Midwest

Executive Summary

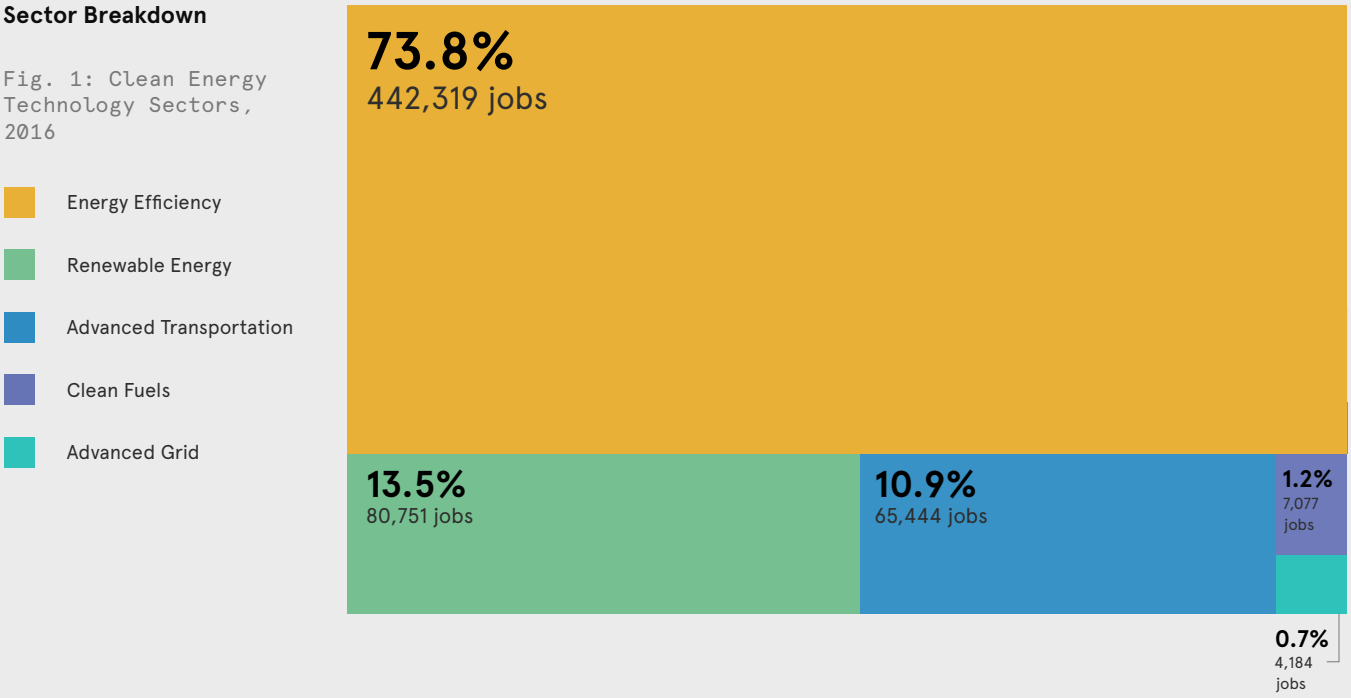
599,775 workers are employed in clean energy sectors.

Clean Jobs Midwest is a survey of clean energy employment in 12 Midwestern states—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The region employs 599,775 workers in sectors including renewable energy generation, advanced grid, energy efficiency, clean fuels, and advanced transportation. Between 2015 and 2016, clean energy jobs in the Midwest grew by more than 5%, adding 30,795 jobs. The clean energy economy is creating jobs approximately five times faster than the rest of the economy in the Midwest.[1]

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

Sector Breakdown

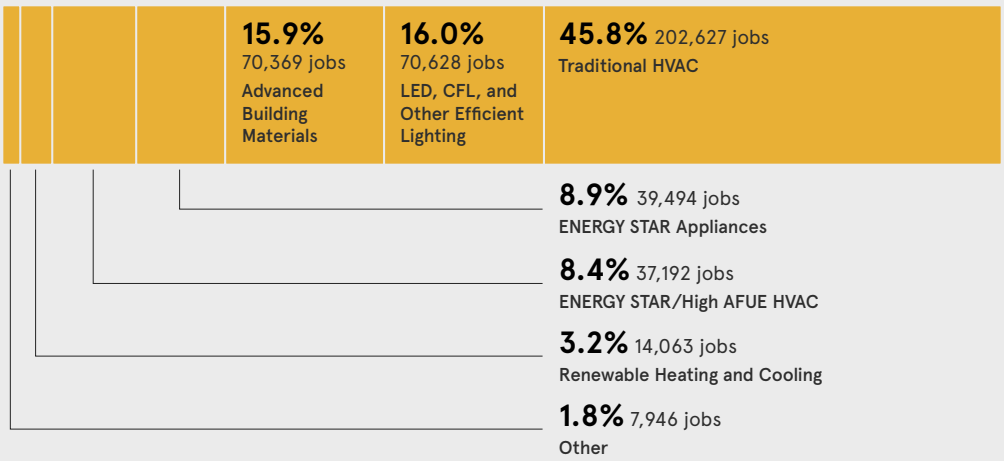
Fig. 1: Clean Energy Technology Sectors, 2016



442,319—or three out of four—of these jobs are in energy efficiency, the region's largest clean energy sector. Between 2015 and 2016 the sector added 18,771 jobs in the region, which is a growth rate of more than 4%. These jobs 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. As a percentage of the labor force[2] Kansas, Minnesota, and North Dakota lead the Midwest in energy efficiency employment. Illinois, Ohio, and Michigan had the largest energy efficiency workforces by absolute size.

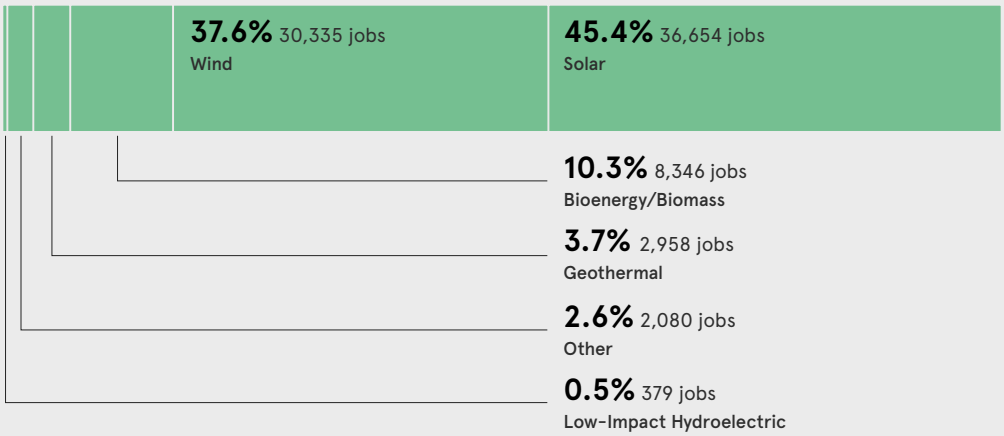
2 Size of the labor force by state also comes from the Bureau of Labor Statistics

Fig. 2:
Energy Efficiency
Subsectors, 2016



Jobs in renewable energy generation are a large factor in the overall growth in clean energy. Approximately 13% of the area's jobs are in renewable energy generation like wind and solar. This sector is also the fastest growing in terms of jobs, having grown by more than 15% between 2015 and 2016 in the Midwest. Beyond wind and solar, renewable energy generation jobs also include jobs in geothermal, bioenergy, and low-impact hydroelectric power. As a percentage of the labor force, North Dakota, Iowa, and Nebraska lead the Midwest in renewable energy generation employment. Illinois, Michigan, and Ohio lead in total number of jobs.

Fig. 3:
Renewable Energy
Subsectors, 2016



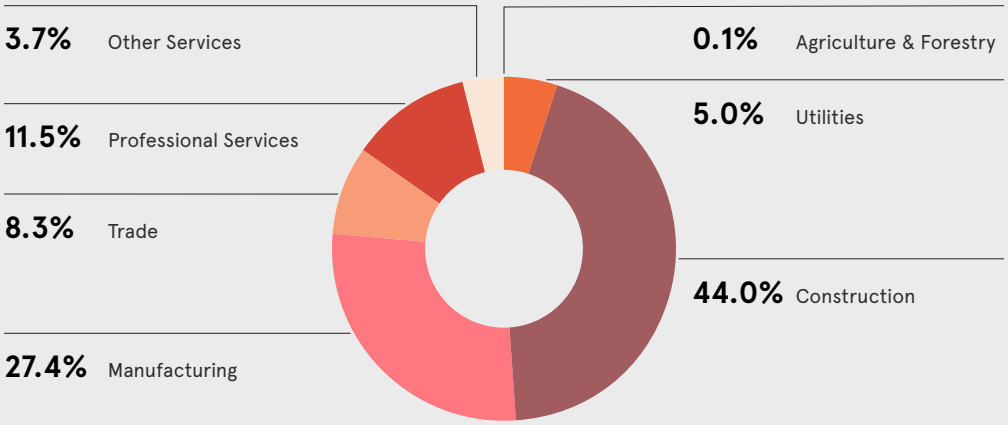
1 in 10 clean energy workers are employed in the advanced transportation industry. This includes hybrid and plug-in electric vehicles, alternative fuels vehicles, and fuel cell vehicles. Michigan leads the region in absolute number of jobs in this sector and as a percentage of the state's labor force. This highlights a shift within traditional automotive industries toward more alternative and advanced vehicles throughout the supply chain.

The clean fuels and advanced grid sectors employ 7,077 and 4,184 Midwestern workers respectively.

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



Clean energy jobs include many good, blue-collar jobs. In the Midwest, 44% of all clean energy jobs were in construction—264,155 jobs. Manufacturing accounted for 164,164 more jobs—over 27% of all clean energy jobs.

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

MSA job numbers only include jobs within the state in the first column

State	Metro Area (MSA)	Total Clean Energy Employment	Renewable Energy Employment	Energy Efficiency Employment
IL	Chicago-Naperville-Joliet, IL-IN-WI MSA	85,600	11,000	63,100
MN	Minneapolis-St. Paul-Bloomington, MN-WI MSA	40,100	4,700	33,000
MI	Detroit-Warren-Livonia, MI MSA	39,300	5,500	21,400

Recap

In 2016, there were 599,775 clean energy jobs in the Midwest. These jobs grew by 5.4% between 2015 and 2016, approximately 5 times faster than overall job growth in the region. The biggest growth came from the renewable energy generation sector while the energy efficiency sector employed the most workers in the region.

Clean energy jobs are all-American, blue-collar jobs with 7 in 10 clean energy jobs in construction and manufacturing. They are found across urban and rural areas, and many are with small businesses.[3]

The clean energy economy is growing in every Midwestern state, but clean energy can grow even faster. By implementing good public policy—such as state renewable portfolio standards and energy efficiency standards—we can create even more clean energy jobs across the region. As this survey shows, the Midwest is at the forefront of our nation's clean energy future. The industry is bringing new jobs and economic growth to our own backyards.

3 *Clean Jobs Midwest 2016*

Illinois

Executive Summary

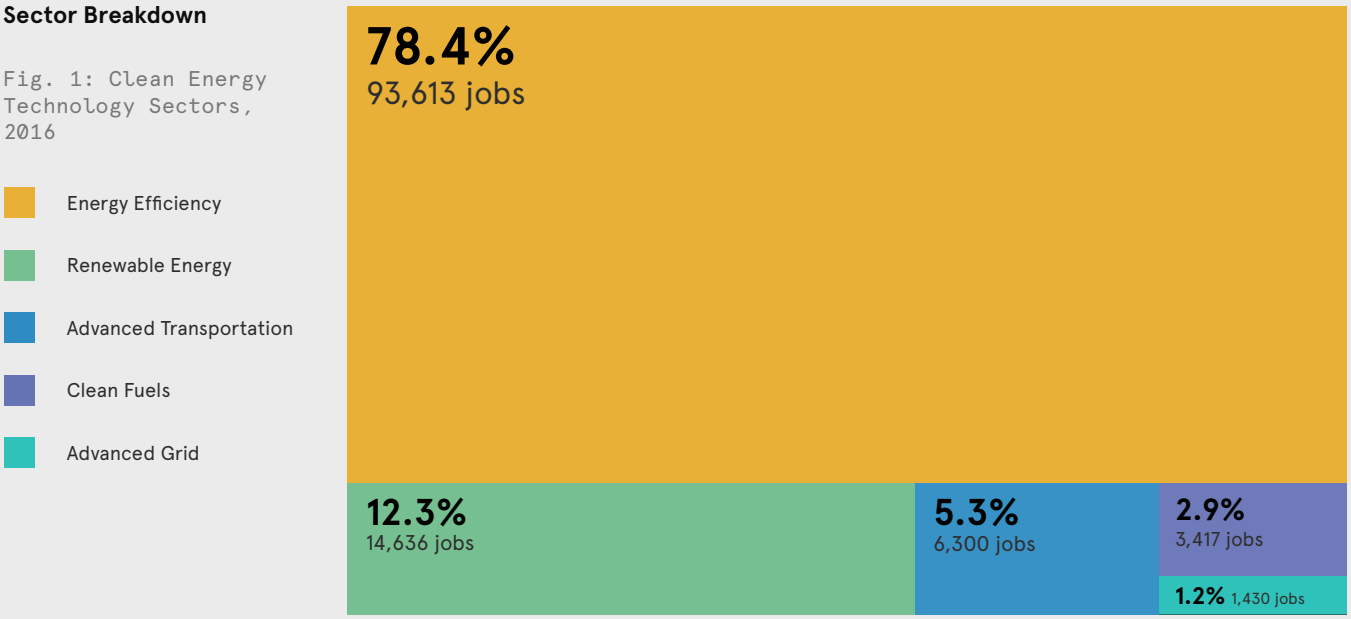
Illinois leads the Midwest with 119,395 clean energy jobs.

The clean energy industry represents an important and growing part of the Illinois economy, growing more than six times faster than overall jobs in the state between 2015 and 2016[1]. Overall, Illinois added 5,477 clean energy jobs. Further, small businesses are driving the clean energy sector, with previous surveys showing that nearly 70% of clean energy businesses in Illinois employ fewer than 25 individuals. Even as the state's economic situation contributed to slower job growth overall—growing by less than 0.73% between 2015 and 2016—clean energy jobs continued to shoot ahead, growing at 4.81% between 2015 and 2016.

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

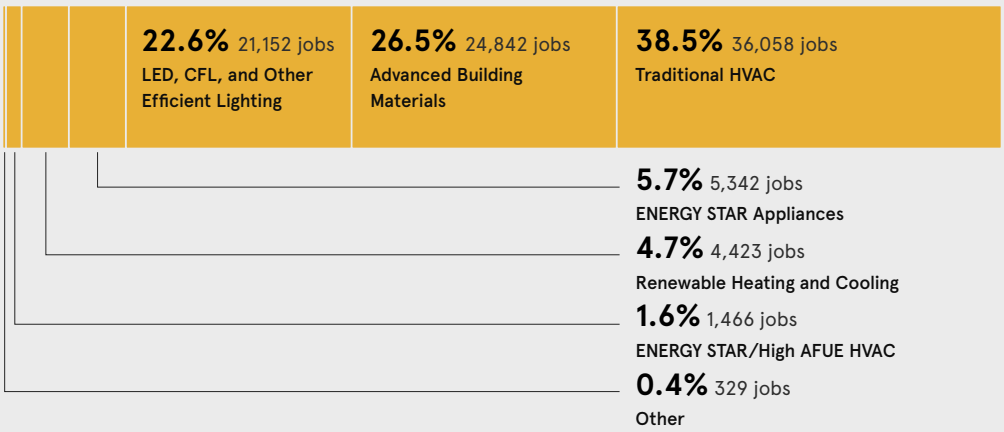
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



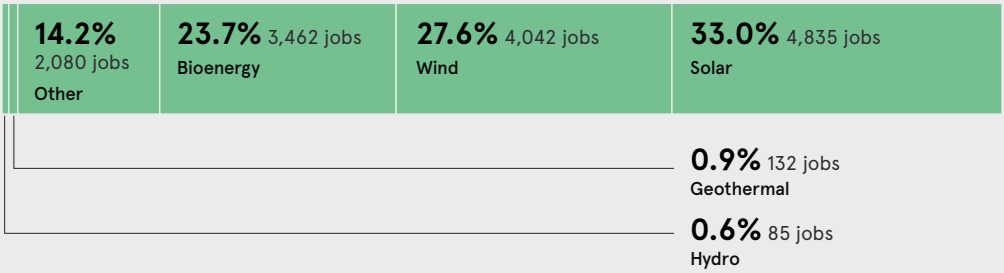
Energy efficiency makes up the largest share of the clean energy workforce in Illinois, consistent with other states in the Midwest. The energy efficiency sector expanded by 3,783 jobs in the state since last year; Illinois is now home to 93,613 energy efficiency jobs. These include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of heating, ventilation, and air conditioning (HVAC) systems, and system technicians. The HVAC industry makes up the largest portion of energy efficiency jobs followed closely by advanced building materials and efficient lighting.

Fig. 2:
Energy Efficiency
Subsectors, 2016



Renewable energy jobs also play an important role in the state's clean energy economy, employing over 14,000 people. Illinois has 4,835 jobs in solar, third largest in the Midwest. Illinois is also home to over 4,000 wind energy jobs. Renewable energy generation is the fastest growing clean energy sector in the Midwest and Illinois is no exception. Renewable energy generation jobs overall—including solar, wind, geothermal, bioenergy, and low-impact hydropower—grew by 13.7% in Illinois.

Fig. 3:
Renewable Energy
Subsectors, 2016

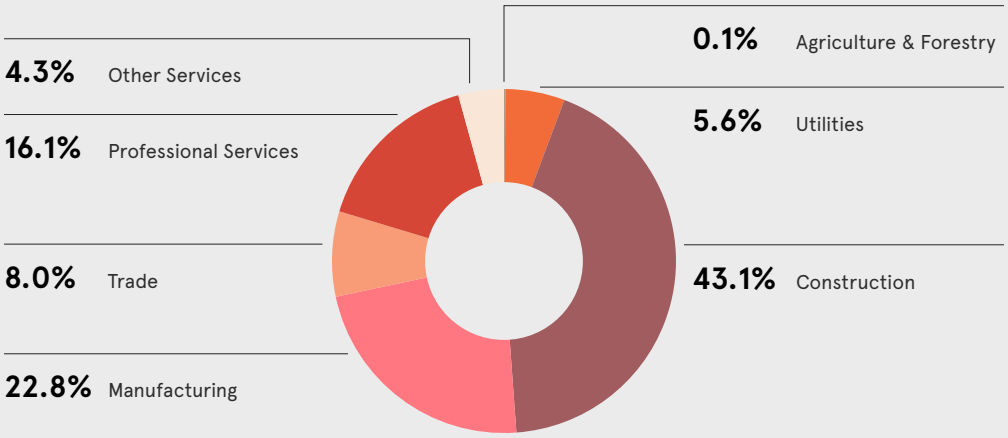


Advanced transportation employed 6,300 clean energy workers while the clean fuels and advanced grid technology sectors employed 3,417 and 1,430 people, respectively. While Illinois' 411 smart grid jobs make up only a portion of advanced grid jobs, Illinois leads the region with jobs in this subsector.

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



Construction accounted for 43% of all clean energy jobs in Illinois and one in five clean energy workers in Illinois work in manufacturing. Illinois also has the second highest percentage of clean energy workers working in professional services in the region with almost 1 in 6 clean energy workers in the state.

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
Chicago-Naperville-Joliet, IL-IN-WI MSA	85,600	11,000	63,100
St. Louis, MO-IL MSA	4,200	400	3,200
Peoria, IL MSA	3,100	300	2,200

Recap

There are 119,395 clean energy jobs in Illinois encompassing everything from the wind and solar industries to construction with advanced building materials. Clean energy jobs in Illinois grew more than 6 times faster than all other jobs, with renewable energy generation jobs growing the fastest. Looking towards the future, Illinois still has room to grow in this sector with other states in the region outpacing Illinois' clean energy job growth. The American Council of an Energy-Efficient Economy ranked Illinois 12 in its latest ACEEE State Energy Efficiency Scorecard, dropping 2 spots from the previous ranking.[2] However, Illinois passed the Future Energy Jobs Bill in late 2016, which strengthens the state's energy efficiency and renewable energy standards, and is expected to further boost growth in clean energy jobs in the state.

2 *2016 ACEEE State Scorecard*

Indiana

Executive Summary

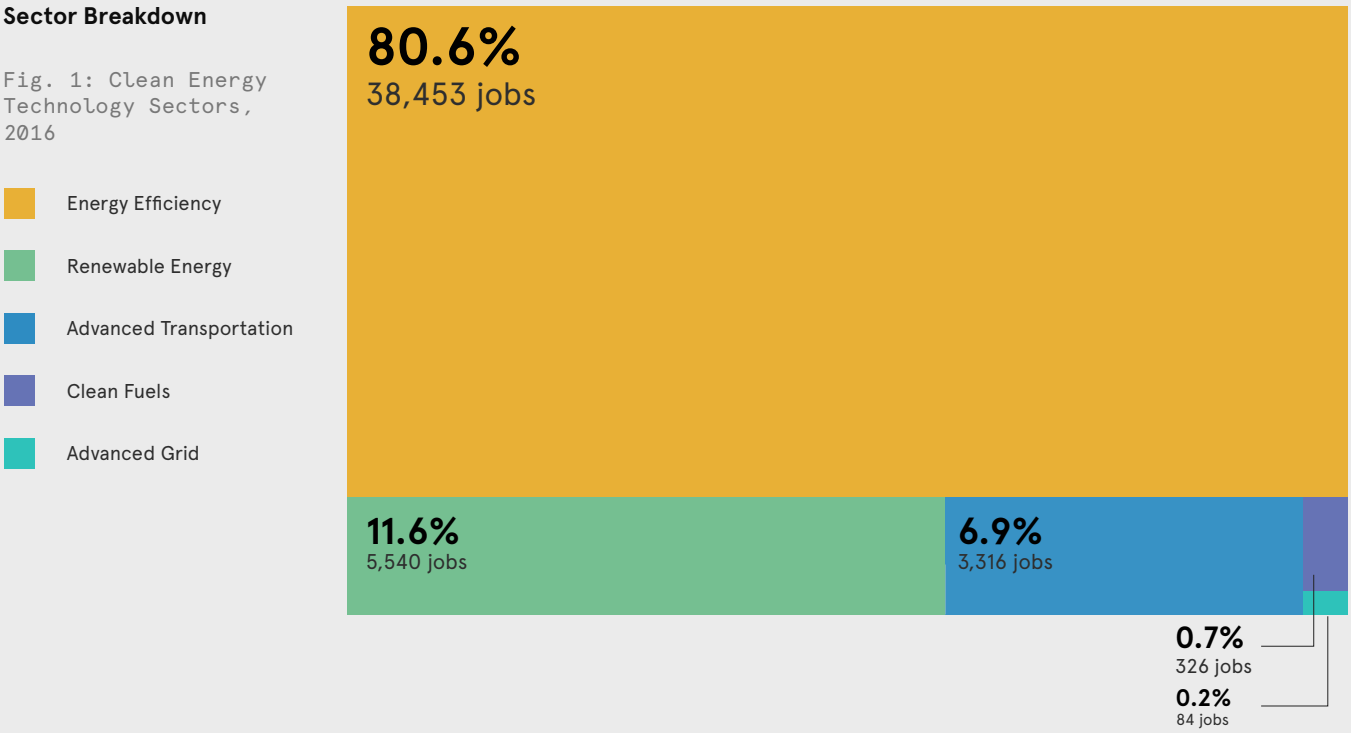
Indiana is home to 47,720 clean energy jobs.

Indiana leads the Midwest region in clean energy job growth. Indiana added 3,587 jobs between 2015 and 2016—over 8% growth. Clean energy jobs grew more than five times faster than the overall job market in Indiana.[1] Most of that growth came from the solar industry, which added 1,393 jobs.

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

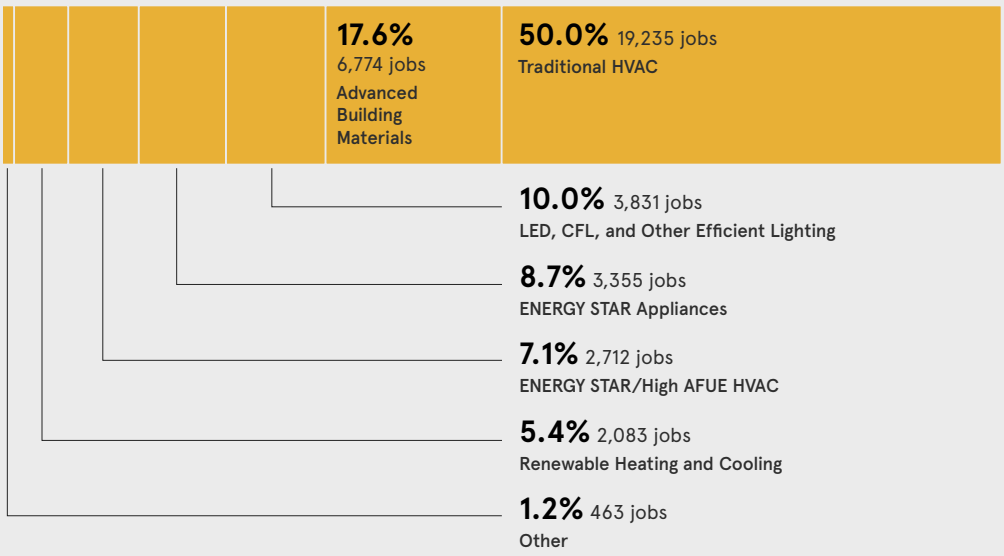
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



Even as the solar industry grows in the Midwest, energy efficiency jobs still make up more than 80% of all clean energy jobs in Indiana. The 38,453 energy efficiency jobs include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of HVAC systems, and system technicians.

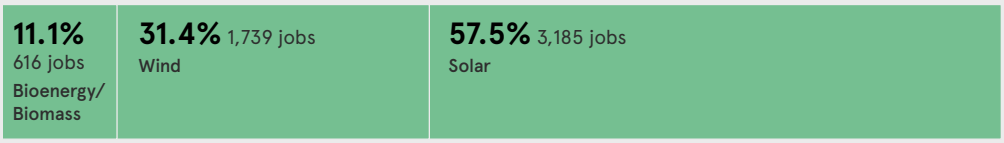
Fig. 2:
Energy Efficiency
Subsectors, 2016



But while the energy efficiency sector is home to the most jobs, the renewable energy generation sector leads the state in growth. The Solar Energy Industries Association (SEIA) reported that solar installations tripled between 2015 and 2016.[2] This led to a 77% growth in solar jobs in the state. But even with this large growth, renewable energy generation jobs only account for around 1 in 10 clean energy jobs in Indiana.

2 *SEIA Indiana Solar Fact Sheet*

Fig. 3:
Renewable Energy
Subsectors, 2016

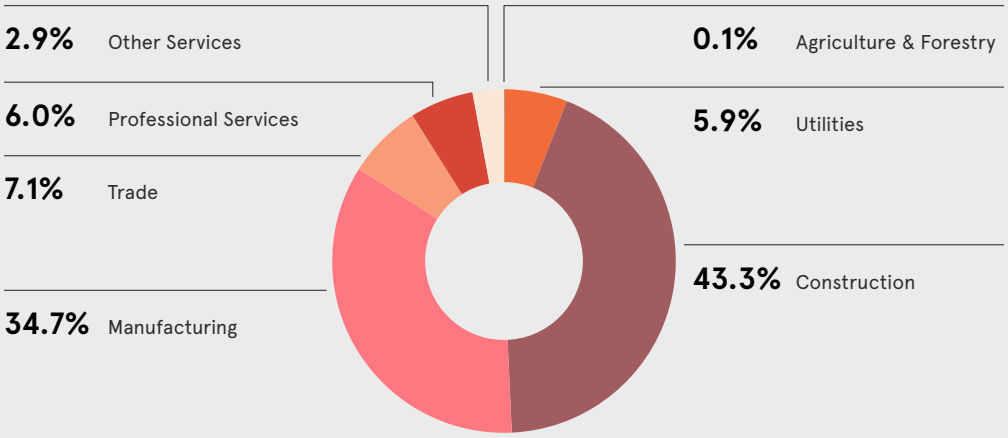


Motor vehicles are the next largest category of jobs with 3,316. The clean fuel sector employs 326 Hoosiers, while only 84 jobs were counted in the storage and smart grid sectors.

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



The clean energy economy impacts the whole value chain from professional services to construction. In Indiana, construction leads the value chain of clean energy jobs with 20,659 jobs—just over 40%. Closely following are the 16,571 manufacturing jobs. 7% of clean energy jobs in Indiana fall under trade, while professional services and utilities account for around 6% each.

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
Indianapolis-Carmel, IN MSA	13,000	1,400	10,400
Chicago-Naperville-Joliet, IL-IN-WI MSA	5,100	600	4,000
Fort Wayne, IN MSA	3,300	300	2,600

Recap

Although Indiana's clean energy sector grew significantly in the last year, especially in solar energy, the state's clean energy sector faces an uncertain economic future. The American Council for an Energy Efficient Economy scored Indiana as 42nd out of 51 for energy efficiency policy, the 4th lowest of the Midwest region.[3] Indiana also lacks energy policies such as renewable portfolio standards and energy efficiency resource standards which promote investment, provide certainty, and encourage economic growth.

3 *2016 ACEEE State Scorecard*

Iowa

Executive Summary

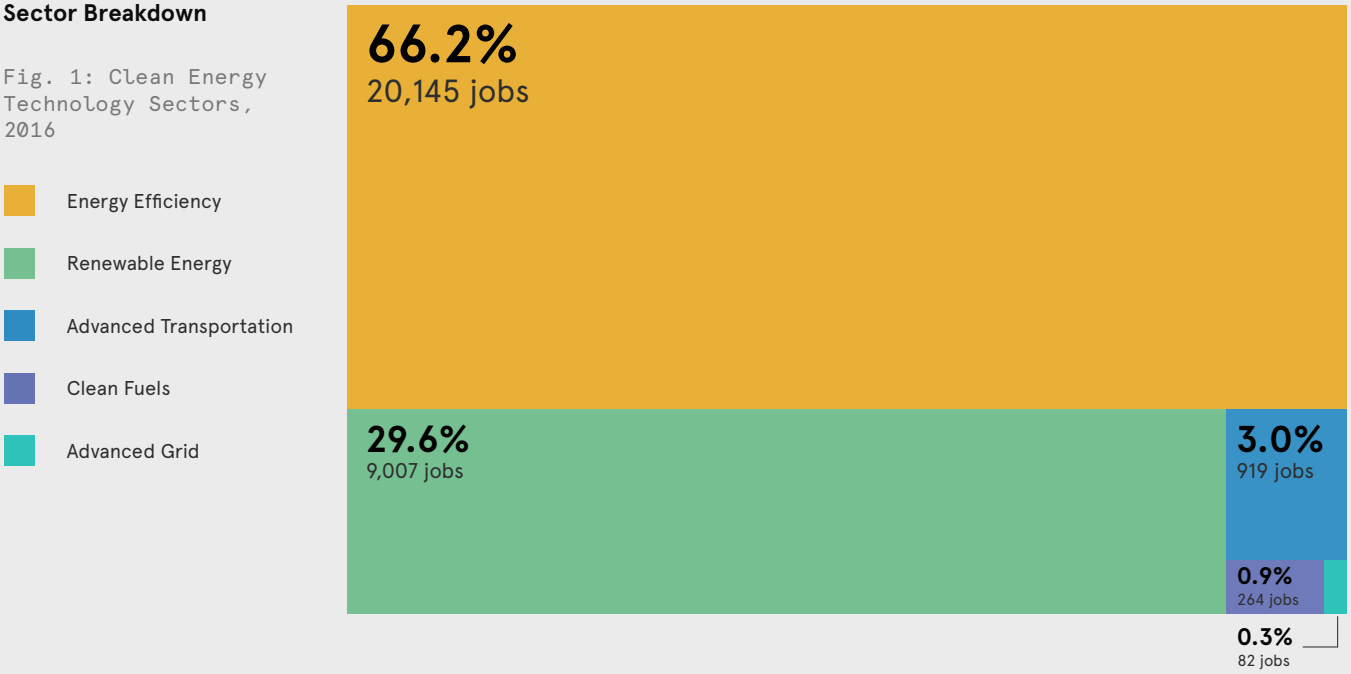
Iowa is home to 30,418 clean energy jobs.

Iowa is home to 30,418 clean energy jobs. Between 2015 and 2016 those jobs grew by almost 7% adding 1,967 jobs. This growth was over 11 times faster than the overall job growth in the state.[1] Leading that growth were renewable energy generation jobs like wind and solar which grew by 14.5% between 2015 and 2016.

1 *Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.*

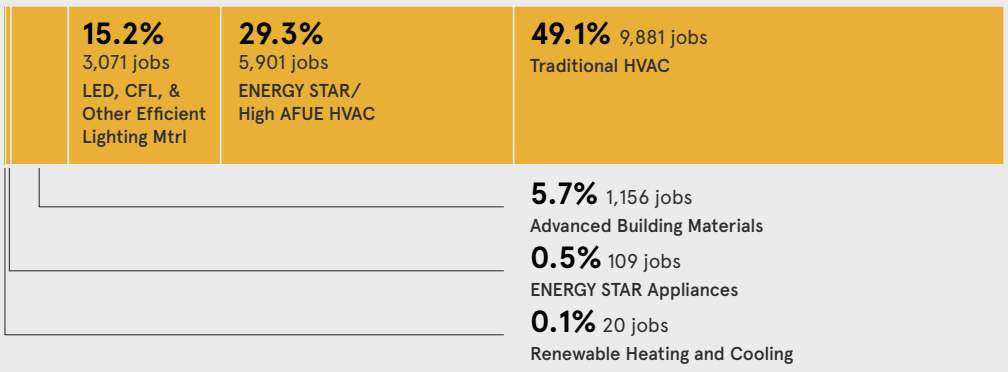
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



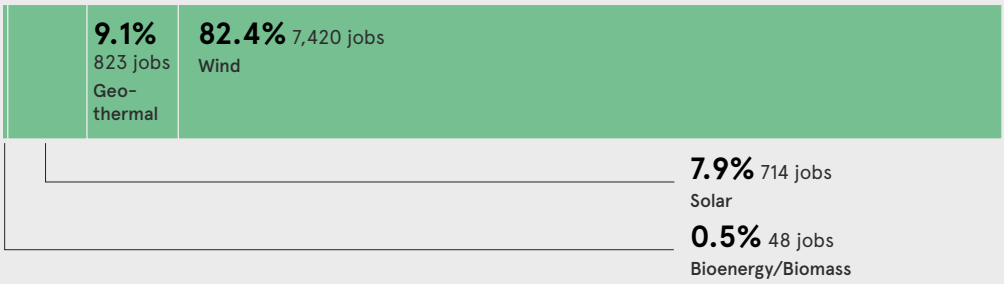
Like the rest of the region, the majority of clean energy jobs in Iowa are in the energy efficiency sector. Energy efficiency jobs account for 20,145 or 6 in every 9 clean energy job in Iowa. These include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of heating, ventilation, and air conditioning (HVAC) systems, and system technicians.

Fig. 2: Energy Efficiency Subsectors, 2016



Iowa leads the Midwest in wind energy generation jobs. Renewable energy generation is the second largest sector in Iowa with 9,007 jobs in wind, solar, geothermal, bioenergy, and low-impact hydropower generation. Wind turbines are becoming a common sight on the landscape and Iowa leads the Midwest in wind energy jobs with 7,420. Those wind jobs in Iowa account for a quarter of all wind jobs in the Midwest.

Fig. 3: Renewable Energy Subsectors, 2016

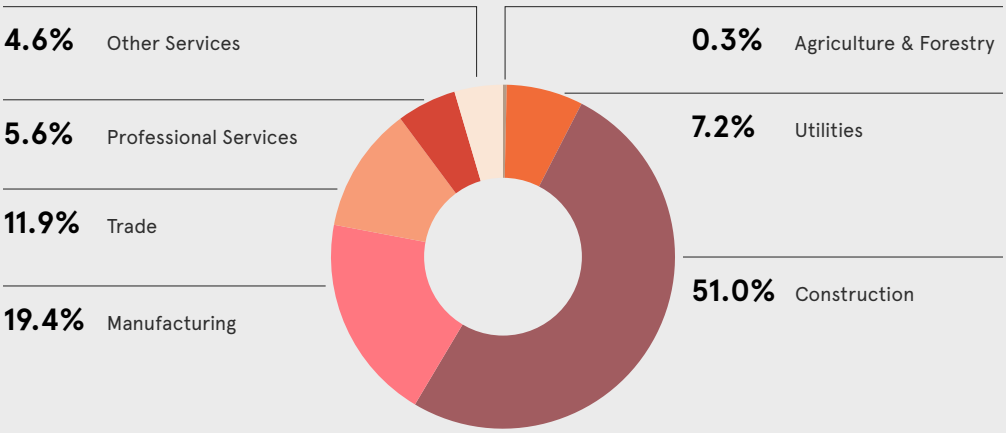


The remaining 1,266 clean energy jobs are distributed between three sectors: advanced vehicles, clean fuels, and advanced grid.

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



The clean energy economy impacts the whole value chain from professional services to construction. Construction is a large part of the Iowa clean energy economy. Half of clean energy jobs in Iowa are construction jobs—15,511. Manufacturing generates 5,908 clean energy jobs in Iowa.

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
Des Moines-West Des Moines, IA MSA	5,200	1,500	3,600
Cedar Rapids, IA MSA	2,200	600	1,200
Waterloo-Cedar Falls, IA MSA	1,700	400	900

Recap

Clean energy jobs are growing in Iowa—over 11 times faster than the overall economy in the state. This led to 1,967 more jobs in clean energy than in 2015. Leading the sector in growth are renewable energy generation jobs which include the region-leading 7,420 wind energy jobs.

Iowa also ranked 15th out of 51 on the American Council for an Energy Efficient Economy's scorecard for energy efficiency policy, 4th highest of the Midwest region.[2] Iowa also passed the nation's first renewable portfolio standard (RPS) which has set the state up to be a leader in clean energy.

3 *2016 ACEEE State Scorecard*

Kansas

Executive Summary

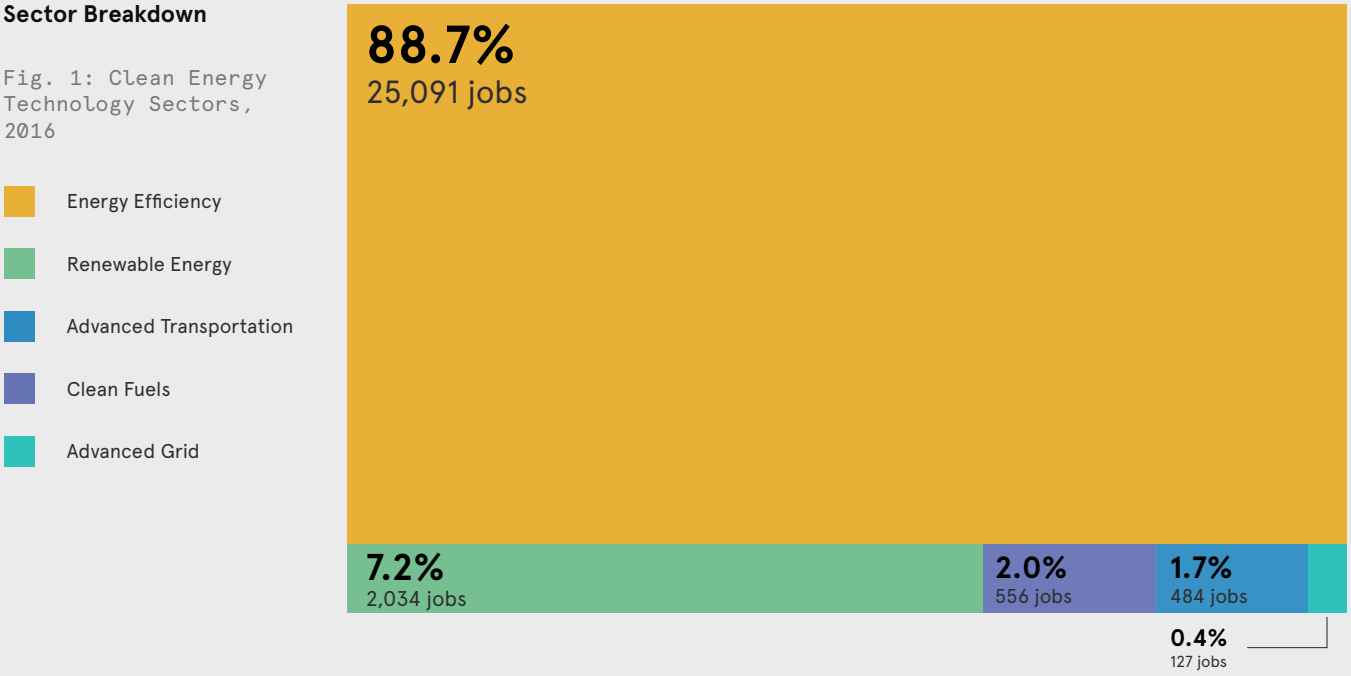
Kansas is home to 28,291 clean energy jobs.

While Kansas lags behind most other states in the region in clean energy sector growth, the state did add 1,286 clean energy workers over the last year. This 4.7% growth rate in clean energy jobs is almost nine times larger than overall job growth in Kansas in the last year and stands out as a bright spot in Kansas' economy.[1]

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

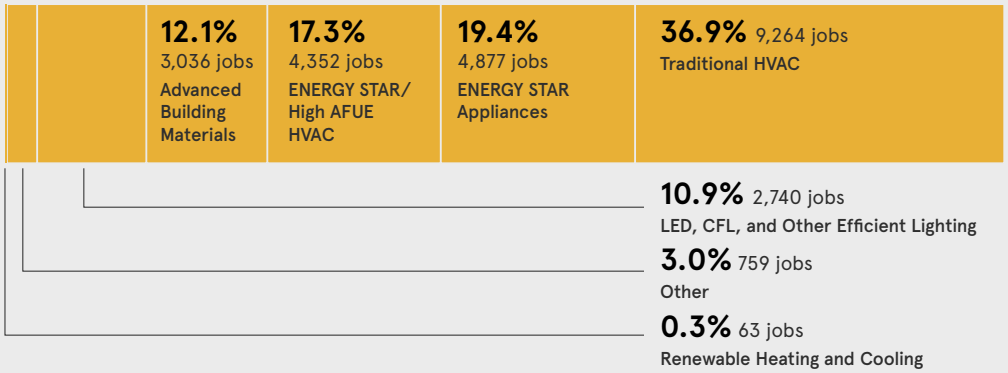
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



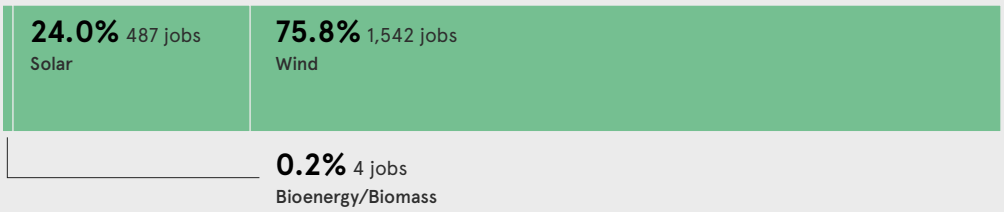
Energy efficiency is the largest clean energy sector, with highly diverse subsectors across HVAC, lighting, energy star appliances, and advanced building materials. As a whole, the energy efficiency sector employs 25,091 people—almost 90% of clean energy jobs in the state.

Fig. 2: Energy Efficiency Subsectors, 2016



Renewable energy generation employs around 7% of clean energy workers in the state. Of these 2,034 jobs, almost 3 out of 4 are in wind; the remainder are in solar. Like the rest of the region, renewable energy generation jobs are the fastest growing sector at over 14% between 2015 and 2016.

Fig. 3: Renewable Energy Subsectors, 2016

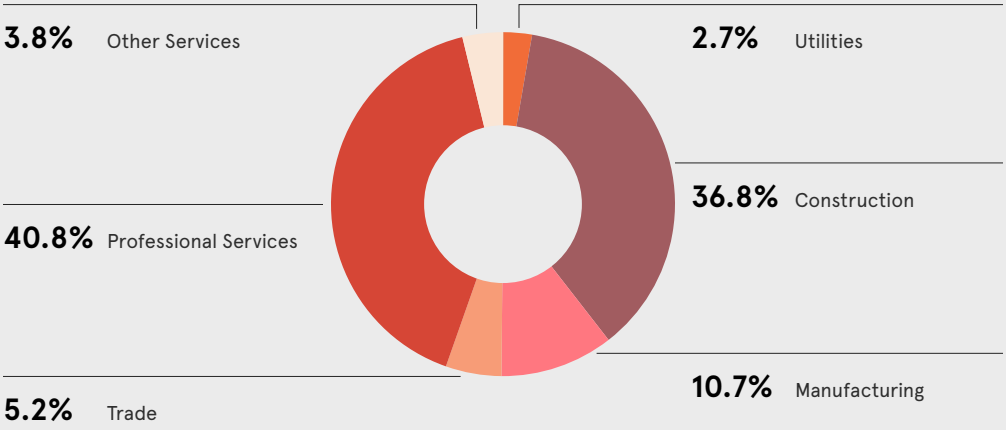


556 jobs are in the clean fuels sector, 484 jobs are in advanced vehicles, and 127 in the advanced grid sector.

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



In Kansas, professional services make up over 40% of the value chain for clean energy jobs. Construction represents 10,402 jobs, or just over 35% of the value chain.

Small businesses drive the clean energy sector in Kansas. Previous surveys have shown that over 80% of businesses working in clean energy employ fewer than 25 individuals, and traditional industries are adopting new clean energy technology.[2]

2 *Clean Jobs Midwest 2016*

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
Kansas City, MO-KS MSA	6,900	500	6,000
Wichita, KS MSA	5,400	300	4,700
Topeka, KS MSA	1,900	<250	1,600

Recap

Almost all of the 28,291 clean energy jobs in Kansas are in energy efficiency, with only 3,200 clean energy jobs in other sectors. However, the renewable energy sector grew by 14% between 2015 and 2016. Overall, clean energy jobs are growing almost 9 times faster than total job growth in the state. Kansas also has the 4th most clean energy jobs as a percentage of the state's labor force.

Kansas lacks a renewable portfolio standard and was ranked 48th by the ACEEE State Energy Efficiency Scorecard.[3] New energy policy such as a renewable portfolio standard or an energy efficiency resource standard can provide market certainty for clean energy businesses, which would drive investment and job creation.

3 *2016 ACEEE State Scorecard*

Michigan

Executive Summary

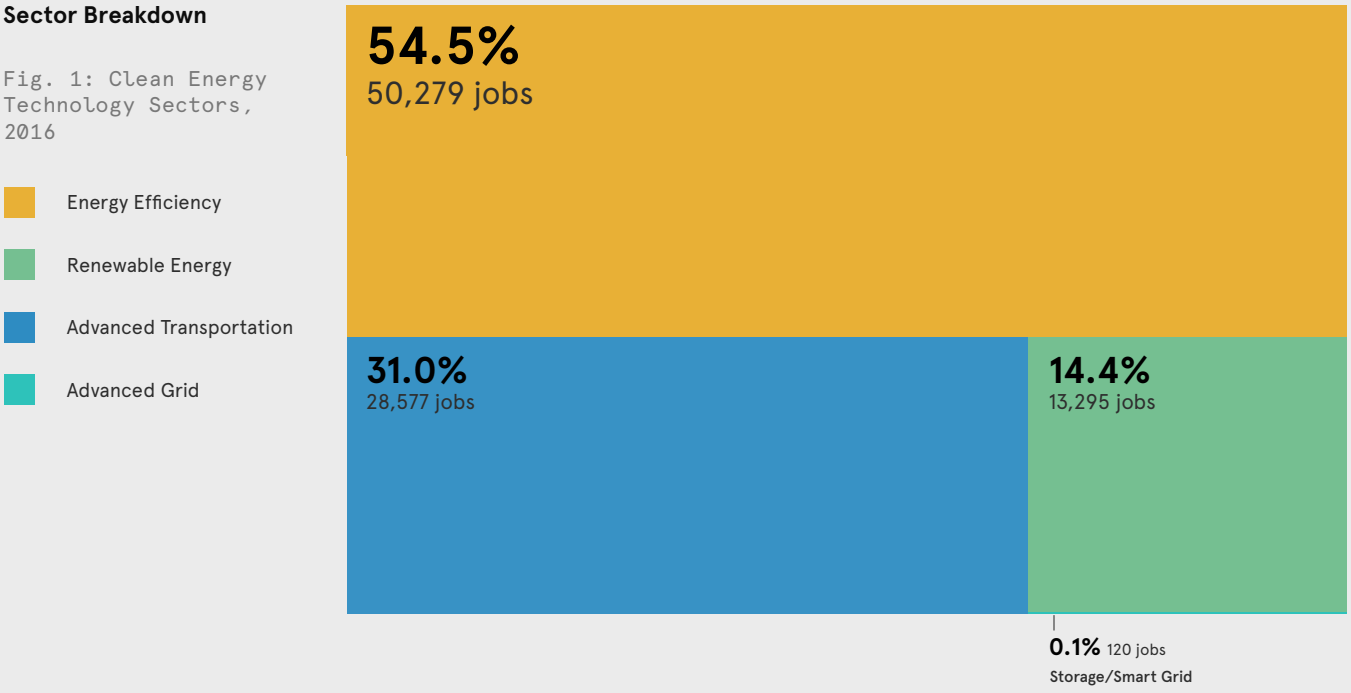
Michigan continues to evolve from traditional manufacturing and automotive jobs toward advanced transportation and clean energy technology.

As clean energy jobs grow, Michigan's iconic and transforming automotive industry continues to lead the Midwest with over 28,577 jobs in advanced transportation. Overall, the state is home to 92,271 clean energy jobs. Michigan is transforming its economy to meet the demands of the changing energy landscape. Between 2015 and 2016, clean energy jobs in Michigan grew by 5.3%, almost three times faster than the 1.93% growth in jobs overall in Michigan.[1]

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

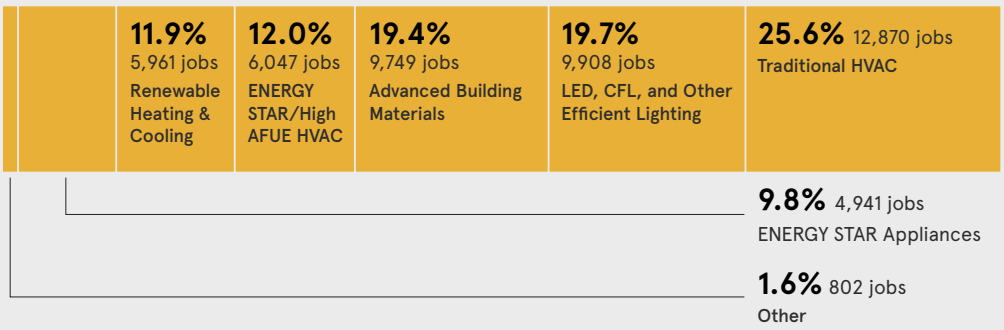
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



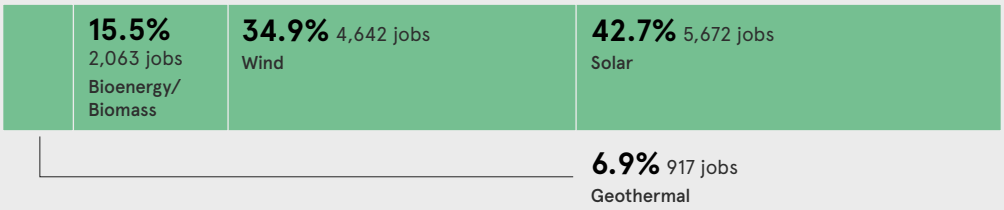
Energy efficiency makes up the largest share of the clean energy workforce in Michigan, consistent with other states in the Midwest. The energy efficiency sector expanded by nearly 2,409 jobs in the state between 2015 and 2016; Michigan is now home to 50,279 energy efficiency jobs. The heating, ventilation, and air conditioning (HVAC) industry makes up the largest portion of energy efficiency jobs followed closely by advanced building materials and efficient lighting. These energy efficiency jobs include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of HVAC systems, and system technicians.

Fig. 2:
Energy Efficiency
Subsectors, 2016



Renewable energy jobs also play an important role in the state's clean energy economy. Michigan has a strong base in solar manufacturing, and as a result, has the second largest number of solar jobs in the Midwest (second only to Ohio) with 5,672 jobs. Solar and renewable energy generation jobs are the fastest growing jobs sector in the Midwest and Michigan is no exception. Between 2015 and 2016, Michigan added 703 solar jobs—a 14.1% growth rate—tied for third highest growth rate in the Midwest. Renewable energy generation jobs overall—including solar, wind, geothermal, bioenergy, and low-impact hydropower—grew by 14.2%—by far the fastest growing clean energy sector.

Fig. 3:
Renewable Energy
Subsectors, 2016



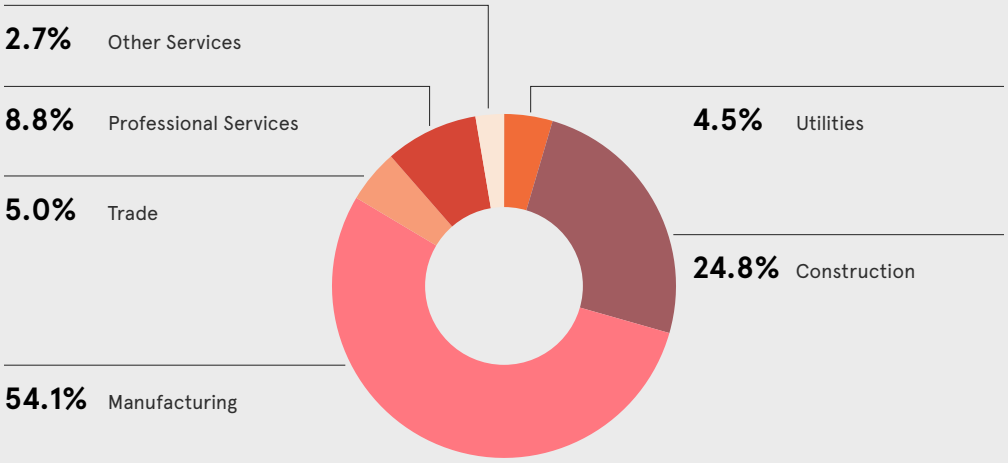
The key story is Michigan's leadership role in advanced transportation. The century-old auto industry is undergoing a transition toward clean energy vehicles, and Michigan is adapting to new technology to keep the industry competitive. Advanced transportation employment is more robust in Michigan than in any other state in the region, and represents 31% of all clean energy jobs in Michigan. With 28,577 advanced transportation jobs, Michigan is home to more than 4 in 10 of the advanced transportation jobs in the Midwest. Those jobs are nearly evenly split between electric and hybrid vehicles, and with this growth comes additional manufacturing jobs creating batteries for those vehicles.

The advanced grid sector employed 120 Michiganders in 2016—largely unchanged from 2015.

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



Michigan has more clean energy jobs in manufacturing—49,956 jobs—than any other state in the Midwest. This manufacturing trend plays an important role in the advanced transportation sector, and in the evolution of Michigan's traditional industries.

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

Metro Area (MSA)	Total Clean Energy Employment	Renewable Energy Employment	Energy Efficiency Employment
Detroit-Warren-Livonia, MI MSA	39,300	5,500	21,400
Grand Rapids-Wyoming, MI MSA	7,700	1,000	4,100
Lansing-East Lansing, MI MSA	4,300	600	2,300

Recap

There are 92,271 clean energy jobs in Michigan encompassing everything from the wind and solar industries to advanced vehicle manufacturing. Clean energy jobs in Michigan grew almost three times faster than all other jobs with renewable energy generation jobs growing the fastest. Looking towards the future, Michigan is well positioned for growth in this sector. The state has greatly improved its statewide energy policies with the American Council of an Energy-Efficient Economy listing Michigan as one of the most improved states on the ACEEE State Energy Efficiency Scorecard.[2]

Clean energy jobs are a large and growing part of the economy impacting every part of the value chain from agriculture to construction and manufacturing to professional services. Michigan's robust advanced transportation sector and growing renewable energy sector will play a large role in positioning the state for a bright economic future.

2 *2016 ACEEE State Scorecard*

Minnesota

Executive Summary

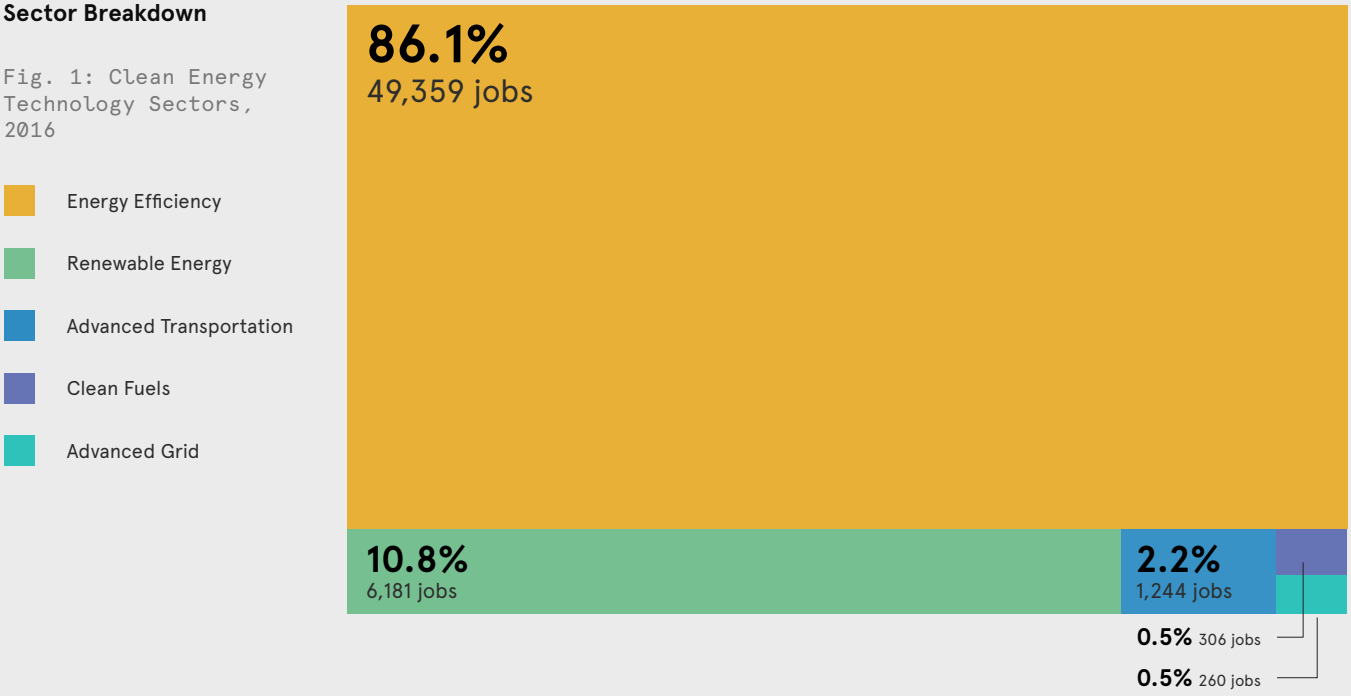
Minnesota's clean energy sector is substantial, with 57,351 clean energy jobs located across the state.

Further, jobs in the sector grew by 5.3% between 2015 and 2016, 3.8 times faster than all other jobs[1]. 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.*

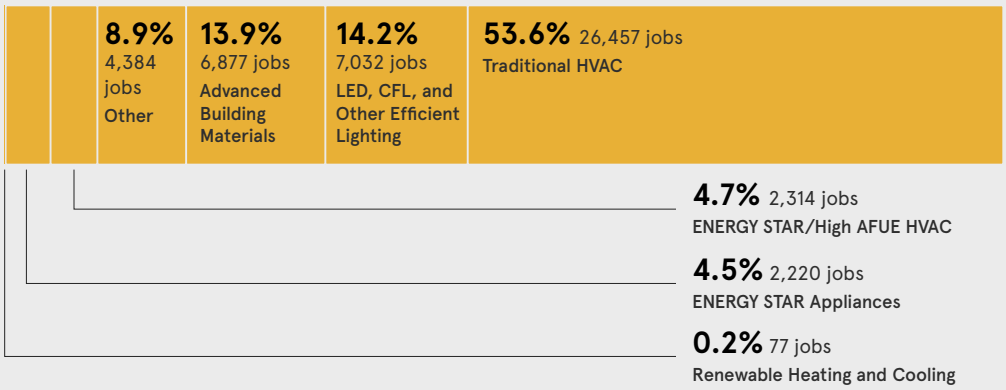
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



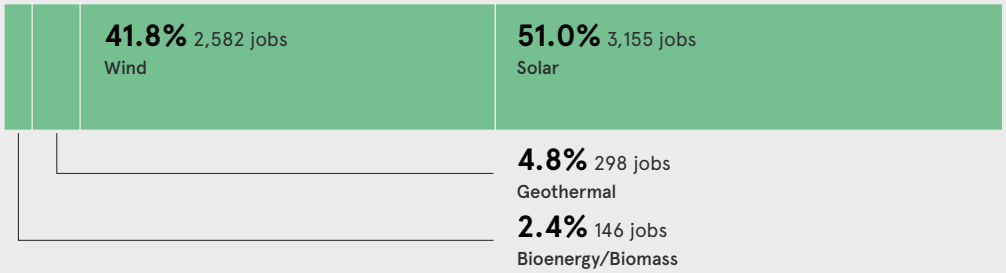
Energy Efficiency employs the highest percentage of clean energy workers in Minnesota and the region overall. These include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of heating, ventilation, and air conditioning (HVAC) systems, and system technicians. 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

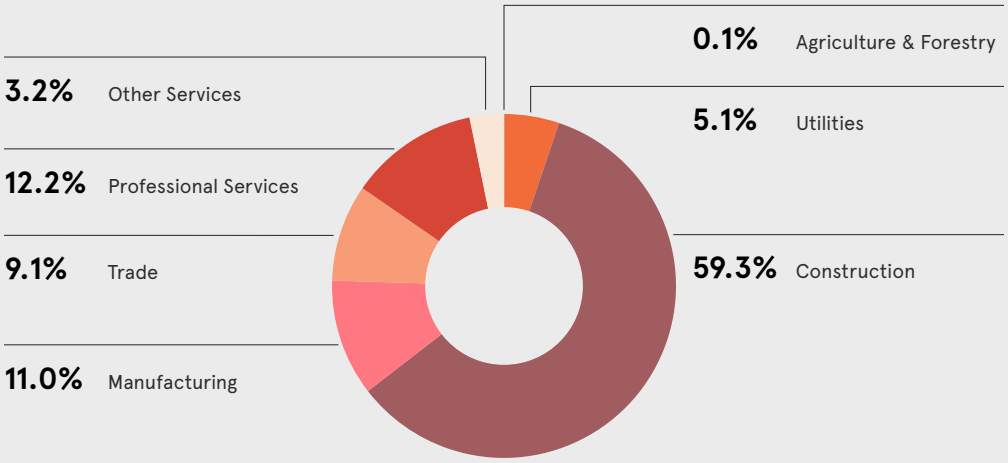


Following those top two sectors are advanced transportation with 1,244 jobs, clean fuels employing 306 Minnesotans, and 260 people working in the advanced grid sector.

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*

Missouri

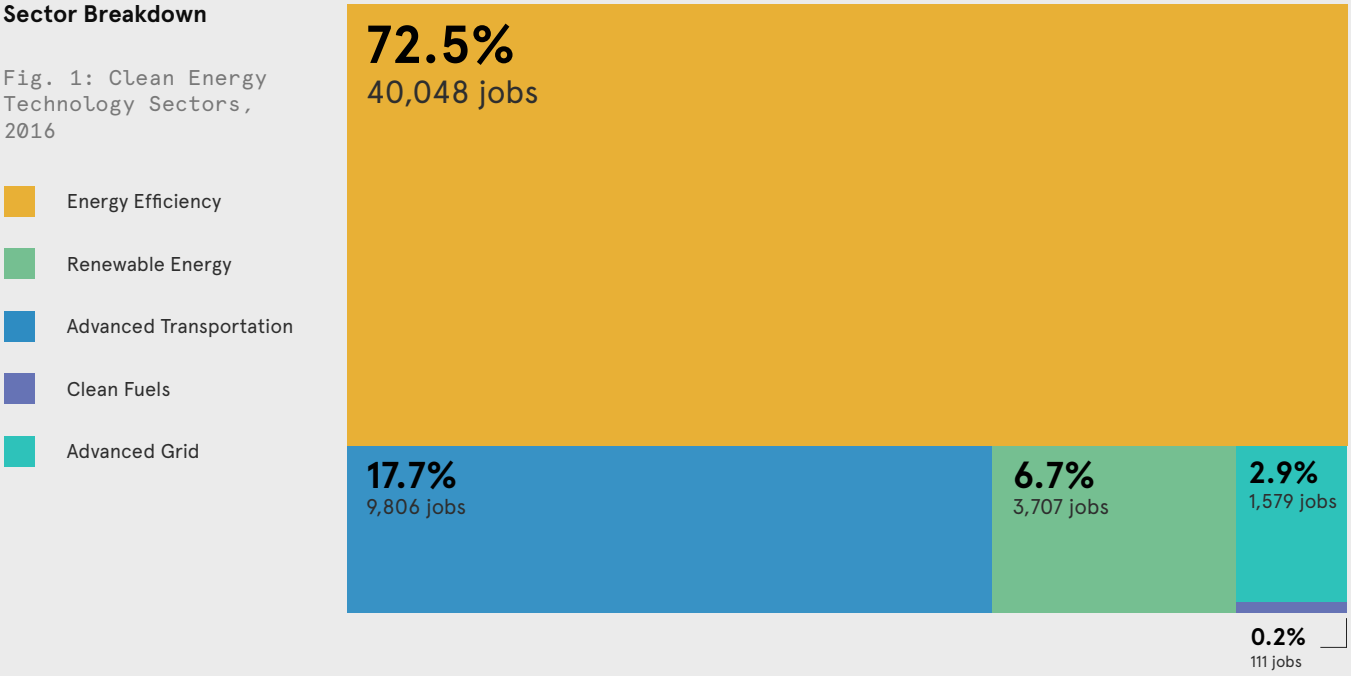
Executive Summary

Missouri has 55,251 clean energy jobs, adding 2,772 jobs between 2015 and 2016.

A majority of these jobs are in energy efficiency, but Missouri is leading the region in the advanced grid sector, with 1,579 jobs. The clean energy economy added 2,772 jobs between 2015 and 2016, growing by over 5% and adding jobs at a rate more than three times faster than the state's economy as a whole.

Sector Breakdown

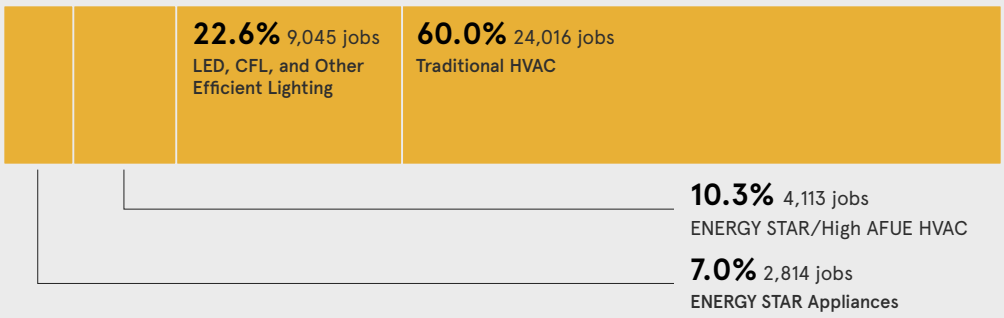
Fig. 1: Clean Energy Technology Sectors, 2016



Energy efficiency accounts for over 70% of the clean energy jobs workforce with 40,048 jobs in the sector. 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.

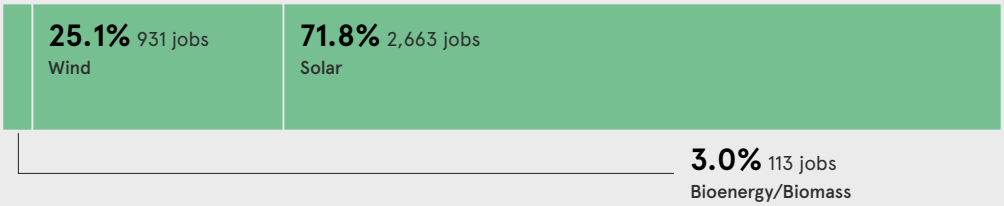
Missouri's advanced transportation sector grew faster than any other state in the Midwest. The state's advanced transportation sector has 9,806 jobs, which are 18% of the state's total clean energy jobs. Between 2015 and 2016, renewable energy generation jobs also grew quickly, increasing 14.5% in Missouri.

Fig. 2:
Energy Efficiency
Subsectors, 2016



Renewable energy generation is the third largest clean energy job sector in Missouri with 3,707 jobs. Like the rest of the region, Missouri renewable energy generation jobs grew the fastest of any sector, expanding by nearly 15% between 2015 and 2016 and adding 470 jobs. Solar energy jobs are the largest sub-sector in renewable energy generation, with 2,663 jobs in Missouri. Wind energy employs 931 individuals in the state.

Fig. 3:
Renewable Energy
Subsectors, 2016



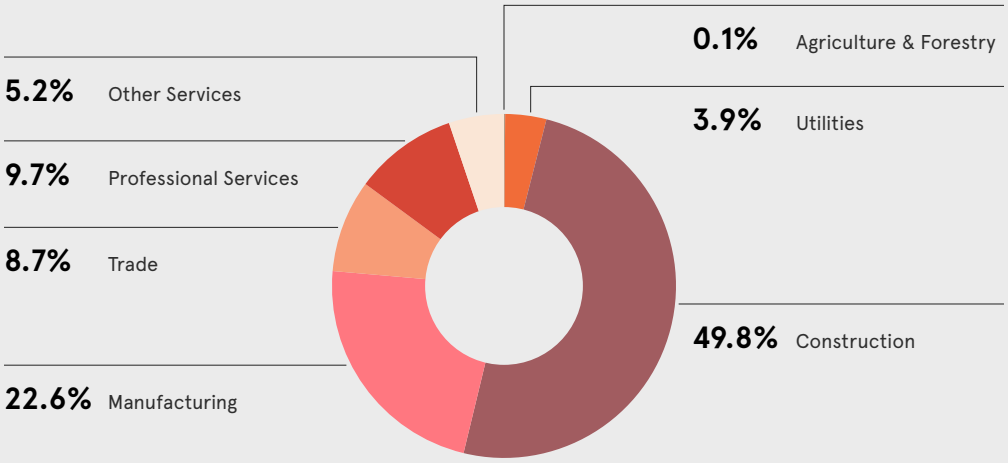
Additionally, the advanced grid sector employs 1,579 people in the state. Missouri leads the region in advanced grid jobs with more than 37% percent of the region's overall sector employment. 1,205 of the advanced grid jobs in Missouri are in energy storage.

Clean fuels is the smallest clean energy job sector in Missouri with 111 jobs.

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



The clean energy economy impacts the whole value chain from professional services to construction. Just under half of all Missouri clean energy jobs are construction jobs, while 1 in 5 clean energy jobs are in manufacturing.

Previous surveys indicate that 80% of businesses working in clean energy in Missouri employ fewer than 25 individuals, illustrating the importance of small businesses in the clean energy sector.[1]

1 *Clean Jobs Midwest 2016*

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
St. Louis, MO-IL MSA	25,200	2,000	12,800
Kansas City, MO-KS MSA	8,800	500	7,800
Springfield, MO MSA	3,400	<250	3,000

Recap

Missouri's clean energy economy added 2,772 jobs between 2015 and 2016, growing more than three times faster than the overall job market in Missouri. Of the 55,251 clean energy jobs in Missouri, energy efficiency jobs make up the largest portion. Missouri also leads the region in advanced grid jobs, with over 35% all advanced grid jobs in the Midwest.

Missouri has a renewable portfolio standard but was ranked 32nd by the ACEEE State Energy Efficiency Scorecard.[2] Better energy policies can provide certainty for clean energy businesses, which would drive investment and job creation if they were enacted.

2 *2016 ACEEE State Scorecard*

Nebraska

Executive Summary

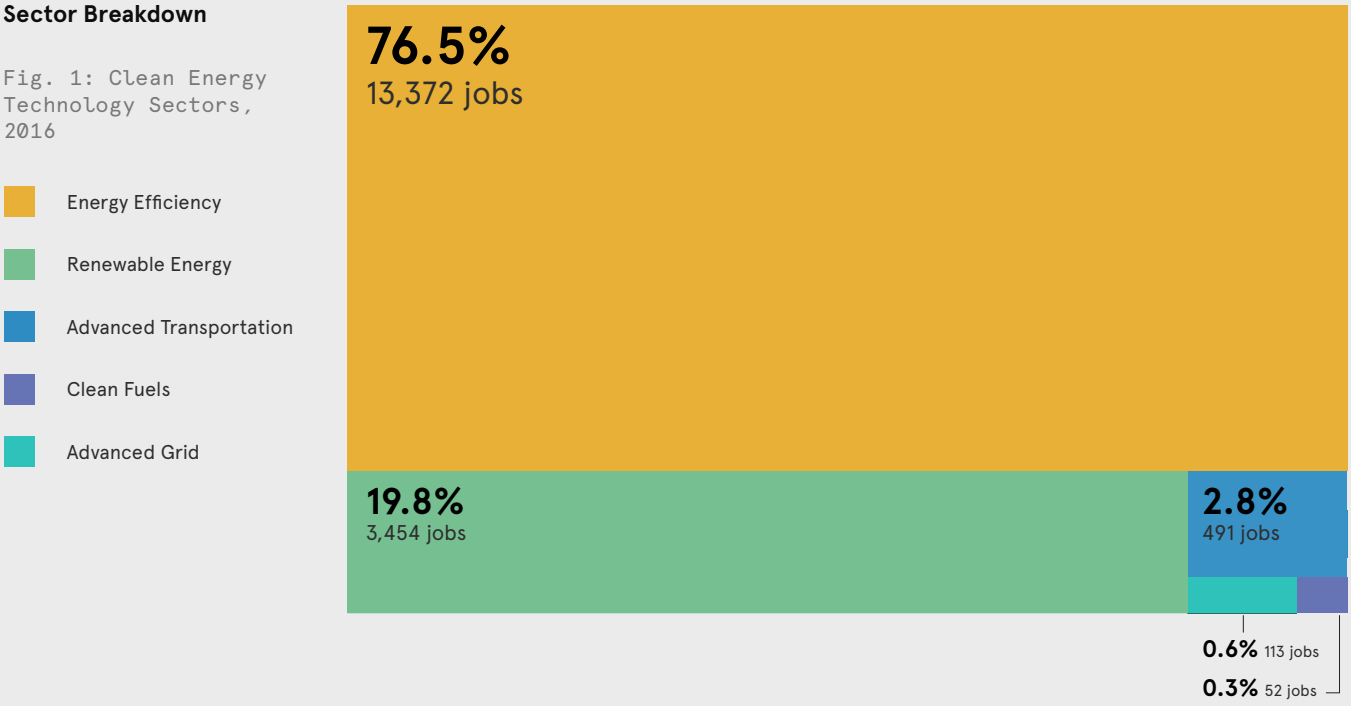
Nebraska is home to 17,482 clean energy jobs.

While Nebraska has the 3rd fewest clean energy jobs in the Midwest, the sector is growing quickly, especially in renewable energy generation. Between 2015 and 2016 Nebraska added 1,060 clean energy jobs, a growth rate of 6.5%—the 4th fastest growth rate in the region. Clean energy jobs are also growing much faster than overall job growth in the state: between 2015 and 2016 clean energy jobs grew more than seven times faster than job growth in the overall state economy.[1]

1 *Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.*

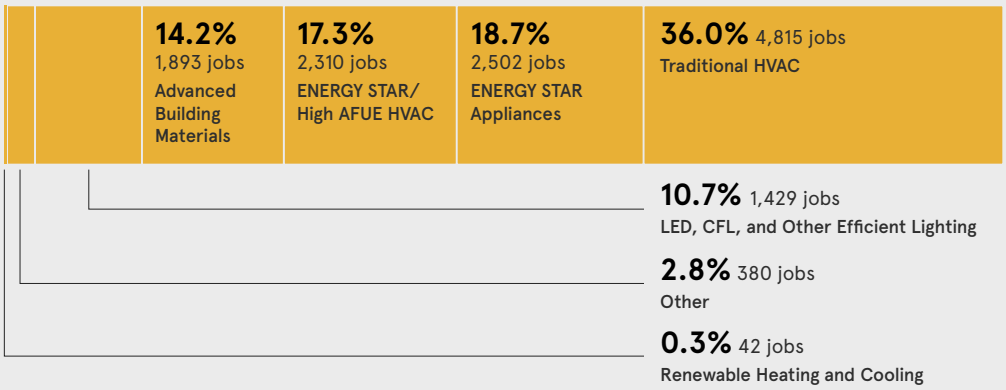
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



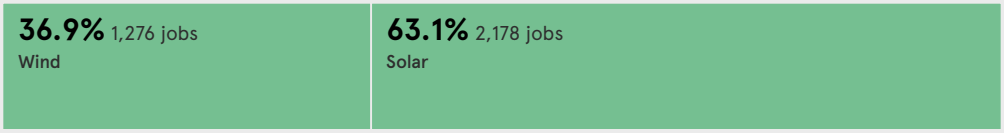
Energy efficiency represents more than three-quarters of clean energy jobs in Nebraska—13,372 jobs in all. Nebraska's energy efficiency sector is dominated by traditional HVAC, with 4,815 of the total energy efficiency jobs, followed by general Energy Star appliances with 2,502 jobs, Energy Star and High Annualized Fuel Utilization Efficiency (AFUE) HVAC at 2,310 jobs, advanced building materials at 1,893 jobs, and then efficient lighting at 1,429 jobs.

Fig. 2:
Energy Efficiency
Subsectors, 2016



Renewable energy generation represents almost 1 in 5 of all clean energy jobs in Nebraska with 3,454 jobs. These jobs are divided between wind and solar: Nebraska has 2,178 solar jobs and 1,276 wind jobs. Overall renewable energy generation jobs grew by 14% between 2015 and 2016, the fastest growing clean energy job sector in the state.

Fig. 3:
Renewable Energy
Subsectors, 2016

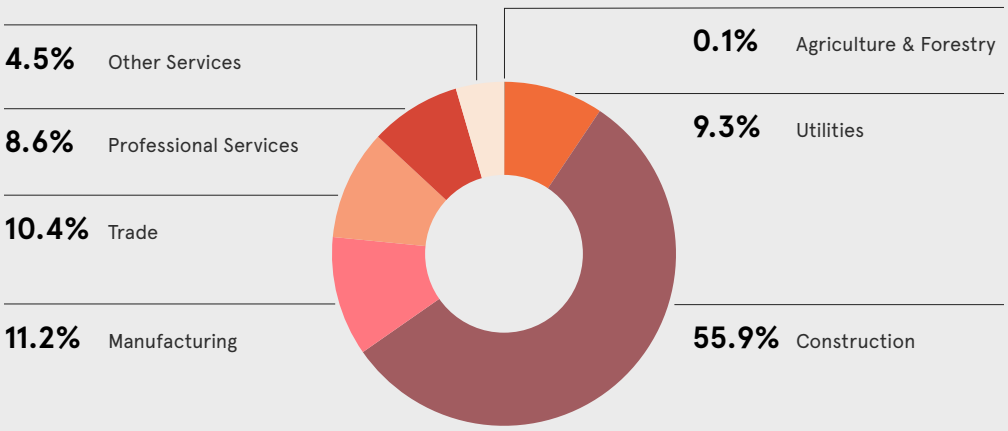


Clean vehicle jobs are the next largest sector with 491 jobs in Nebraska. The rest of Nebraska's clean energy jobs are split between advanced grid with 113 jobs and clean fuels with 53 jobs.

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



More than half of all of Nebraska's clean energy jobs are construction jobs. Those 9,773 construction jobs are followed by 1,965 manufacturing jobs, 1,811 trade jobs, 1,631 jobs in utilities, and 1,498 professional service jobs.

Consistent with the rest of the Midwest, small businesses drive the clean energy sector. Previous surveys have shown that nearly 85% of businesses working in clean energy employ fewer than 25 individuals.[2]

2 *Clean Jobs Midwest 2016*

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
Omaha-Council Bluffs, NE-IA MSA	5,900	1,100	4,400
Lincoln, NE MSA	2,400	400	1,800
Sioux City, IA-NE-SD MSA	<250	<250	<250

Recap

The size of Nebraska's clean energy sector ranks tenth out of the twelve states surveyed, but with promising growth and transitioning industries, future surveys may tell a different story. Nebraska is one of the few states in the region without either a renewable portfolio standard (RPS) or an Energy Efficiency Resource Standard (EERS), and Nebraska ranks 42 out of 51 in ACEEE's Energy Efficiency scorecard.[3]

3 *2016 ACEEE State Scorecard*

If new energy policy in Nebraska were enacted, such as an RPS or EERS, it would provide certainty for clean energy businesses and drive investment and job creation for Nebraskans working in the clean energy economy.

North Dakota

Executive Summary

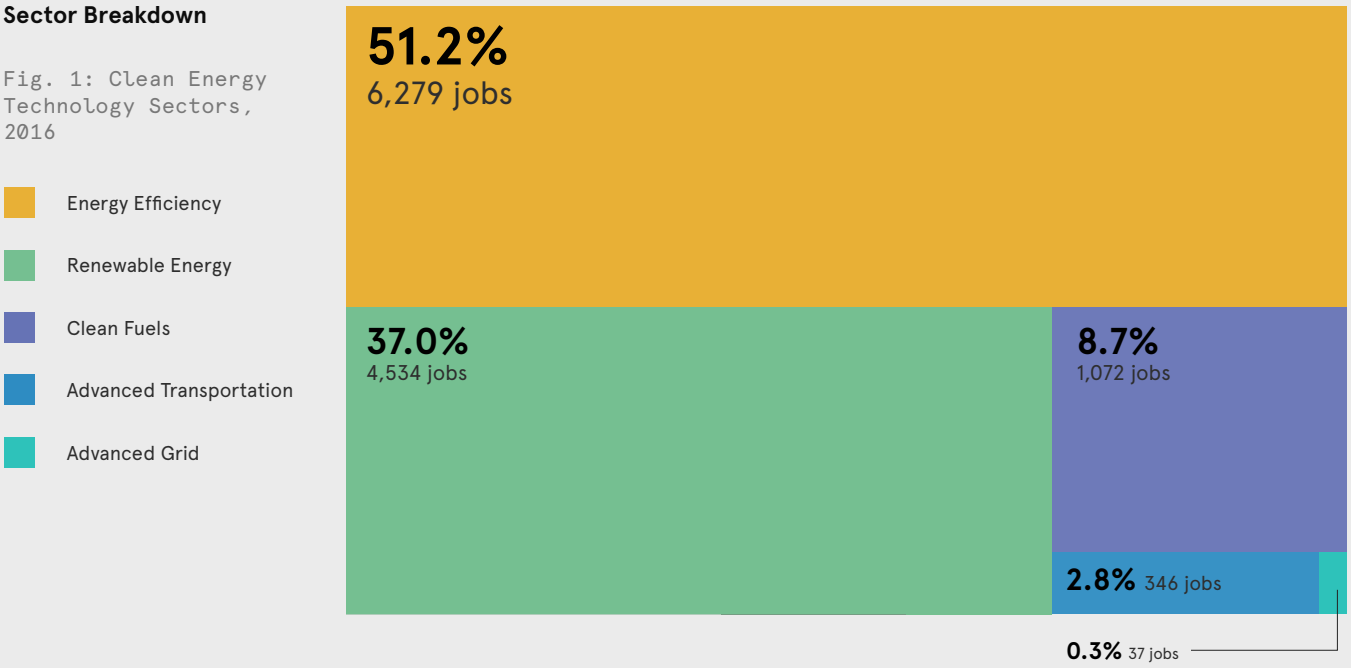
North Dakota is home to 12,266 clean energy jobs.

While North Dakota's clean energy workforce lags many other states in the Midwest, the state actually has the highest percentage of clean jobs in their workforce in the region. North Dakota also has the highest portion of renewable energy generation jobs in the region as a percent of all clean energy jobs in the state: 34.6% of clean energy jobs in North Dakota come from renewable energy generation. While North Dakota saw the smallest growth of clean energy jobs in the region between 2015 and 2016 at 3.2%, this growth rate still significantly outperformed the overall state economy, which actually saw its workforce decline by 4.1%.[1]

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state

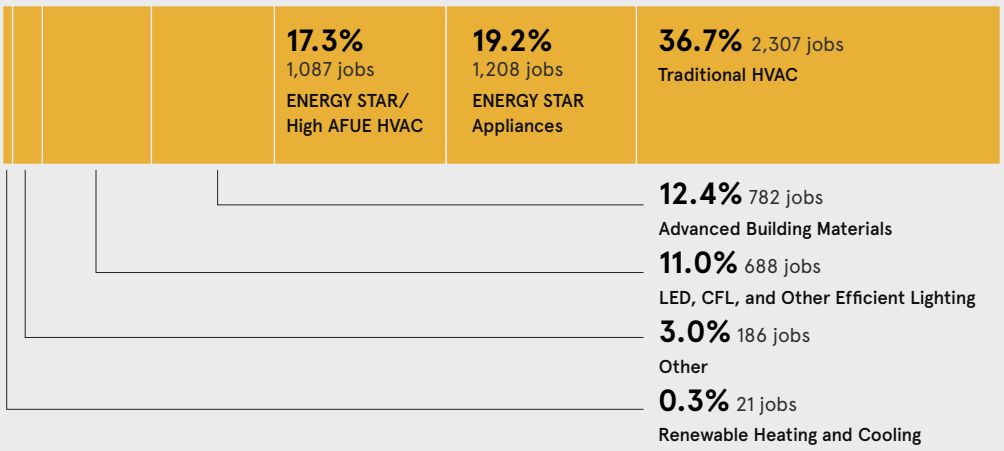
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



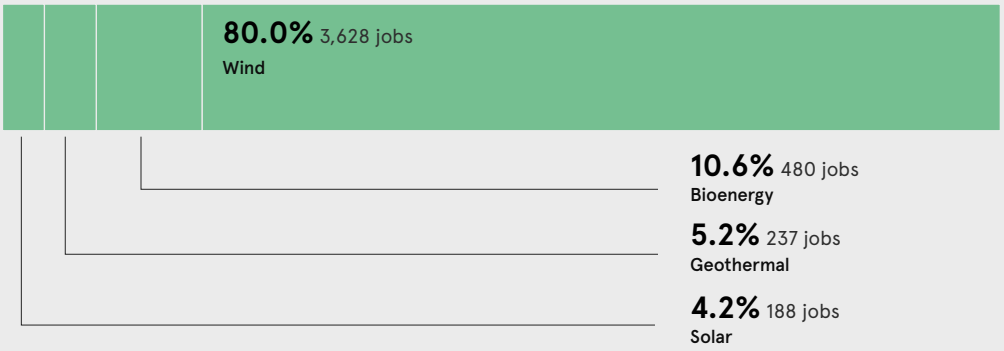
Energy efficiency jobs are the largest clean energy jobs sector in North Dakota at just over half of clean energy jobs in the sector, employing 6,279 in the state. These energy efficiency jobs include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of HVAC systems, and system technicians.

Fig. 2:
Energy Efficiency
Subsectors, 2016



As the leader in renewable energy generation jobs per capita, North Dakota is diversifying its energy generation sector. Within the renewable generation sector, wind power is the largest source of jobs with 3,628. North Dakota is also home to 188 solar jobs and 237 geothermal jobs. Overall, renewable energy generation employs 4,534 in the state. Advanced transportation employed 346 clean energy workers while clean fuels and advanced grid sectors employed 1,072 and 37 people respectively.

Fig. 3:
Renewable Energy
Subsectors, 2016

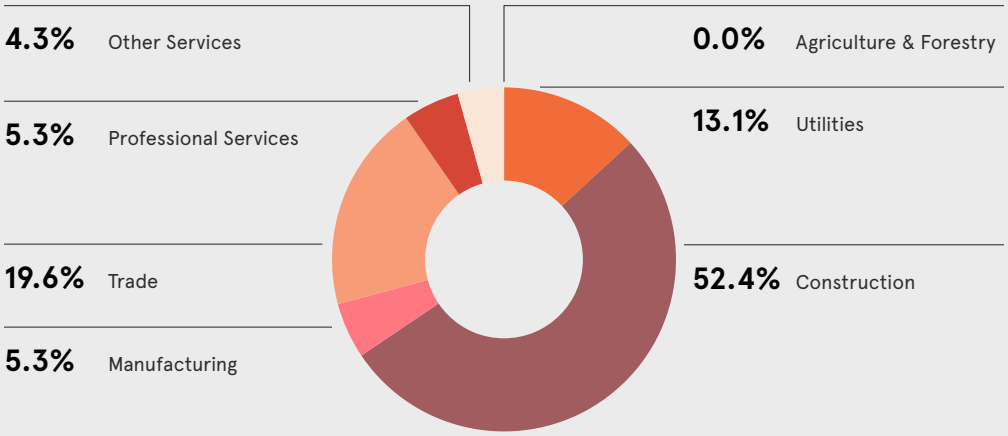


North Dakota is second only to Illinois in the clean fuels sector, with 1,072 jobs. Most clean fuels jobs are in the non-corn ethanol and non-woody biomass categories.

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, utility, construction, manufacturing, trade, professional service 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



Consistent with the rest of the region, more than half of all clean energy jobs in North Dakota are construction jobs. Trade and utility jobs are the next largest parts of the clean energy value chain with 2,398 and 1,609 jobs, respectively.

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
Fargo, ND-MN MSA	2,100	700	900
Bismarck, ND MSA	1,600	500	800
Grand Forks, ND-MN MSA	600	<250	<250

Recap

Most clean energy businesses in North Dakota are small businesses. Prior surveys have shown that over 80% of businesses working in clean energy employ fewer than 25 individuals, illustrating the importance of small business in the state.[2]

While the industry has been doing well relative to North Dakota's overall economy, there is a lot of room for clean energy policy to help drive investment and job growth in the industry. For example, North Dakota has no renewable portfolio standard driving investments and no Energy Efficiency Resource Standard. The current ACEEE Energy Efficiency scorecard ranks North Dakota last in the nation.[3] Popular, commonplace policy could help the state capture very low hanging fruit, particularly with regards to energy efficiency savings, which would lead both to new jobs in this space as well as significant energy and monetary savings by state residents.

2 *Clean jobs Midwest 2016*

3 *2017 ACEEE State Scorecard*

Ohio

Executive Summary

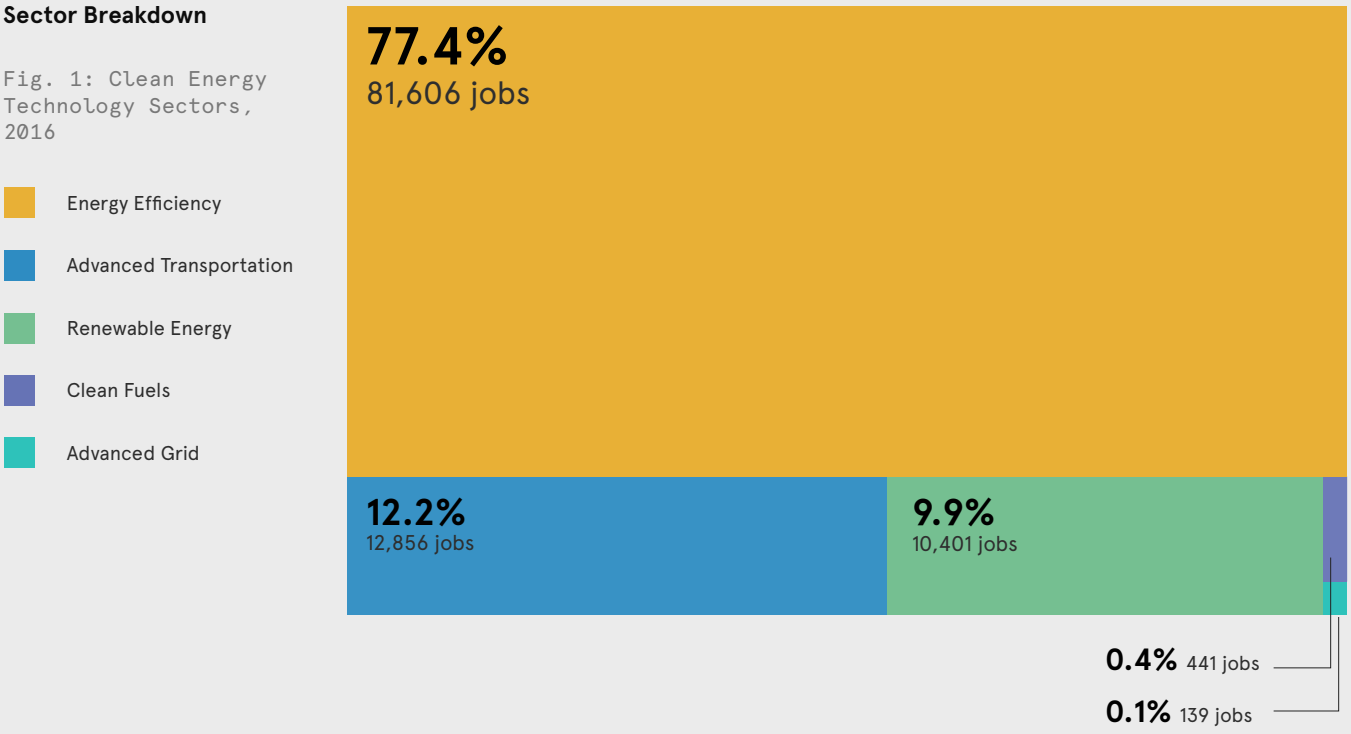
Clean Energy Employees over 100,000 in Ohio.

Ohio is home to the second-largest number clean energy jobs in the region with 105,443. While those jobs were not growing as fast as the rest of the region, clean energy jobs in Ohio grew six times faster than other jobs in the state between 2015 and 2016.[1] Along with the rest of the region, Ohio saw strong job gains in the renewable energy generation sector, growing at nearly 14%. A strong energy efficiency sector is leading the Buckeye State's clean energy industry, accounting for more than 3 in 4 clean energy jobs. The clean energy sector in Ohio continues to be a significant contributor to the state's economy, particularly in manufacturing.

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

Sector Breakdown

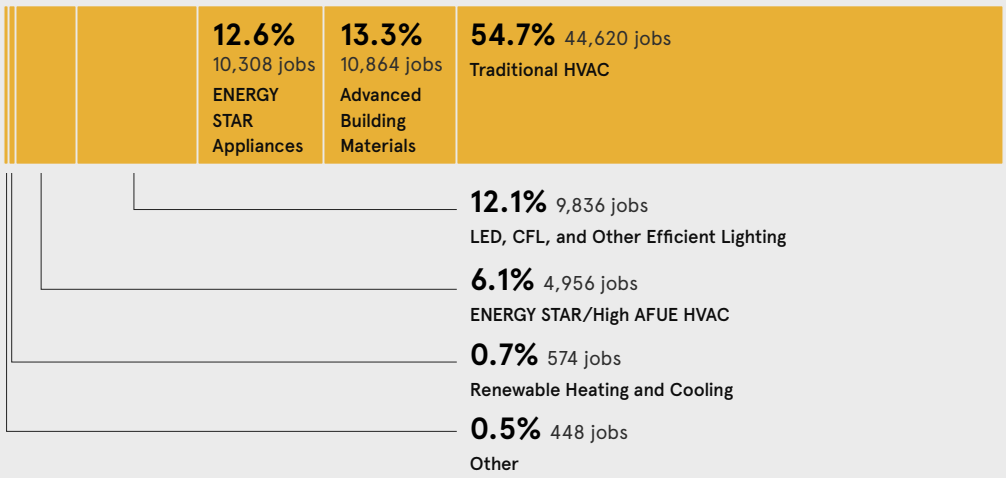
Fig. 1: Clean Energy Technology Sectors, 2016



Energy efficiency is the largest clean energy job sector in Ohio with 81,606 workers. The heating, ventilation, and air conditioning (HVAC) industry makes up the largest portion of energy efficiency jobs followed closely by advanced building materials and efficient lighting. These energy efficiency jobs include hardware and software implementers, contractors who can diagnose, adjust and verify the efficiency of HVAC systems, and system technicians. The growth in clean energy jobs in traditional sectors such as HVAC illustrates a transition to embrace the clean energy economy.

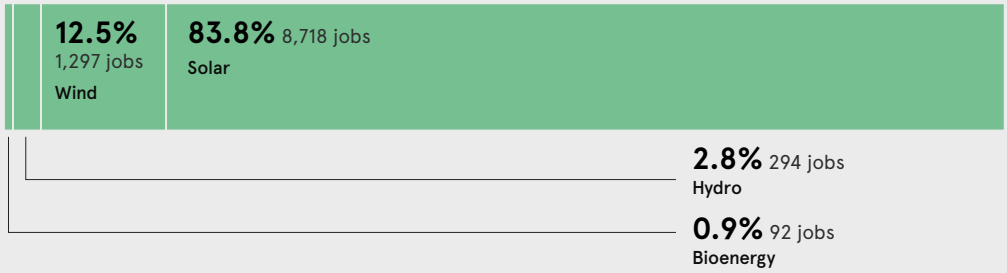
Renewable energy generation is the second largest clean energy jobs sector in Ohio, employing

Fig. 2:
Energy Efficiency
Subsectors, 2016



10,401 people. Ohio leads the Midwest in solar jobs with 8,718 jobs, primarily driven by manufacturing. However, Ohio ranked 8th in the 12 state region with 1,138 wind energy jobs. Renewable energy generation is the fastest growing clean energy sector in the Midwest and Ohio is no exception. Renewable energy generation jobs overall—including solar, wind, geothermal, bioenergy, and low-impact hydropower—grew by nearly 14% in Ohio.

Fig. 3:
Renewable Energy
Subsectors, 2016

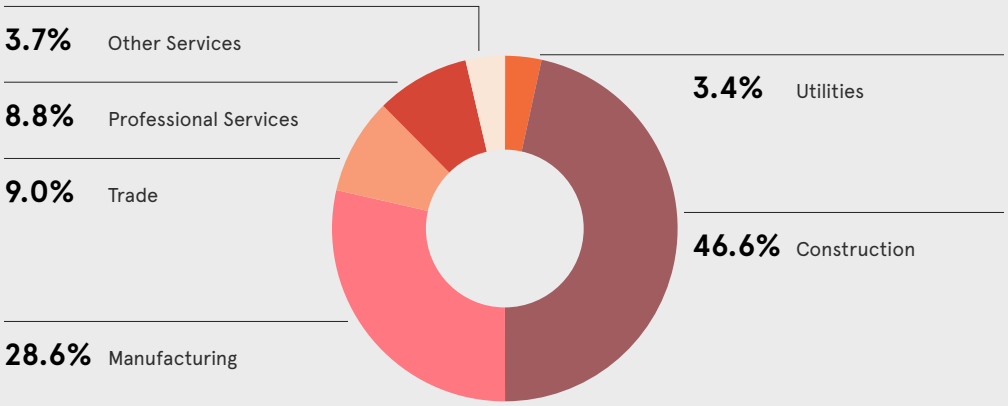


Beyond energy efficiency and renewable energy generation, 12,856 work in advanced transportation, 441 in the clean fuels space, and 139 people work in the advanced grid sector.

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, utility, construction, manufacturing, trade, professional service 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



Ohio manufacturers play an important role in the clean energy economy, employing local Ohioans and producing energy efficiency and other products for the entire country. Manufacturing jobs make up nearly 30% of the clean energy value chain in the state, employing 30,157 people—the second largest number of clean energy manufacturing jobs in the Midwest.

Previous surveys have shown that small businesses drive the clean energy sector with more than 75% of businesses employing fewer than 25 individuals.[2]

2 *2016 Clean Jobs Midwest*

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
Cleveland-Elyria-Mentor, OH MSA	18,600	1,500	16,900
Cincinnati-Middletown, OH-KY-IN MSA	17,700	2,200	13,400
Columbus, OH MSA	10,300	1,000	9,000

Recap

The clean energy sector employs 105,443 people in Ohio and these jobs grew six times faster than overall job growth in the state. However, there is still room for improvement in the Buckeye state. Ohio's clean energy job growth was the second slowest in the region and the American Council for an Energy-Efficient Economy energy efficiency scorecard ranks Ohio 29th out of 51—down 2 spots from 2015.[3] A rising tide of clean energy adoption is positively benefiting Ohio, but challenges remain.

3 *2017 ACEEE State Scorecard*

South Dakota

Executive Summary

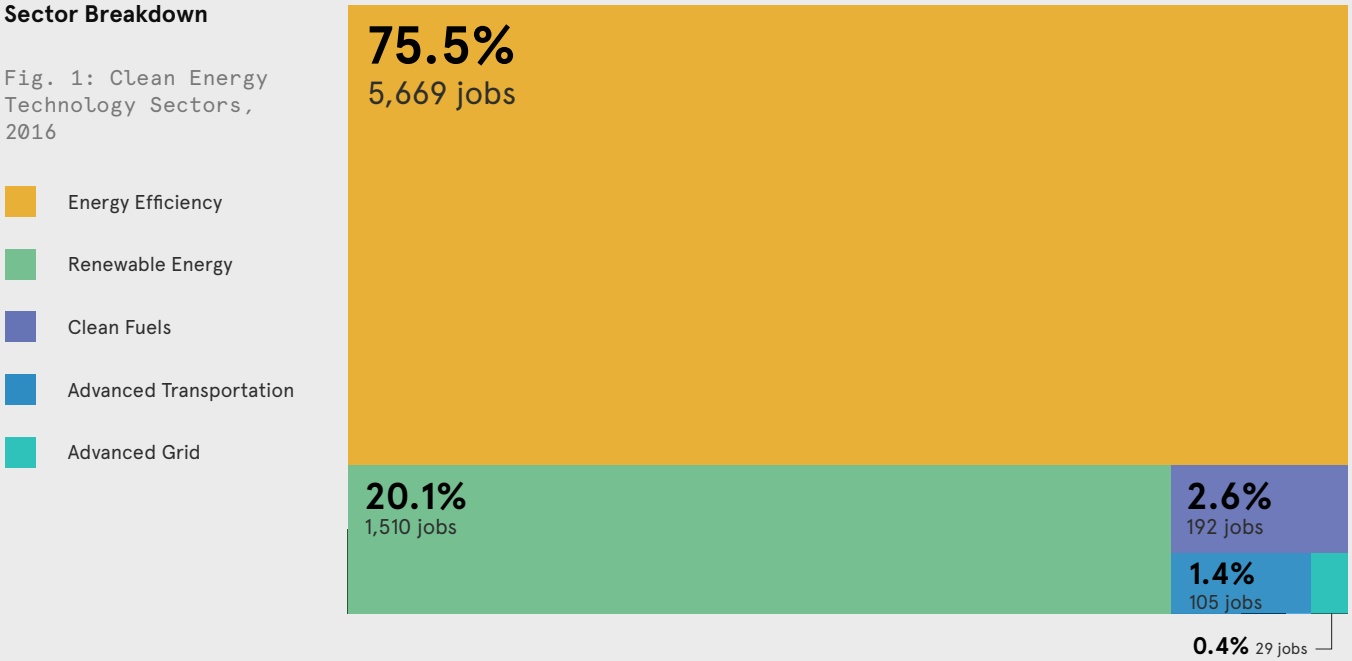
South Dakota is home to 7,505 clean energy jobs.

Between 2015 and 2016, South Dakota added 386 clean energy jobs, growing by over 5%—more than five times faster than the overall job growth in the state.[1]

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

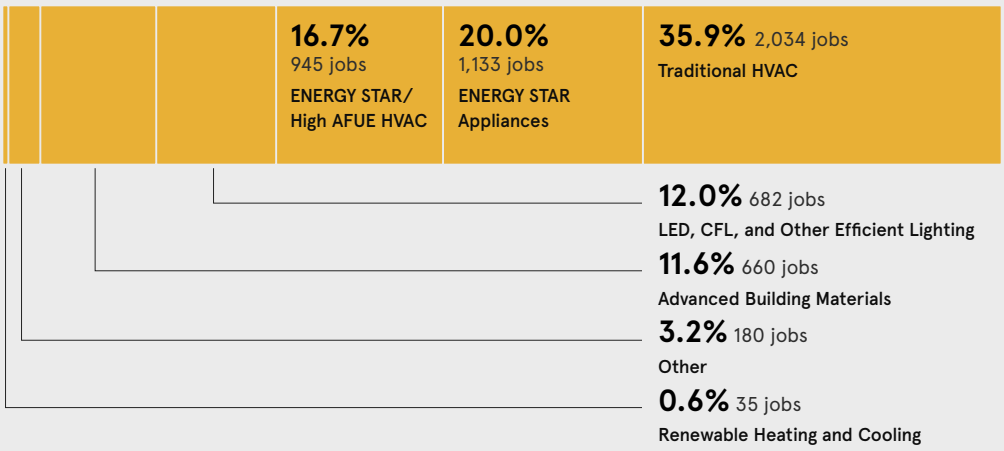
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



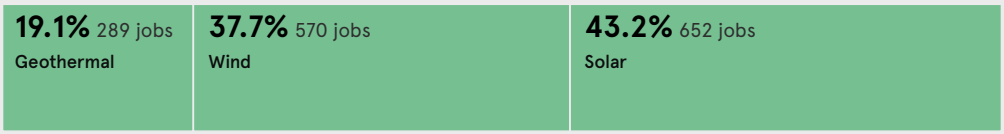
Three-quarters of all clean energy jobs in South Dakota are in energy-efficiency totalling 5,669 energy efficiency jobs. These jobs include hardware and software implementers, system technicians, and contractors who can diagnose, adjust, and verify the efficiency of heating, ventilation, and air conditioning (HVAC) systems.

Fig. 2:
Energy Efficiency
Subsectors, 2016



Renewable energy generation jobs represent 1,510 jobs—1 in 5 clean energy jobs in the state. Solar is the largest sub-sector with 652 jobs, followed by wind with 570 jobs and geothermal with 289 jobs.

Fig. 3:
Renewable Energy
Subsectors, 2016

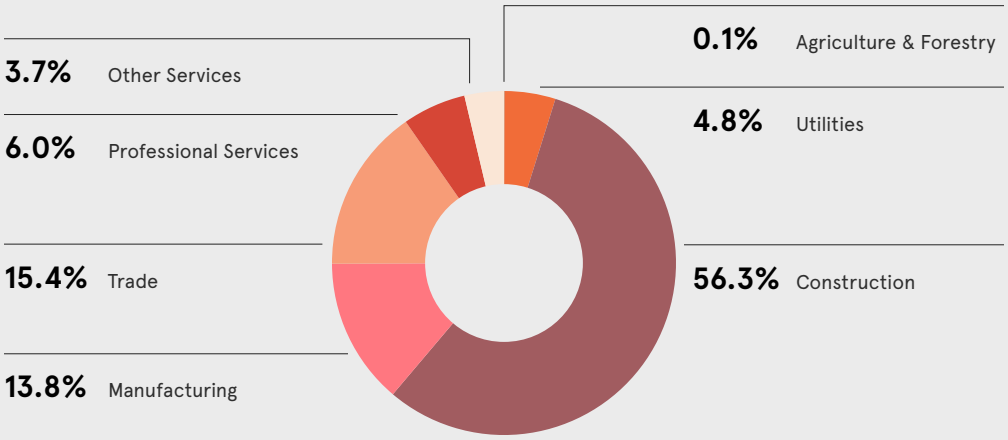


The rest of South Dakota's clean energy jobs are distributed between clean fuels, advanced transportation, and storage and smart grid sectors. These sectors are home to 192, 105, and 29 jobs respectively.

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, utility, construction, manufacturing, trade, professional service 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



Consistent with the rest of the region, more than half of all clean energy jobs in South Dakota are construction jobs. Trade and manufacturing jobs are the next largest parts of the clean energy value chain with 1,155 and 1,032 jobs respectively.

Prior surveys have shown that South Dakota has a strong small business base in clean energy, with 75% of businesses working in clean energy employing less than 25 workers.[2]

2 *Clean Jobs Midwest 2016*

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
Sioux Falls, SD MSA	2,400	400	1,400
Rapid City, SD MSA	1,300	<250	800
Sioux City, IA-NE-SD MSA	<250	<250	<250

Recap

The state is home to more than 7,500 clean energy jobs and is adding jobs to the clean energy sector at more than five times the growth rate of the overall economy.

South Dakota lags behind the region in clean energy policy. It lacks a renewable portfolio standard (RPS) or and energy efficiency resource standard (EERS), and the state ranks 48 out of 51 on ACEEE's Energy Efficiency Scorecard. South Dakota would benefit from these clean energy policies. Enacting and RPS or EERS would drive investment and job creation if it were enacted, providing a boost to the state.

3 *2017 ACEEE State Scorecard*

Wisconsin

Executive Summary

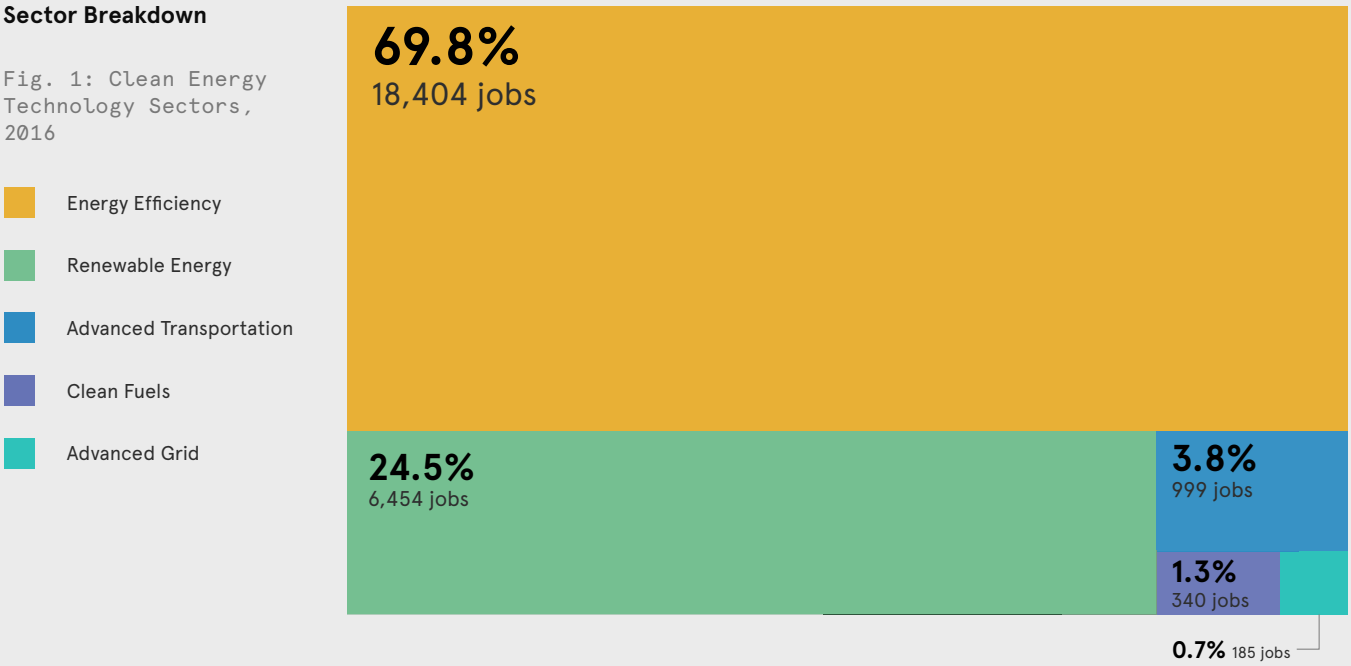
Wisconsin is home to 26,382 clean energy jobs.

While the size of the clean energy sector is significant, Wisconsin has a lot of room to grow—the state has the smallest clean energy workforce in the region as a percentage of the state's workforce. However, the clean energy sector grew by almost 7% between 2015 and 2016 — the third fastest in the region. Clean energy jobs also grew six times faster than overall job growth in the state.[1]

1 Overall employment data comes from the Bureau of Labor Statistics' annual average of employment by state.

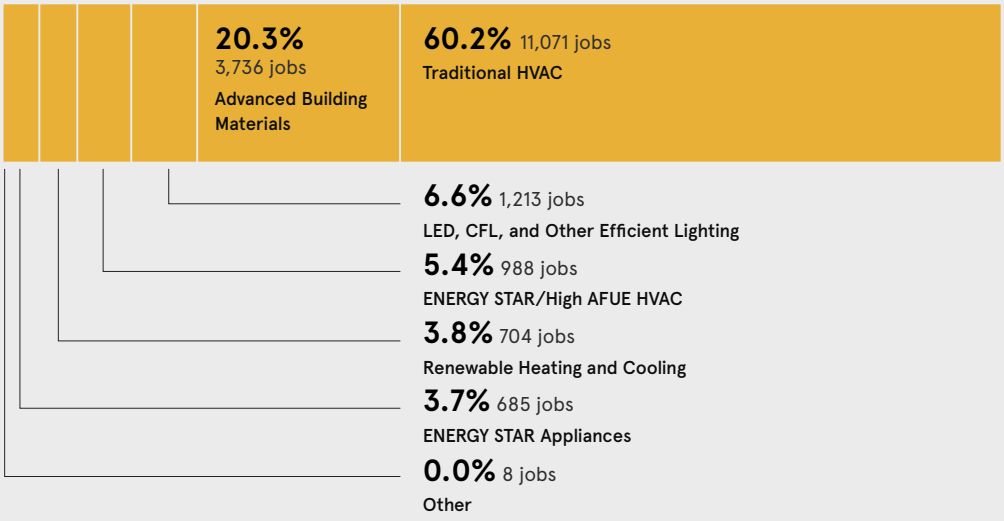
Sector Breakdown

Fig. 1: Clean Energy Technology Sectors, 2016



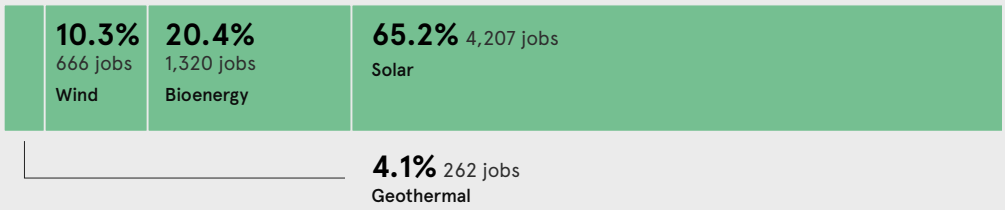
Energy efficiency makes up the largest share of the clean energy workforce in Wisconsin, employing nearly 7 in 10 clean energy workers. The energy efficiency sector expanded by 852 jobs in the state since last year; Wisconsin is now home to 18,404 energy efficiency jobs. These include hardware and software 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. The HVAC industry makes up the largest portion of energy efficiency jobs followed closely by advanced building materials and efficient lighting.

Fig. 2:
Energy Efficiency
Subsectors, 2016



Renewable energy jobs also play an important role in the state's clean energy economy and are the fastest growing clean energy jobs sector in Wisconsin. Between 2015 and 2016, Wisconsin added 788 renewable energy generation jobs—growing by nearly 14%. This includes adding 82 wind jobs and 512 solar jobs. Renewable energy generation jobs include solar, wind, geothermal, bioenergy, and low-impact hydropower.

Fig. 3:
Renewable Energy
Subsectors, 2016

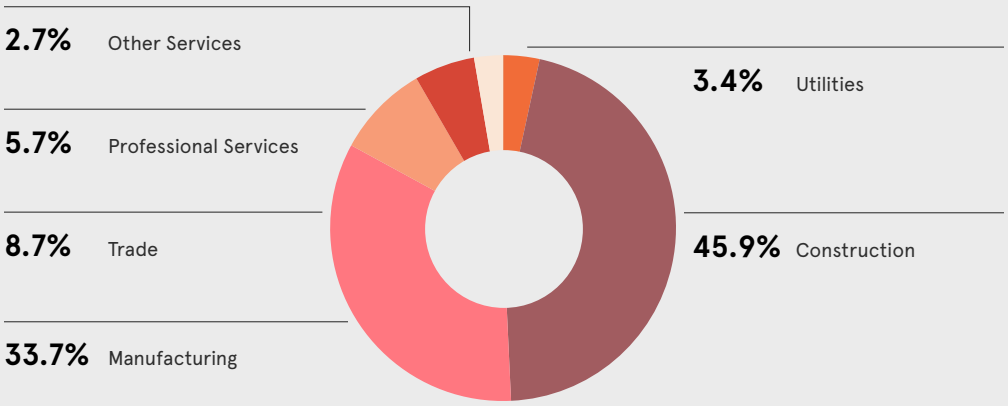


Wisconsin has one of the strongest bioenergy sectors in the region—this includes people who work with biodigesters processing agricultural waste. It is the largest relative to total clean energy workers, as 5% of all Wisconsin clean energy workers are employed in the bioenergy sector. Wisconsin is one of only two states in the region, along with Illinois, to have over 20% of its renewable energy generation jobs in the bioenergy 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, utility, construction, manufacturing, trade, professional service 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



Construction jobs are the largest portion of clean energy jobs in Wisconsin, with 12,098 jobs. Manufacturing jobs are second with 8,885 jobs.

Small businesses drive the clean energy sector in Wisconsin. Previous surveys have shown that more than 70% of businesses working in clean energy employ fewer than 25 individuals.

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
Milwaukee-Waukesha-West Allis, WI MSA	7,000	1,600	5,300
Madison, WI MSA	3,100	700	2,300
Appleton, WI MSA	1,300	300	700

Recap

There are 26,382 clean energy jobs in Wisconsin encompassing everything from biodigesters to construction using advanced building materials. Clean energy jobs in Wisconsin grew more than 6 times faster than all other jobs, with renewable energy generation jobs growing the fastest. Looking towards the future, Wisconsin's strong growth holds promise, but improving state policies can encourage further growth. The state recently ranked 22 by the American Council of an Energy-Efficient Economy on its State Energy Efficiency Scorecard.[2] Further, while the state has a renewable portfolio standard, the goals in that standard for renewable energy were met several years ago; so making the standard more robust would further encourage clean energy job creation in the state.

Clean energy jobs are a large and growing part of the economy impacting every part of the value chain from agriculture to construction and manufacturing to professional services.

2 *2017 ACEEE State Scorecard*