterans for private-sector employment in industries like solar.

Small businesses drive the state's clean energy sector –78 percent of clean energy businesses employ fewer than 20 individuals.

SUMMARY

Clean energy employment opportunities in Iowa are broad and diverse. In 2018, they grew at a 4 percent clip, with even faster job growth projected in the coming year. While Iowa has traditionally been viewed as the Midwest's wind powerhouse, other clean energy sectors are also racking up jobs across the state. Just look at advanced transportation, where Iowa experienced significant job growth in electric, hybrid and plug-in hybrid vehicles. Meanwhile, in non-wind related renewable energy jobs, solar employment increased even as jobs in the sub-sector fell nationally.

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).

4. 2018 Bureau of Labor Statistics Current Population Survey (CPS)