CLEAN JOBS AMERICA 2023

8TH ANNUAL ANALYSIS OF U.S. AND STATE CLEAN ENERGY SECTOR EMPLOYMENT

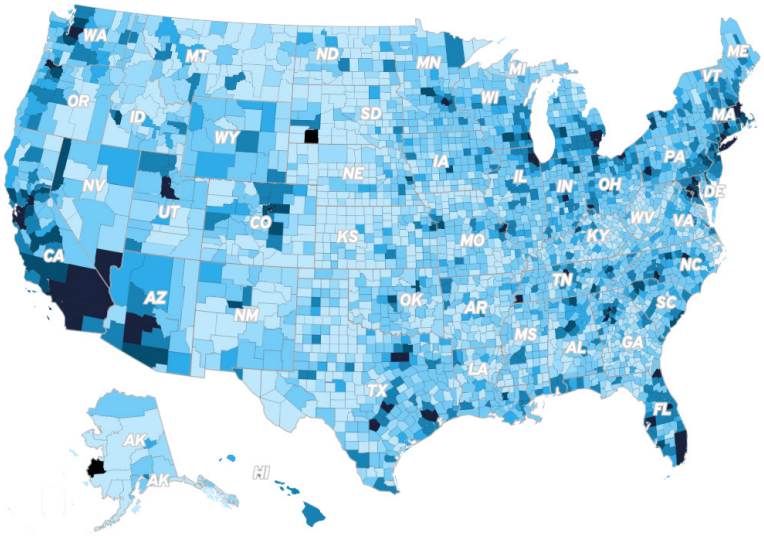
METHODOLOGY

This analysis of U.S. clean energy employment is based on employment data collected and analyzed by the BW Research Partnership for the 2023 U.S. Energy and Employment Report (USEER). The USEER analyzes data from the U.S. Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages (QCEW) to track employment across many energy production, transmission and distribution subsectors. In addition, the 2023 USEER relies on a unique supplemental survey of 33,000 business representatives across the United States. Created and conducted by BW Research, the methodology has been approved by the Office of Management and Budget (OMB) and U.S. Department of Energy (DOE). This survey is used to identify energy-related employment within key subsectors of the broader industries as classified by the BLS and to assign them into their component energy and energy efficiency sectors.

ABOUT THIS REPORT

This is the eighth annual Clean Jobs America report produced by E2 based on analysis of the USEER, which was first released by the DOE in 2016. E2 was an original proponent of the DOE producing the USEER, and was a partner on the reports produced by the Energy Futures Initiative (EFI) and National Association of State Energy Officials (NASEO) after the Trump administration chose not to produce a USEER.

For additional insight into E2's Clean Jobs America 2023 report and the chance to explore the data via an interactive map visit www.cleanjobsamerica.e2.org.



What we include are jobs in solar energy, wind energy, combined heat and power, bioenergy, non-woody biomass, low-impact hydro power, geothermal, electric vehicles, hybrid electric vehicles, plug-in hybrid vehicles, hydrogen and fuel-cell vehicles, clean energy storage, smart grid, micro grid, grid modernization, advanced biofuels, and energy efficiency including ENERGY STAR® and high efficiency appliances, efficient lighting, HVAC, renewable heating and cooling, and advanced building materials. The clean energy occupations covered in this report span economic sectors including agriculture, utilities, construction, manufacturing, wholesale trade,professional services, other services.

What we do not include are jobs of workers who may spend some of their time in clean energy but a plurality in another energy sector. For example, workers employed by an excavation business might spend the majority of their time grading and preparing drilling pads for oil or gas rigs, but they also might spend a portion of their time preparing sites for wind turbines or large solar installations. If clean energy does not account for a plurality of their work, those workers would not be counted as being employed in the clean energy economy but would instead be counted as part of another energy sector. We also do not include any jobs in traditional transmission and distribution due to an inability to accurately segment out workers by electricity source, despite many of those jobs being critical to the increased electricity from renewable energy used by the grid. Lastly, we do not include jobs in corn ethanol, woody biomass, large or traditional hydroelectric, and nuclear because of environmental issues associated with those industries. Jobs in retail trade, repair services, water or waste management, and indirect employment or induced employment are also not included.

ABOUT THE CLEAN ENERGY JOB SECTORS ANALYZED

// **Renewable Energy:** jobs in solar energy, wind energy, combined heat and power, bioenergy, low-impact hydroelectric and hydrokinetic energy, and geothermal energy.

// **Energy Efficiency:** jobs in ENERGY STAR® appliances; LED, CFL, and other efficient lighting; traditional heating, ventilation, and air-conditioning systems (HVAC); high-efficiency HVAC; renewable heating and cooling; advanced building materials/insulation; and other services not specific to a detailed technology.

// **Clean Vehicles:** jobs in plug-in hybrid vehicles, all-electric vehicles, hybrid electric vehicles, natural gas vehicles, and hydrogen and fuel-cell vehicles.

// **Storage & Grid:** jobs in clean energy and battery storage technologies as well as microgrids, smart grids, and overall modernization of the U.S. electricity transmission and distribution system.

// **Biofuels:** jobs in biofuels and biomass, but not including corn ethanol or woody biomass.

Other energy employment sectors analyzed in this report include:

// **Total Energy Economy:** all employment in the U.S. energy industry as defined by the USEER, including both clean and traditional energy jobs across fuels; electric power generation; motor vehicles; energy efficiency; and transmission, distribution, and storage (TDS).

// **Fossil Generation:** jobs in coal, natural gas, or petroleum electric power generation.

// **Fossil Fuels:** all jobs related to fuel extraction, mining, and processing, including petroleum refineries and firms that support coal mining, oil, and gas field machinery manufacturing.

// **Gas & Diesel Vehicles:** jobs in vehicles that run on gasoline and diesel internal combustion engines.

CLEAN ENERGY TECHNOLOGY DEFINITIONS

Solar: Generating electricity using solar radiation (PV generation), solar thermal energy, or concentrated sunlight.

Wind: Generating electricity from wind's kinetic energy.

Geothermal: Generating electricity from naturally occurring steam from below the Earth's surface.

Low-Impact Hydroelectric/Hydrokinetic and Wave Energy: Similar to traditional hydroelectric, but including criteria to ensure that the certified dam adequately protects or mitigates its impacts to river flows, water quality, fish passage and protection, watersheds, threatened and endangered species, cultural resources, and public access and recreation.

Biomass/Bioenergy: Generating electricity from materials derived from biological sources or any organic material.

Combined Heat and Power (CHP): Generating electricity and useful thermal energy in a single, integrated system. Heat that is normally wasted in conventional power generation is recovered as useful energy.

Storage: Includes pumped hydro storage, battery storage, thermal storage, and mechanical storage technologies.

Microgrid: Group of interconnected distributed energy resources that acts as a single controllable entity with respect to the grid.

Smart Grid: An electricity supply network that uses communications technology to detect and react to local changes in usage.

Grid Modernization: Other modernization of the U.S. electricity transmission and distribution system.

ENERGYSTAR Appliances: Energy efficient Appliances that meet the international Energy Star standard for energy efficient consumer products originated in the U.S.

Efficient Lighting: LED, CFL, and other energy efficient lighting sources

Traditional HVAC (Heating, Ventilation, and Cooling): Services related to heating, ventilation, and air conditioning systems (HVAC), including building retro-commissioning and retrofits connected to heating and cooling.

High Efficiency HVAC: HVAC that meets the international Energy Star standard for energy efficient consumer products originated in the U.S. or has high Average Fuel Utilization Efficiency (AFUE) rating of 90 or greater or 15 SEER or greater.

Renewable H&C: Heating, ventilation and air conditioning (HVAC) from renewable energy sources or work that increases the Energy Efficiency of HVAC systems.

Advanced Materials: All materials that represent advances in efficiency in buildings over the traditional materials, including insulation.

Other (EE): All other services related to improving energy efficiency, including reducing water consumption, energy audits, and maintenance.

Other Biofuels: Other fuel derived directly from biomatter.

Other Ethanol/Non-Woody Biomass: Fuel made from other materials such as straw, manure, vegetable oil, animal fats, etc.

Electric Vehicles: Type of vehicle that uses one or more electric motors for propulsion, that recharges with batteries and that has no onboard generator or non-electric motor.

Plug-In Hybrids: Type of vehicle that uses two or more distinct types of power, such as internal combustion engine and an electric motor that is powered by rechargeable batteries, or another energy storage device.

Hybrid Electric Vehicles: Type of vehicle that use two or more distinct types of power, such as internal combustion engine and electric motor.

Hydrogen Vehicles: Type of vehicle that uses hydrogen as its onboard fuel for motive power.

Fuel-Cell Vehicles: Type of hybrid vehicle that uses a fuel cell, instead of an engine, in combination with a storage device, such as a battery, to power its on-board electric motor.

ABOUT E2

E2 is a national, nonpartisan group of more than 11,000 business leaders, investors and others who advocate for smart policies that are good for the environment and good for the economy. E2 members have founded or funded more than 2,500 companies, created more than 600,000 jobs, and manage more than $100 billion in venture and private equity capital.

On Diversity & Equity

A good economy and good environment should be for all. For that reason, E2 supports policies that advance diversity and equity and ensure that the benefits of a clean economy—jobs, savings, opportunities, health—are extended to all communities. Environmental justice is considered in every policy on which we work, and diversity and inclusivity are tantamount in everything we do. Internally, we will prioritize making our membership more representative of America as a whole and addressing internal biases that can keep us from fulfilling our goals.

CLEAN JOBS AMERICA 2023[1]

CLEAN ENERGY JOBS SURPASS 3.3 MILLION; IMPACT OF NEW CLIMATE POLICIES JUST BEGINNING.

Clean energy and clean vehicle jobs in America grew 4 percent in 2022, bringing the total number of workers in renewable generation, energy efficiency, clean vehicles, battery and storage, grid modernization, and biofuels to more than 3.3 million. Clean energy now employs over 40 percent of all energy workers in America.

The increase in 2022 marked the full workforce recovery for multiple sectors following the earlier impacts of the COVID-19 pandemic. Renewable energy, biofuels, and storage and grid modernization sectors officially surpassed their sectors' pre-pandemic job numbers in 2022 while clean vehicles—which continued to add jobs during the pandemic—kept up its industry-leading growth pace.

Approximately 127,000 jobs were added across all sectors—accounting for more than 3 percent of all U.S. jobs added in 2022. Over the past two years clean energy jobs have grown by more than 10 percent, faster than the overall energy industry and overall U.S. employment.

It's a trend that's expected to continue as the clean energy sector begins to feel the full impact from historic investments passed in the Inflation Reduction Act (IRA). Clean energy and clean vehicle companies announced 210 major projects across 38 states in the year after the IRA was signed into law on August 16, 2022.[2] The numbers in this report do not reflect the estimated 74,000 jobs to be created by the projects announced.

California and Texas continue to lead the country in clean energy jobs, with more than 500,000 and 250,000 workers respectively. New York, Florida, Michigan, Illinois, Massachusetts, Ohio, and North Carolina follow, all with at least 100,000. Clean energy employment grew by more than 6 percent in five states (Tenn. Ky., Okla., N.J., N.M.), while the sector accounted for 5.2 percent of all jobs in Vermont and over 3 percent of all employment in four other states (Mass., Wyo., Md., R.I.).

Los Angeles County (Calif.), Harris County (Texas), Orange County (Calif.), Cook County (Ill.), and San Diego County (Calif.) led all counties for the most clean energy jobs with at least 50,000 jobs in each. Kenedy County (Texas), Pulaski County (Ill.), and Storey County (Nev.) had the highest density in clean energy employment while Dewey County (Okla.), Hoke County (N.C.), and Hopewell County (Va.) had the fastest growth rates.

The New York City, Los Angeles, and San Francisco-Oakland metropolitan areas led all metros for the most clean energy jobs, with more than 100,000 jobs in each.

KEY FINDINGS

3.3M
AMERICANS WORKED IN CLEAN ENERGY IN 2022

43%
OF NEW JOBS IN ENERGY SECTOR WERE IN CLEAN ENERGY

1 in 30
NET NEW JOBS NATIONWIDE WERE IN CLEAN ENERGY

1.6M
CONSTRUCTION JOBS SUPPORTED BY CLEAN ENERGY

53%
CLEAN ENERGY ADDED JOBS 53% FASTER THAN REST OF U.S. ECONOMY

SECTION SUMMARY HIGHLIGHTS

// RENEWABLE ENERGY

Jobs grew across all subsectors, led by wind energy (7.5%) and geothermal (5.0%). In all, nearly 20,000 jobs were added in 2022 and over 535,000 Americans now work in renewable energy sectors—an 8.5% increase since 2021.

// ENERGY EFFICIENCY

Energy efficiency remained the single-biggest employer across the entire energy sector, employing more than 2.2 million Americans. However, the sector still remains down from its pre-Covid-19 high of nearly 3.4 million workers. Still, more than 50,000 jobs were added in 2022 (up 2.3%) and since 2021 energy efficiency employment overall has grown 5.1 percent.

// STORAGE AND GRID MODERNIZATION

The storage and grid modernization sector added over 8,000 jobs in 2022, up 5.8%. Jobs making power grids more resilient and able to handle more renewable energy led the sector, growing 11.6% followed by battery and energy storage (6.2%). Since 2021, the sector increased employment by 9.8%.

// CLEAN VEHICLES

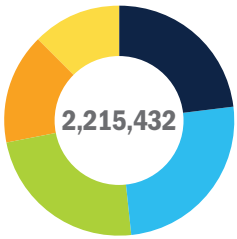
Clean vehicle makers continue to lead all sectors in growth, adding nearly 50,000 jobs. Electric vehicles (EVs) led the sector, adding nearly 30,000 jobs alone in 2022 (26.8%), followed closely by hydrogen and fuel cell vehicles (25.2%). Since 2021, every clean vehicle subsector has increased employment by over 27% with EVs and hydrogen and fuel-cell vehicles seeing job growth rates over 60%. The sector also continued to outgrow the gas and diesel-powered vehicle industry (1.6%).

// BIOFUELS

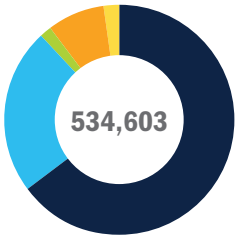
The smallest clean energy sector, biofuels, added over 1,000 jobs in 2022. Since 2021, the sector has increased employment by 8.4% and over 3,000 jobs.

U.S. CLEAN ENERGY ECONOMY—AT A GLANCE

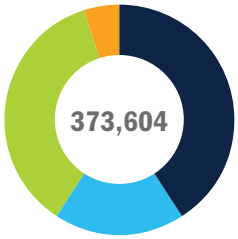
FIG 1 // U.S. CLEAN ENERGY EMPLOYMENT
by sectors 2022



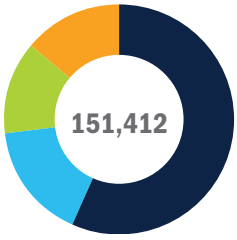
ENERGY EFFICIENCY:
- ENERGY STAR and Efficient Lighting: **511,561**
- Traditional HVAC: **564,498**
- High-Efficiency HVAC and Renewable Heating & Cooling: **523,908**
- Advanced Materials: **339,152**
- Other: **276,313**



RENEWABLE ENERGY:
- Solar: **346,143**
- Wind: **124,580**
- Geothermal: **8,635**
- Bioenergy/CHP: **42,568**
- Low-Impact Hydro: **11,677**

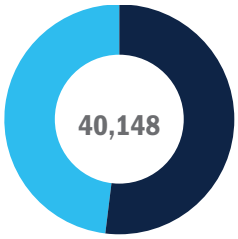


CLEAN VEHICLES:
- Hybrid Electric Vehicles: **152,846**
- Plug-In Hybrid Vehicles: **68,925**
- Electric Vehicles: **77,667**
- Hydrogen & Fuel Cell: **17,774**



GRID & STORAGE:
- Clean Storage:* **85,858**
- Smart Grid: **24,916**
- Micro-Grid: **19,845**
- Other Grid Modernization: **20,794**

* includes pumped hydro storage, battery storage, thermal storage, and mechanical storage detailed technologies



FUELS:
- Other Ethanol/Non-Woody Biomass: **20,939**
- Other Biofuels: **19,209**

FIG 2 // U.S. CLEAN ENERGY EMPLOYMENT
by value chain 2022

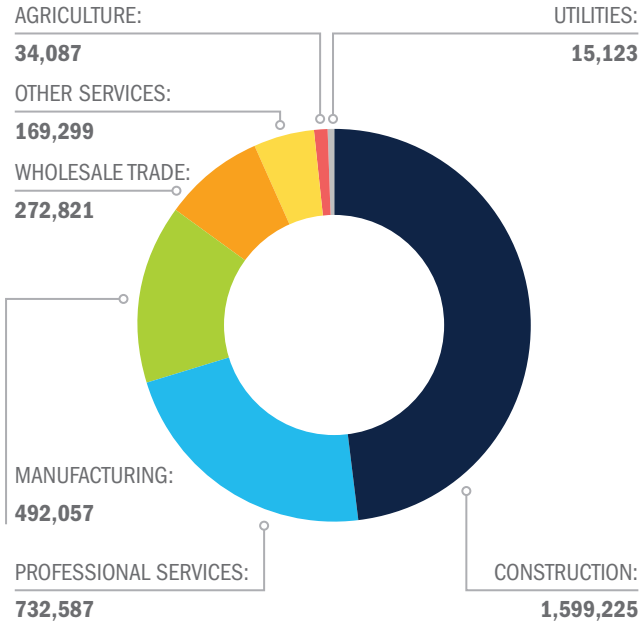
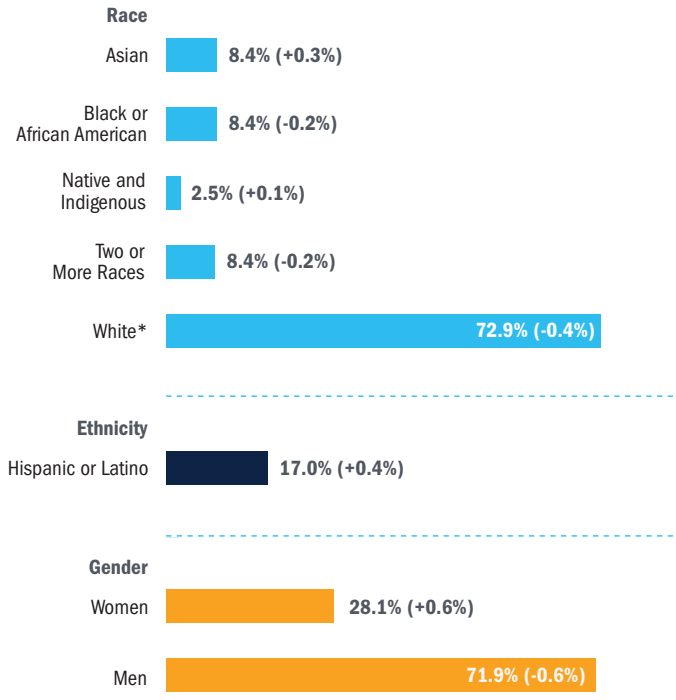
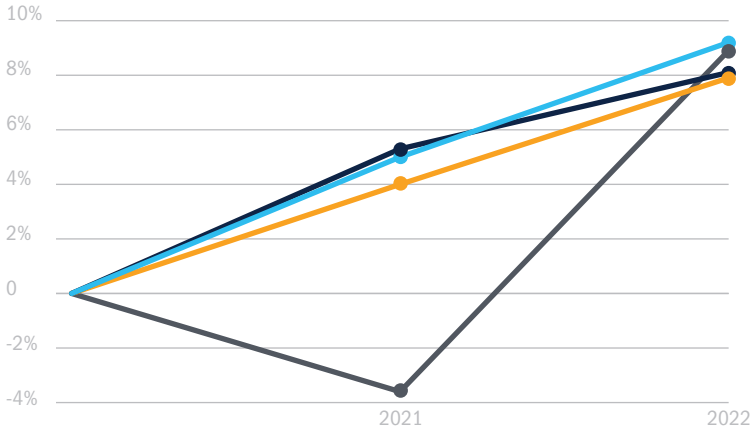


FIG 3 // U.S. CLEAN ENERGY EMPLOYMENT
by demographics 2022[3]



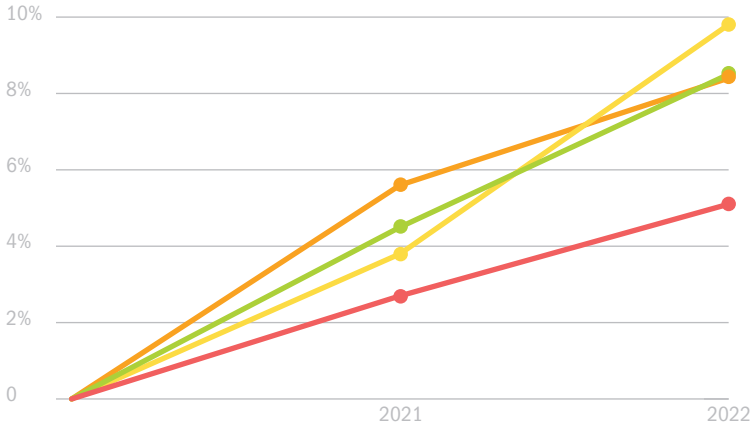
U.S. CLEAN ENERGY ECONOMY—BY TRENDS

FIG 4 // U.S. ENERGY EMPLOYMENT by industry growth 2020–2022



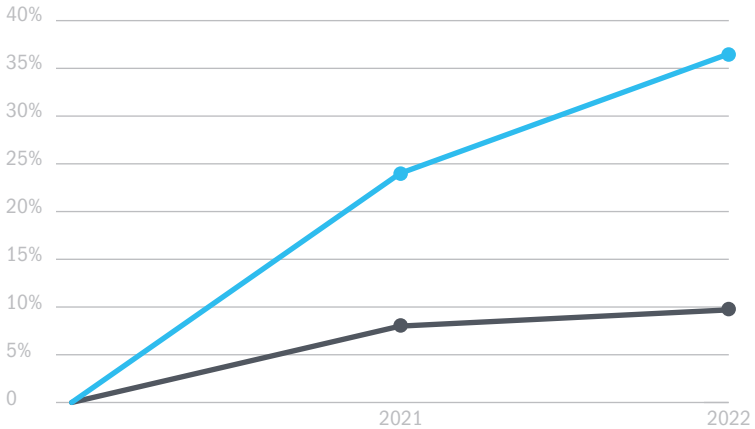
2020	2021	2022
Clean Energy		
3,036,226	3,188,155 **(+5%)**	3,315,199 **(+9.2%)**
Overall U.S. Employment		
140,881,253	148,293,597 **(+5.3%)**	152,317,914 **(+8.1%)**
Overall Energy Industry		
7,525,914	7,827,932 **(+4.0%)**	8,122,319 **(+7.9%)**
Fossil Fuel		
972,712	937,640 **(-3.6%)**	1,059,752 **(+8.9%)**

FIG 5 // U.S. ENERGY EMPLOYMENT by clean energy sector growth 2020–2022



2020	2021	2022
Energy Efficiency		
2,107,174	2,164,914 **(+2.7%)**	2,215,432 **(+5.1%)**
Renewable Energy		
492,891	515,248 **(+4.5%)**	534,603 **(+8.5%)**
Storage/Grid		
137,872	143,052 **(+3.8%)**	**151,412 (+9.8%)**
Biofuels		
37,036	39,096 **(+5.6%)**	**40,148 (+8.4%)**

FIG 6 // U.S. ENERGY EMPLOYMENT by vehicle sector growth 2020–2022



2020	2021	2022
Clean Vehicles		
273,630	339,291 **(+24.0%)**	373,604 **(+36.5%)**
Gas & Diesel Vehicles		
1,836,018	1,983,055 **(+8.0%)**	2,014,071 **(+9.7%)**

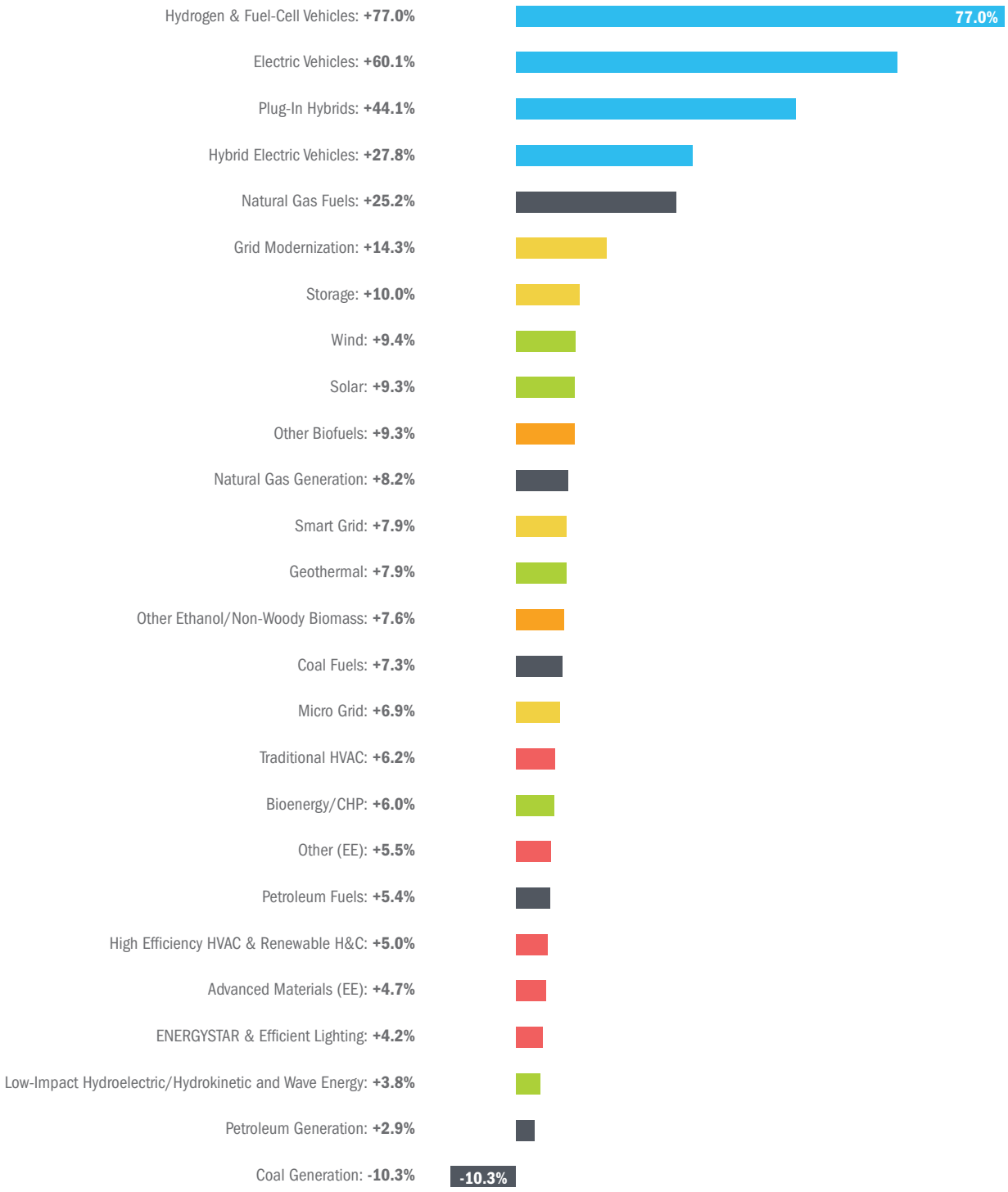
U.S. CLEAN ENERGY ECONOMY—BY TECHNOLOGY

TABLE 1 // U.S. CLEAN ENERGY EMPLOYMENT by subsector 2020–2022

	Year		
Subsector	**2020**	**2021**	**2022**
Solar	316,675	333,887	346,143
Wind	116,817	120,164	125,580
Geothermal	8,002	8,222	8,635
Bioenergy/CHP	40,146	41,491	42,568
Low-impact hydroelectric/hydrokinetic and wave energy	11,251	11,485	11,677
Storage	78,040	80,813	85,858
Smart Grid	23,089	24,225	24,916
Micro grid	18,556	19,377	19,845
Other grid modernization	18,187	18,637	20,794
Energy STAR/Efficient Lighting	490,717	500,026	511,561
Trad. HVAC	531,640	549,380	564,498
High Efficiency HVAC & Renewable H&C	498,863	512,223	523,908
Advance Materials	324,060	331,169	339,152
Other	261,894	272,116	276,313
Other E/Non-woody Biomass	19,455	20,335	20,939
Other Biofuels	17,581	18,761	19,209
Hybrid electric vehicles	119,638	143,318	152,846
Plug-in hybrid vehicles	47,842	62,632	68,925
Electric vehicles	83,733	105,694	134,060
Hydrogen/fuel-cell vehicles	10,040	14,200	17,774

FIG 7 // U.S. ENERGY EMPLOYMENT GROWTH

by fastest-growing clean energy subsector with fossil fuel comparisons 2020–2022



U.S. CLEAN ENERGY ECONOMY—APPENDIX

Quick Reference Guide: Per Capita (per 1,000 Jobs); CE (Clean Energy); EE (Energy Efficiency); RE (Renewable Energy); CV (Clean Vehicles); EV (Electric Vehicles); LI (Low-Impact); CHP (Combined Heat and Power); HVAC (Heating, Ventilation, and Cooling); HE (High Efficiency);

FIG 8 // U.S. CLEAN ENERGY EMPLOYMENT by total clean energy workforce 2022

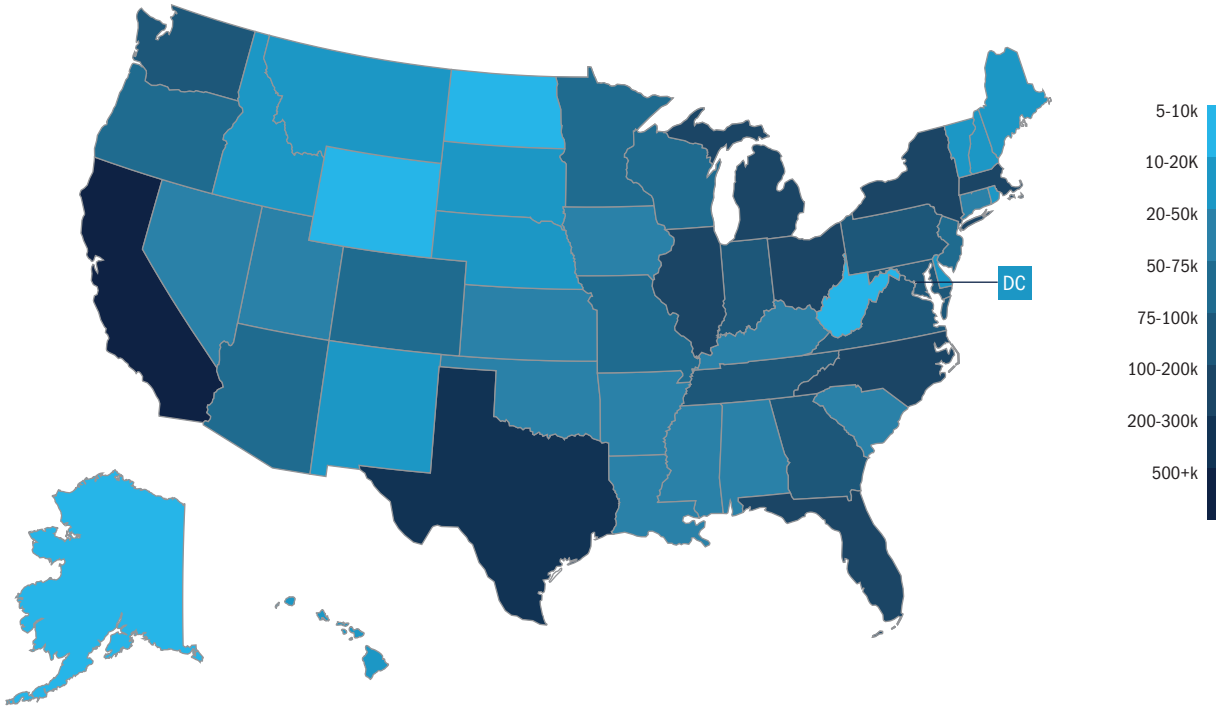


TABLE 2 // U.S. CLEAN ENERGY EMPLOYMENT by state, total jobs and density 2022

Total CE Job Rank	State	Clean Energy Jobs	CE Jobs per Capita	CE Share of all U.S. Energy Jobs	Renewable Energy Jobs	Storage & Grid Jobs	Energy Efficiency Jobs	Biofuels Jobs	Clean Vehicle Jobs
26	Alabama	43,848	21.3	29.6%	4,140	1,940	29,200	245	8,323
51	Alaska	5,130	16.8	19.5%	384	327	4,127	39	252
19	Arizona	61,583	19.5	48.1%	11,945	2,431	42,638	369	4,199
35	Arkansas	20,697	16.2	32.6%	1,940	885	15,006	579	2,288
1	California	523,480	28.8	57.4%	133,188	23,954	294,396	5,877	66,065
18	Colorado	63,780	22.4	41.6%	18,022	3,240	35,847	1,978	4,693
27	Connecticut	42,543	25.5	58.3%	3,926	886	34,477	365	2,889
45	Delaware	12,440	26.7	61.5%	861	236	10,782	79	482
39	District of Col.	14,996	19.7	79.9%	2,333	337	11,827	42	458
4	Florida	165,857	17.3	48.4%	25,913	5,851	118,904	2,815	12,374
16	Georgia	78,400	16.3	38.6%	10,500	4,369	55,605	476	7,452

TABLE 2 // U.S. CLEAN ENERGY EMPLOYMENT by state, total jobs and density 2022

Total CE Job Rank	State	Clean Energy Jobs	CE Jobs per Capita	CE Share of all U.S. Energy Jobs	Renewable Energy Jobs	Storage & Grid Jobs	Energy Efficiency Jobs	Biofuels Jobs	Clean Vehicle Jobs
42	Hawaii	13,100	20.7	51.7%	4,725	548	5,517	1,837	473
41	Idaho	13,983	16.8	42.2%	2,179	1,164	9,112	269	1,259
6	Illinois	123,799	20.6	41.8%	18,728	5,167	84,351	1,586	13,968
12	Indiana	88,412	28.0	30.8%	11,720	3,123	50,721	789	22,058
30	Iowa	31,288	20.2	36.9%	5,770	1,477	19,343	870	3,828
32	Kansas	24,823	17.5	31.4%	3,832	1,134	16,984	303	2,569
28	Kentucky	37,250	18.9	24.8%	2,662	1,412	23,435	301	9,440
31	Louisiana	29,527	15.7	18.8%	4,748	1,629	20,896	286	1,967
43	Maine	12,960	20.6	50.5%	2,654	516	8,684	216	889
14	Maryland	80,967	30.3	64.8%	9,002	2,173	66,570	256	2,967
7	Massachusetts	118,165	32.4	70.2%	21,611	6,841	81,244	736	7,734
5	Michigan	123,983	28.4	31.1%	12,002	3,944	75,085	682	32,271
20	Minnesota	59,708	20.7	47.7%	8,713	2,923	43,133	712	4,226
34	Mississippi	20,987	18.1	30.3%	1,763	843	14,560	530	3,292
21	Missouri	56,503	19.7	35.9%	5,862	2,045	39,554	915	8,128
47	Montana	10,165	20.4	31.6%	623	451	8,285	75	731
36	Nebraska	19,483	19.5	34.6%	3,189	560	13,345	211	2,178
29	Nevada	33,304	22.1	56.3%	9,988	9,319	12,173	136	1,689
37	New Hampshire	16,245	24.0	53.9%	3,345	348	11,299	139	1,113
22	New Jersey	56,277	13.3	40.0%	11,884	1,886	36,332	445	5,730
44	New Mexico	12,686	15.0	19.2%	4,723	773	6,059	147	983
3	New York	166,014	17.5	52.1%	20,628	4,628	126,008	1,780	12,970
9	North Carolina	105,370	22.1	50.4%	12,606	3,857	78,338	1,520	9,049
49	North Dakota	8,867	21.1	15.1%	2,203	538	5,110	167	851
8	Ohio	114,395	20.9	34.5%	10,978	3,181	76,475	1,329	22,431
33	Oklahoma	22,805	13.7	16.8%	3,698	1,621	14,142	824	2,521
23	Oregon	55,246	28.2	59.7%	7,884	3,646	39,437	753	3,524
10	Pennsylvania	96,317	16.2	35.2%	11,370	4,000	69,990	1,376	9,582
40	Rhode Island	14,553	29.8	64.0%	2,225	593	10,990	276	467
24	South Carolina	45,204	20.4	32.5%	6,760	1,979	29,133	608	6,724
46	South Dakota	12,003	26.9	42.9%	2,756	482	7,448	197	1,120
13	Tennessee	82,146	25.5	39.1%	6,558	7,993	50,017	1,210	16,367
2	Texas	251,774	18.5	26.9%	44,355	13,963	164,470	2,350	26,636
25	Utah	44,674	26.6	52.5%	8,476	1,201	31,731	139	3,126
38	Vermont	15,748	51.8	73.1%	2,253	939	10,184	653	1,718
11	Virginia	95,643	23.8	51.2%	10,203	2,740	74,516	401	7,782
15	Washington	78,570	22.1	54.3%	10,330	3,653	58,703	1,733	4,150
48	West Virginia	9,778	14.3	11.5%	1,154	863	6,668	45	1,049
17	Wisconsin	71,489	24.5	50.2%	6,866	2,335	55,736	395	6,158
50	Wyoming	8,236	30.4	17.9%	425	466	6,844	88	413
	United States	**3,315,199**	**21.8**	**40.8%**	**534,603**	**151,412**	**2,215,432**	**40,148**	**373,604**

TABLE 3 // U.S. CLEAN ENERGY EMPLOYMENT by state, total and sector job growth 2022

CE Job Growth Rank	State	CE Job Growth	Net New CE Jobs	Total Energy Sector Job Growth	CE Share of Net New Energy Jobs	Total State Job Growth	CE Share Total State Net New Jobs	RE Job Growth	Storage/ Grid Job Growth	EE Job Growth	Biofuels Job Growth	CV Job Growth
10	Alabama	5.3%	2,202	3.6%	42.3%	2.3%	4.6%	8.3%	8.1%	2.9%	10.6%	11.9%
40	Alaska	2.7%	135	6.2%	8.8%	2.0%	2.3%	9.6%	6.4%	1.8%	9.7%	2.7%
24	Arizona	4.0%	2,373	3.7%	52.0%	3.3%	2.3%	3.9%	6.7%	3.3%	4.5%	10.3%
21	Arkansas	4.2%	836	2.8%	47.5%	3.1%	2.1%	8.5%	9.5%	4.1%	1.8%	0.5%
26	California	3.9%	19,599	2.9%	75.9%	2.9%	3.7%	0.3%	4.1%	1.6%	0.8%	25.9%
16	Colorado	4.6%	2,789	4.8%	39.9%	2.4%	4.1%	2.3%	6.4%	4.8%	-0.5%	13.7%
38	Connecticut	2.9%	1,180	1.9%	86.3%	1.8%	3.8%	7.9%	10.9%	1.1%	4.0%	17.0%
47	Delaware	1.6%	193	3.1%	31.4%	2.9%	1.4%	11.6%	8.2%	0.5%	3.7%	7.5%
9	District of Col.	5.4%	766	4.8%	90.0%	1.4%	7.2%	11.3%	11.5%	2.8%	43.4%	51.6%
11	Florida	5.0%	7,890	4.8%	50.6%	3.6%	2.3%	4.5%	9.9%	4.2%	0.7%	12.8%
13	Georgia	4.7%	3,517	4.3%	41.8%	3.5%	2.1%	7.1%	8.0%	4.3%	8.8%	2.0%
43	Hawaii	1.9%	246	3.5%	28.7%	3.1%	1.2%	0.2%	4.2%	3.6%	-2.0%	14.5%
12	Idaho	4.7%	632	2.5%	78.4%	3.5%	2.2%	9.0%	4.9%	4.9%	1.1%	-2.5%
37	Illinois	3.0%	3,621	2.6%	48.2%	2.4%	2.5%	3.5%	5.4%	2.1%	4.6%	6.9%
27	Indiana	3.7%	3,114	0.4%	255.2%	2.3%	4.3%	2.5%	5.1%	1.5%	2.4%	9.4%
29	Iowa	3.5%	1,051	1.4%	92.3%	1.6%	4.3%	1.6%	6.7%	2.5%	0.0%	11.3%
14	Kansas	4.7%	1,106	2.3%	61.4%	2.7%	2.9%	4.2%	7.9%	3.6%	3.1%	11.8%
2	Kentucky	6.2%	2,190	4.2%	35.8%	2.4%	4.7%	11.3%	7.9%	3.2%	6.7%	12.8%
8	Louisiana	5.4%	1,512	6.4%	16.1%	1.6%	4.9%	6.9%	8.3%	4.2%	13.4%	11.2%
22	Maine	4.1%	506	2.9%	69.4%	2.4%	3.4%	3.7%	7.9%	4.3%	2.2%	1.6%
48	Maryland	1.4%	1,083	1.5%	56.8%	1.0%	4.1%	7.8%	7.7%	0.6%	19.6%	-5.3%
19	Massachusetts	4.3%	4,926	2.9%	102.9%	2.3%	5.8%	3.3%	3.8%	2.6%	12.3%	31.0%
17	Michigan	4.6%	5,410	1.4%	100.6%	2.5%	4.9%	5.4%	6.3%	0.6%	4.6%	14.4%
31	Minnesota	3.4%	1,950	3.1%	51.4%	2.2%	3.1%	5.4%	5.8%	2.2%	4.2%	10.6%
7	Mississippi	5.5%	1,103	3.2%	51.8%	1.2%	8.0%	10.0%	8.5%	3.8%	3.7%	11.1%
18	Missouri	4.5%	2,430	3.6%	44.0%	2.3%	3.7%	6.6%	8.8%	2.2%	1.6%	14.4%
35	Montana	3.0%	300	4.3%	22.8%	2.0%	2.9%	15.6%	8.8%	1.8%	45.6%	1.0%
23	Nebraska	4.0%	753	1.8%	74.8%	1.8%	4.1%	2.2%	9.4%	3.7%	1.3%	7.7%
34	Nevada	3.1%	999	2.4%	72.7%	5.0%	1.3%	-0.4%	1.8%	6.7%	5.9%	6.2%
42	New Hampshire	2.4%	377	2.2%	58.3%	2.1%	2.7%	2.1%	12.5%	1.8%	3.8%	6.0%
4	New Jersey	6.0%	3,169	4.0%	57.9%	2.4%	3.2%	4.2%	8.5%	5.1%	10.2%	15.1%
5	New Mexico	6.0%	713	14.1%	8.8%	3.1%	2.7%	4.8%	8.2%	6.1%	18.1%	7.5%
28	New York	3.6%	5,830	2.0%	95.5%	3.0%	2.1%	6.2%	8.3%	1.7%	3.2%	19.7%
44	North Carolina	1.8%	1,898	2.1%	44.0%	2.7%	1.5%	4.8%	9.2%	0.4%	2.1%	7.7%
32	North Dakota	3.4%	289	15.9%	3.6%	2.9%	2.4%	1.2%	5.3%	3.4%	5.7%	7.9%
15	Ohio	4.6%	5,027	1.5%	105.7%	2.1%	4.4%	6.7%	7.7%	2.0%	2.0%	13.0%
3	Oklahoma	6.1%	1,308	9.1%	11.5%	3.4%	2.3%	7.7%	7.7%	5.4%	0.5%	8.4%
39	Oregon	2.8%	1,518	2.3%	73.5%	2.3%	3.3%	4.5%	5.0%	1.5%	0.9%	13.1%
20	Pennsylvania	4.3%	3,978	5.9%	26.2%	2.4%	2.8%	8.6%	7.3%	3.3%	3.7%	6.0%
45	Rhode Island	1.8%	261	3.3%	36.5%	2.6%	2.1%	3.2%	2.5%	1.2%	-0.8%	12.4%

TABLE 3 // U.S. CLEAN ENERGY EMPLOYMENT by state, total and sector job growth 2022

CE Job Growth Rank	State	CE Job Growth	Net New CE Jobs	Total Energy Sector Job Growth	CE Share of Net New Energy Jobs	Total State Job Growth	CE Share Total State Net New Jobs	RE Job Growth	Storage/ Grid Job Growth	EE Job Growth	Biofuels Job Growth	CV Job Growth
30	South Carolina	3.4%	1,503	1.9%	58.9%	3.2%	2.1%	2.5%	6.5%	4.7%	1.2%	-1.4%
46	South Dakota	1.7%	196	2.9%	24.8%	2.5%	1.7%	0.5%	6.7%	2.5%	-0.2%	-2.5%
1	Tennessee	6.5%	5,046	3.6%	69.0%	3.2%	4.9%	8.5%	0.1%	1.9%	0.9%	27.9%
6	Texas	5.8%	13,904	6.3%	24.9%	4.2%	2.4%	6.7%	7.3%	3.5%	7.2%	19.9%
33	Utah	3.1%	1,355	3.6%	46.3%	3.2%	2.5%	2.9%	8.9%	2.5%	12.4%	7.4%
49	Vermont	0.6%	99	0.8%	59.4%	1.7%	2.0%	2.0%	1.1%	0.4%	-1.7%	0.6%
25	Virginia	3.9%	3,625	3.7%	54.2%	2.5%	3.7%	7.1%	10.0%	1.9%	16.0%	19.1%
41	Washington	2.4%	1,835	2.8%	46.1%	3.7%	1.4%	3.6%	5.0%	1.6%	-0.6%	10.6%
36	West Virginia	3.0%	287	17.4%	2.3%	1.3%	3.2%	7.8%	6.5%	2.4%	25.9%	-1.6%
50	Wisconsin	0.5%	382	0.6%	42.7%	2.7%	0.5%	5.2%	6.8%	-0.9%	4.7%	6.7%
51	Wyoming	0.3%	28	10.5%	0.6%	1.2%	0.8%	12.6%	5.6%	-1.2%	6.6%	9.0%
	United States	**4.0%**	**127,044**	**3.8%**	**43.2%**	**2.7%**	**3.2%**	**3.8%**	**5.8%**	**2.3%**	**2.7%**	**14.7%**

TABLE 4 // U.S. CLEAN ENERGY EMPLOYMENT by industry 2022

State	Agriculture & Forestry	Utilities	Construction	Manufacturing	Trade	Prof. Services	Other Services
Alabama	897	127	20,352	10,716	2,597	7,783	1,377
Alaska	37	39	3,200	88	432	1,152	183
Arizona	173	180	35,923	3,817	2,551	16,394	2,544
Arkansas	793	6	11,286	3,279	1,790	2,558	986
California	1,166	3,024	227,547	71,184	52,326	132,584	35,648
Colorado	714	326	20,784	1,449	2,319	35,717	2,471
Connecticut	138	74	19,853	3,081	4,527	12,198	2,671
Delaware	35	8	9,030	464	701	1,769	433
District of Col.	-	15	5,384	12	623	7,910	1,052
Florida	518	714	115,792	8,572	12,757	19,894	7,610
Georgia	1,091	105	44,231	10,967	7,453	10,982	3,570
Hawaii	620	164	7,866	164	689	3,145	452
Idaho	640	63	7,229	647	571	3,749	1,083
Illinois	2,589	513	51,089	23,546	7,884	31,643	6,536
Indiana	1,869	230	40,023	27,649	5,707	9,980	2,952
Iowa	2,013	159	17,688	5,191	2,794	2,259	1,185
Kansas	532	229	7,489	1,512	749	13,580	732
Kentucky	574	45	14,336	13,961	2,432	4,776	1,126
Louisiana	615	16	20,066	1,979	1,917	3,794	1,139
Maine	427	143	7,281	702	570	2,607	1,229

TABLE 4 // U.S. CLEAN ENERGY EMPLOYMENT by industry 2022

State	Agriculture & Forestry	Utilities	Construction	Manufacturing	Trade	Prof. Services	Other Services
Maryland	148	194	55,971	3,454	3,492	13,482	4,225
Massachusetts	25	218	42,223	11,479	17,438	40,014	6,767
Michigan	447	227	33,396	61,531	5,497	19,009	3,877
Minnesota	1,373	368	35,270	6,090	4,497	10,136	1,973
Mississippi	1,010	3	10,974	4,503	1,309	2,476	712
Missouri	616	82	31,011	11,131	3,748	7,663	2,252
Montana	229	37	6,143	138	831	2,338	450
Nebraska	1,154	37	11,133	1,984	1,911	2,549	714
Nevada	-	358	22,324	1,977	2,210	5,341	1,093
New Hampshire	17	81	7,772	2,720	1,218	3,752	683
New Jersey	39	227	25,680	8,435	8,126	8,952	4,818
New Mexico	256	91	6,203	1,411	537	3,752	436
New York	428	390	57,742	12,435	11,328	70,767	12,923
North Carolina	1,149	580	41,423	17,265	6,058	34,196	4,698
North Dakota	1,790	78	4,724	294	1,166	593	222
Ohio	628	190	55,500	27,123	9,014	17,149	4,789
Oklahoma	93	232	13,301	2,788	1,341	4,046	1,005
Oregon	2,301	402	27,398	10,719	2,639	9,089	2,697
Pennsylvania	771	360	46,284	19,714	10,738	12,295	6,154
Rhode Island	-	48	7,634	876	2,217	3,257	520
South Carolina	725	183	17,561	10,043	11,115	3,588	1,989
South Dakota	551	64	6,950	1,522	1,404	911	600
Tennessee	399	91	38,533	20,646	7,809	11,558	3,110
Texas	2,142	3,324	130,579	26,851	22,145	52,364	14,369
Utah	3	290	29,098	1,372	3,999	8,199	1,713
Vermont	18	171	5,741	1,448	2,485	4,775	1,110
Virginia	578	295	51,515	6,111	4,686	27,686	4,772
Washington	408	167	45,240	5,452	4,740	19,811	2,753
West Virginia	476	20	7,001	687	961	397	236
Wisconsin	821	86	32,321	22,813	5,903	7,112	2,432
Wyoming	50	46	6,129	64	866	856	227
United States	**34,087**	**15,123**	**1,599,225**	**492,057**	**272,821**	**732,587**	**169,299**

TABLE 5A // U.S. CLEAN ENERGY EMPLOYMENT by subsector, renewable generation 2022

State	Solar	Wind	Geothermal	Bioenergy/CHP	Low-impact hydroelectric/ hydrokinetic and wave energy
Alabama	1,377	1,423	115	1,052	174
Alaska	137	80	11	137	19
Arizona	9,627	1,273	154	652	239
Arkansas	622	930	70	247	70
California	115,251	7,516	1,667	7,345	1,410
Colorado	8,473	7,741	184	1,331	292
Connecticut	3,031	304	89	364	138
Delaware	675	81	21	53	31
District of Col.	1,685	352	56	133	107
Florida	13,430	5,666	579	5,414	825
Georgia	7,761	1,247	223	922	347
Hawaii	4,065	292	32	299	36
Idaho	895	1,036	50	123	75
Illinois	6,579	9,285	274	2,177	413
Indiana	4,066	6,909	129	459	158
Iowa	1,152	3,929	63	540	87
Kansas	1,210	2,033	62	434	94
Kentucky	1,891	280	82	295	114
Louisiana	3,810	445	98	244	151
Maine	868	1,329	33	376	48
Maryland	6,865	1,202	179	480	276
Massachusetts	16,379	2,659	263	1,875	435
Michigan	5,345	5,113	199	1,040	306
Minnesota	5,120	2,759	140	495	200
Mississippi	1,319	231	43	103	66
Missouri	3,384	1,440	128	704	206
Montana	387	124	22	56	34
Nebraska	1,902	676	56	490	65
Nevada	8,848	220	308	517	94
New Hampshire	1,538	1,161	40	543	63
New Jersey	8,781	1,114	187	1,520	281
New Mexico	3,323	1,109	60	124	108
New York	14,292	4,338	434	907	658
North Carolina	9,091	1,354	242	1,553	366
North Dakota	305	1,723	19	125	30
Ohio	8,426	1,422	214	607	309
Oklahoma	1,449	1,901	71	167	110
Oregon	5,640	1,633	113	329	169
Pennsylvania	6,304	3,092	273	1,280	420
Rhode Island	1,479	607	24	79	36
South Carolina	3,910	1,726	96	883	145

TABLE 5A // U.S. CLEAN ENERGY EMPLOYMENT by subsector, renewable generation 2022

State	Solar	Wind	Geothermal	Bioenergy/CHP	Low-impact hydroelectric/ hydrokinetic and wave energy
South Dakota	678	1,852	19	178	29
Tennessee	5,123	665	146	396	228
Texas	14,830	26,135	702	1,546	1,141
Utah	7,342	654	94	248	139
Vermont	1,771	355	18	80	30
Virginia	5,476	2,260	247	1,819	402
Washington	5,297	3,444	147	1,164	279
West Virginia	536	442	28	103	44
Wisconsin	4,174	1,885	116	529	161
Wyoming	223	137	13	32	20
United States	**346,143**	**125,580**	**8,635**	**42,568**	**11,677**

TABLE 5B // U.S. CLEAN ENERGY EMPLOYMENT by subsector, storage and grid 2022

State	Storage	Smart Grid	Micro grid	Other grid modernization
Alabama	878	357	302	403
Alaska	204	37	43	43
Arizona	1,478	260	377	316
Arkansas	394	159	146	186
California	17,580	2,352	2,041	1,982
Colorado	1,889	453	446	452
Connecticut	311	141	227	207
Delaware	63	87	49	37
District of Col.	112	49	106	71
Florida	2,287	1,077	1,128	1,359
Georgia	1,922	704	688	1,055
Hawaii	390	57	48	53
Idaho	930	49	98	87
Illinois	2,438	1,387	664	678
Indiana	1,974	566	296	287
Iowa	788	188	214	287
Kansas	611	194	155	174
Kentucky	684	230	225	273
Louisiana	864	222	257	285
Maine	330	48	68	70
Maryland	905	433	416	418

TABLE 5B // U.S. CLEAN ENERGY EMPLOYMENT by subsector, storage and grid 2022

State	Storage	Smart Grid	Micro grid	Other grid modernization
Massachusetts	5,014	624	1,067	136
Michigan	2,599	412	437	497
Minnesota	1,985	261	336	342
Mississippi	427	139	123	154
Missouri	868	435	343	399
Montana	249	61	65	77
Nebraska	234	90	114	122
Nevada	8,863	155	148	153
New Hampshire	130	59	83	76
New Jersey	830	325	411	320
New Mexico	410	132	108	124
New York	2,210	538	1,116	765
North Carolina	1,649	679	678	851
North Dakota	327	89	60	62
Ohio	1,526	514	541	600
Oklahoma	941	219	212	249
Oregon	1,419	314	234	1,678
Pennsylvania	1,976	546	767	712
Rhode Island	142	34	362	55
South Carolina	935	483	255	305
South Dakota	299	56	56	71
Tennessee	919	6,417	327	331
Texas	8,098	1,742	1,980	2,143
Utah	566	186	229	220
Vermont	444	54	397	44
Virginia	1,172	472	546	551
Washington	2,541	367	359	386
West Virginia	456	92	126	189
Wisconsin	1,324	326	311	374
Wyoming	273	47	58	87
United States	**85,858**	**24,916**	**19,845**	**20,794**

TABLE 5C // U.S. CLEAN ENERGY EMPLOYMENT by subsector, energy efficiency 2022

State	Energy STAR/ Efficient Lighting	Trad. HVAC	HE HVAC/ Renewable H&C	Advance Materials	Other
Alabama	2,572	6,068	3,268	14,739	2,553
Alaska	524	657	1,586	1,188	172
Arizona	7,935	10,313	11,983	7,301	5,107
Arkansas	2,244	3,062	2,874	962	5,863
California	65,880	110,786	59,170	21,677	36,883
Colorado	10,882	10,340	7,095	5,927	1,602
Connecticut	7,895	8,505	10,068	3,627	4,381
Delaware	1,327	3,726	2,977	1,948	805
District of Col.	1,395	2,561	4,619	580	2,671
Florida	31,952	21,485	23,350	28,710	13,407
Georgia	8,659	12,249	18,364	7,213	9,120
Hawaii	1,297	599	2,722	356	542
Idaho	1,714	1,916	4,522	778	182
Illinois	13,504	28,628	25,653	8,187	8,379
Indiana	6,027	12,970	22,126	4,525	5,072
Iowa	6,485	2,151	6,612	1,989	2,106
Kansas	3,849	2,648	3,587	3,096	3,805
Kentucky	5,253	5,380	7,186	3,186	2,431
Louisiana	4,195	7,048	3,766	4,002	1,886
Maine	956	1,403	3,708	362	2,256
Maryland	11,549	24,763	18,034	8,728	3,496
Massachusetts	14,053	21,939	17,858	10,226	17,168
Michigan	13,955	3,059	6,190	40,047	11,833
Minnesota	11,097	8,686	11,929	4,150	7,270
Mississippi	1,587	3,818	2,945	1,794	4,417
Missouri	5,619	20,244	10,160	2,018	1,514
Montana	2,174	3,247	1,319	1,216	329
Nebraska	1,718	3,199	4,013	2,202	2,213
Nevada	2,454	2,429	3,810	2,097	1,383
New Hampshire	2,739	2,420	4,509	460	1,172
New Jersey	8,199	11,130	7,524	2,614	6,865
New Mexico	1,954	1,230	1,539	751	586
New York	36,427	34,526	36,481	8,730	9,843
North Carolina	35,052	19,371	12,046	6,650	5,218
North Dakota	514	729	3,302	310	254
Ohio	15,341	18,073	15,661	17,884	9,517
Oklahoma	1,611	2,699	8,055	476	1,300
Oregon	5,279	10,085	10,234	8,735	5,104
Pennsylvania	14,897	19,327	16,212	12,977	6,577
Rhode Island	3,127	1,345	2,249	2,896	1,373
South Carolina	2,523	2,593	7,813	6,000	10,204
South Dakota	1,030	2,076	2,007	724	1,612

TABLE 5C // U.S. CLEAN ENERGY EMPLOYMENT by subsector, energy efficiency 2022

State	Energy STAR/ Efficient Lighting	Trad. HVAC	HE HVAC/ Renewable H&C	Advance Materials	Other
Tennessee	10,909	8,695	17,813	6,288	6,312
Texas	55,834	33,625	37,127	22,290	15,595
Utah	6,531	3,903	7,417	8,916	4,963
Vermont	1,824	2,147	3,010	1,571	1,631
Virginia	18,974	17,141	13,532	10,395	14,475
Washington	14,428	17,806	7,485	6,542	12,442
West Virginia	1,906	842	1,137	2,485	297
Wisconsin	20,946	8,922	6,211	18,159	1,499
Wyoming	2,767	1,935	1,047	468	627
United States	**511,561**	**564,498**	**523,908**	**339,152**	**276,313**

TABLE 5D // U.S. CLEAN ENERGY EMPLOYMENT by subsector, clean vehicles and biofuels 2022

	Clean Vehicles				Biofuels	
State	Hybrid electric vehicles	Plug-in hybrid vehicles	Electric vehicles	Hydrogen/ fuel-cell vehicles	Other Ethanol/ Non-woody Biomass	Other Biofuels
Alabama	3,771	1,731	2,385	436	56	189
Alaska	115	52	73	13	8	31
Arizona	1,899	879	1,200	221	63	306
Arkansas	1,034	480	653	121	436	143
California	14,189	6,191	43,899	1,786	1,490	4,387
Colorado	2,120	987	1,338	249	1,575	403
Connecticut	1,415	455	888	131	60	305
Delaware	218	101	138	25	28	52
District of Col.	207	95	131	24	28	14
Florida	5,601	2,581	3,541	650	1,442	1,373
Georgia	3,400	1,510	2,162	380	106	369
Hawaii	215	97	137	24	1,741	96
Idaho	569	264	359	66	39	230
Illinois	6,306	2,941	3,979	741	1,179	408
Indiana	9,978	4,614	6,305	1,162	521	268
Iowa	1,731	801	1,094	202	644	226
Kansas	1,161	538	734	136	152	151
Kentucky	4,299	1,927	2,729	485	173	128
Louisiana	894	404	567	102	128	159
Maine	402	185	254	47	34	183
Maryland	1,345	519	938	165	75	181

TABLE 5D // U.S. CLEAN ENERGY EMPLOYMENT

by subsector, clean vehicles and biofuels 2022

	Clean Vehicles				Biofuels	
State	Hybrid electric vehicles	Plug-in hybrid vehicles	Electric vehicles	Hydrogen/ fuel-cell vehicles	Other Ethanol/ Non-woody Biomass	Other Biofuels
Massachusetts	2,133	984	4,368	248	216	520
Michigan	14,625	6,704	9,253	1,688	151	531
Minnesota	1,914	880	1,210	222	354	359
Mississippi	1,490	686	942	173	382	147
Missouri	3,676	1,700	2,323	428	695	220
Montana	331	152	209	38	24	51
Nebraska	985	456	622	115	77	133
Nevada	764	353	483	89	59	77
New Hampshire	503	234	317	59	23	116
New Jersey	2,597	1,189	1,644	299	110	335
New Mexico	445	204	282	51	36	111
New York	6,252	2,071	3,966	681	979	801
North Carolina	4,100	1,882	2,593	474	986	534
North Dakota	385	178	243	45	64	102
Ohio	10,147	4,692	6,411	1,182	974	355
Oklahoma	1,143	522	724	131	701	123
Oregon	1,593	739	1,006	186	145	608
Pennsylvania	4,347	1,930	2,716	589	771	605
Rhode Island	226	91	127	23	231	45
South Carolina	3,045	1,401	1,925	353	370	238
South Dakota	505	237	319	60	118	78
Tennessee	7,392	3,442	4,666	867	983	228
Texas	12,030	5,602	7,593	1,411	1,341	1,009
Utah	1,411	660	890	166	29	110
Vermont	1,087	501	130	-	586	67
Virginia	3,519	1,630	2,223	411	127	273
Washington	1,884	857	1,194	216	251	1,482
West Virginia	475	219	300	55	14	31
Wisconsin	2,784	1,291	1,758	325	102	293
Wyoming	187	87	118	22	61	27
United States	**152,846**	**68,925**	**134,060**	**17,774**	**20,939**	**19,209**

TABLE 6A // U.S. OVERALL ENERGY SECTOR EMPLOYMENT COMPARISON 2020–2022

State	2022 Clean Energy Jobs	2021 Clean Energy Jobs	2020 Clean Energy Jobs	2022 Fossil Fuel Jobs	2021 Fossil Fuel Jobs	2020 Fossil Fuel Jobs	2022 All U.S. Energy Jobs	2021 All U.S. Energy Jobs	2020 All U.S. Energy Jobs
Alabama	43,848	41,646	39,171	11,277	9,905	10,441	148,304	143,098	133,716
Alaska	5,130	4,995	4,837	12,193	10,777	11,488	26,298	24,765	25,003
Arizona	61,583	59,209	56,346	9,619	9,502	9,662	128,070	123,508	116,113
Arkansas	20,697	19,861	18,713	6,711	6,015	6,305	63,522	61,763	60,969
California	523,480	503,880	483,886	78,429	71,502	75,527	911,345	885,539	856,109
Colorado	63,780	60,990	58,014	29,316	25,891	27,096	153,223	146,238	143,813
Connecticut	42,543	41,363	39,807	4,757	4,299	4,501	72,937	71,570	70,320
Delaware	12,440	12,248	11,960	1,448	1,250	1,251	20,230	19,617	18,950
District of Col.	14,996	14,230	13,567	1,054	951	1,015	18,763	17,911	17,562
Florida	165,857	157,968	149,163	31,819	29,506	29,885	342,611	327,007	312,117
Georgia	78,400	74,883	70,774	8,857	8,089	8,269	203,319	194,908	188,626
Hawaii	13,100	12,854	12,531	2,718	2,578	2,636	25,316	24,461	23,876
Idaho	13,983	13,350	12,492	1,458	1,177	1,143	33,162	32,356	30,843
Illinois	123,799	120,178	114,603	28,452	26,061	27,711	296,326	288,814	288,788
Indiana	88,412	85,298	79,776	14,837	13,557	14,101	287,187	285,967	257,552
Iowa	31,288	30,237	28,811	5,957	5,695	6,032	84,737	83,599	79,312
Kansas	24,823	23,717	22,478	18,056	17,042	17,924	79,048	77,247	75,788
Kentucky	37,250	35,060	32,772	14,295	12,197	12,691	150,111	143,994	133,920
Louisiana	29,527	28,014	26,315	65,770	58,361	62,190	156,736	147,338	147,828
Maine	12,960	12,453	11,886	2,078	1,840	1,920	25,658	24,927	23,944
Maryland	80,967	79,884	77,705	6,309	5,990	6,195	125,007	123,101	125,351
Massachusetts	118,165	113,239	108,753	9,819	9,074	9,117	168,222	163,437	158,991
Michigan	123,983	118,573	112,256	13,220	12,302	12,526	398,583	393,207	357,743
Minnesota	59,708	57,757	55,168	9,219	8,415	8,852	125,194	121,402	117,484
Mississippi	20,987	19,884	18,625	10,071	9,153	9,614	69,151	67,022	62,489
Missouri	56,503	54,073	51,275	6,815	6,404	6,597	157,296	151,777	152,535
Montana	10,165	9,865	9,429	5,867	4,972	4,573	32,187	30,875	29,362
Nebraska	19,483	18,730	17,762	2,603	2,359	2,383	56,351	55,344	52,339
Nevada	33,304	32,305	31,125	4,086	3,698	3,806	59,179	57,804	56,369
New Hampshire	16,245	15,867	15,280	2,257	2,077	2,084	30,156	29,508	29,176
New Jersey	56,277	53,108	49,883	17,034	15,795	17,032	140,643	135,172	131,047
New Mexico	12,686	11,973	11,077	28,907	22,775	21,565	66,058	57,920	53,916
New York	166,014	160,183	152,789	15,408	14,058	14,512	318,499	312,394	306,542
North Carolina	105,370	103,472	99,314	9,565	8,876	9,112	209,127	204,813	194,709
North Dakota	8,867	8,578	8,225	32,397	24,660	20,348	58,722	50,657	46,050
Ohio	114,395	109,368	102,612	29,629	28,728	30,541	331,417	326,660	310,240
Oklahoma	22,805	21,497	20,032	58,316	51,678	54,916	135,783	124,431	122,138
Oregon	55,246	53,728	52,022	1,628	1,455	1,475	92,608	90,543	88,858
Pennsylvania	96,317	92,340	86,922	41,119	35,686	37,149	273,364	258,202	249,886

TABLE 6A // U.S. OVERALL ENERGY SECTOR EMPLOYMENT COMPARISON 2020–2022

State	2022 Clean Energy Jobs	2021 Clean Energy Jobs	2020 Clean Energy Jobs	2022 Fossil Fuel Jobs	2021 Fossil Fuel Jobs	2020 Fossil Fuel Jobs	2022 All U.S. Energy Jobs	2021 All U.S. Energy Jobs	2020 All U.S. Energy Jobs
Rhode Island	14,553	14,291	13,857	914	755	723	22,740	22,024	21,038
South Carolina	45,204	43,701	41,601	8,494	8,211	8,406	138,997	136,442	133,568
South Dakota	12,003	11,807	11,360	1,614	1,482	1,588	27,966	27,176	26,583
Tennessee	82,146	77,101	72,431	5,634	4,995	5,202	209,951	202,637	184,523
Texas	251,774	237,869	222,500	298,735	261,375	276,085	936,476	880,692	849,789
Utah	44,674	43,319	41,397	12,464	10,887	11,033	85,163	82,239	80,043
Vermont	15,748	15,648	15,220	597	460	420	21,529	21,361	22,117
Virginia	95,643	92,017	88,100	13,449	11,520	11,520	186,624	179,940	171,610
Washington	78,570	76,735	75,521	6,921	6,130	6,419	144,624	140,640	140,706
West Virginia	9,778	9,491	8,952	27,994	22,127	21,429	85,381	72,750	64,780
Wisconsin	71,489	71,107	69,105	7,831	7,413	7,786	142,426	141,530	140,347
Wyoming	8,236	8,209	8,026	21,730	17,936	17,919	45,992	41,606	40,438
United States	**3,315,199**	**3,188,155**	**3,036,226**	**1,059,752**	**937,640**	**972,712**	**8,122,319**	**7,827,932**	**7,525,914**

TABLE 6B // U.S. OVERALL ENERGY SECTOR EMPLOYMENT COMPARISON 2020–2022

State	2022 Gas/Diesel Vehicles	2021 Gas/Diesel Vehicles	2020 Gas/Diesel Vehicles	2022 Clean Vehicle Jobs	2021 Clean Vehicle Jobs	2020 Clean Vehicle Jobs	2022 U.S. Total Employment	2021 U.S. Total Employment	2020 U.S. Total Employment
Alabama	57,982	56,702	48,603	8,323	7,436	6,056	2,054,394	2,007,007	1,951,153
Alaska	1,857	1,917	1,701	252	246	209	305,344	299,357	290,134
Arizona	30,221	28,262	24,591	4,199	3,808	3,030	3,163,042	3,057,805	2,908,650
Arkansas	16,531	15,838	16,346	2,288	2,277	1,802	1,275,330	1,236,063	1,194,829
California	156,483	158,800	143,910	66,065	52,459	41,408	18,153,035	17,622,235	16,380,064
Colorado	25,182	24,284	24,459	4,693	4,129	3,224	2,845,050	2,776,384	2,613,665
Connecticut	13,459	13,706	13,628	2,889	2,470	1,901	1,670,682	1,639,884	1,578,407
Delaware	2,914	2,906	2,712	482	448	359	465,279	451,984	432,887
District of Col.	84	243	520	458	302	244	760,023	749,370	712,961
Florida	82,070	76,291	71,724	12,374	10,973	8,841	9,581,728	9,241,147	8,642,807
Georgia	64,980	60,075	61,277	7,452	7,306	6,521	4,796,359	4,629,754	4,405,924
Hawaii	2,998	2,838	2,883	473	413	357	633,476	613,795	561,119
Idaho	9,688	9,509	9,176	1,259	1,291	1,022	831,189	802,322	763,461
Illinois	76,062	73,598	79,654	13,968	13,071	10,165	6,020,866	5,877,314	5,573,816
Indiana	143,655	146,099	123,236	22,058	20,160	16,081	3,160,961	3,089,279	2,985,115
Iowa	23,766	23,979	21,863	3,828	3,438	2,738	1,551,719	1,527,441	1,494,334
Kansas	15,811	15,820	14,135	2,569	2,298	1,820	1,418,778	1,381,000	1,346,890
Kentucky	67,141	65,623	59,395	9,440	8,372	7,290	1,966,625	1,919,766	1,839,565
Louisiana	14,571	14,236	12,857	1,967	1,770	1,511	1,884,694	1,853,853	1,796,921

TABLE 6B // U.S. OVERALL ENERGY SECTOR EMPLOYMENT COMPARISON 2020–2022

State	2022 Gas/Diesel Vehicles	2021 Gas/Diesel Vehicles	2020 Gas/Diesel Vehicles	2022 Clean Vehicle Jobs	2021 Clean Vehicle Jobs	2020 Clean Vehicle Jobs	2022 U.S. Total Employment	2021 U.S. Total Employment	2020 U.S. Total Employment
Maine	6,147	6,122	5,916	889	875	703	628,779	613,677	594,318
Maryland	20,934	20,752	24,024	2,967	3,131	2,639	2,674,687	2,648,432	2,546,115
Massachusetts	14,901	16,188	17,958	7,734	5,905	4,724	3,642,181	3,556,919	3,365,797
Michigan	207,349	208,021	175,802	32,271	28,204	23,068	4,360,513	4,250,847	3,998,223
Minnesota	25,825	24,915	25,236	4,226	3,821	3,091	2,886,221	2,823,664	2,684,097
Mississippi	22,182	22,032	18,889	3,292	2,962	2,391	1,161,087	1,147,285	1,119,123
Missouri	48,917	46,325	48,546	8,128	7,106	5,665	2,870,012	2,804,806	2,724,378
Montana	5,141	4,917	5,164	731	724	586	499,156	488,956	467,398
Nebraska	13,767	13,780	13,115	2,178	2,023	1,609	996,898	978,540	962,733
Nevada	10,469	10,125	10,036	1,689	1,591	1,273	1,508,729	1,432,570	1,283,102
New Hampshire	6,362	6,181	6,710	1,113	1,050	825	676,238	662,228	637,297
New Jersey	32,283	31,389	31,079	5,730	4,980	4,087	4,223,612	4,123,726	3,860,482
New Mexico	6,094	6,124	5,940	983	914	746	845,699	819,116	767,120
New York	56,626	57,338	56,141	12,970	10,835	8,558	9,476,185	9,195,839	8,693,446
North Carolina	61,816	60,294	55,206	9,049	8,405	6,841	4,776,568	4,646,589	4,430,986
North Dakota	5,151	5,128	5,149	851	788	632	419,986	407,932	394,376
Ohio	129,742	130,495	118,561	22,431	19,858	15,843	5,466,851	5,352,629	5,199,861
Oklahoma	17,133	16,464	15,707	2,521	2,324	1,920	1,661,712	1,604,478	1,569,143
Oregon	19,895	19,609	19,311	3,524	3,115	2,467	1,960,508	1,914,974	1,824,327
Pennsylvania	61,995	59,417	62,142	9,582	9,040	7,211	5,950,634	5,807,876	5,549,371
Rhode Island	4,015	3,880	3,845	467	416	322	488,149	475,481	449,586
South Carolina	49,960	48,264	46,971	6,724	6,821	5,517	2,219,196	2,147,851	2,074,422
South Dakota	7,353	6,921	7,792	1,120	1,149	881	446,860	435,500	422,761
Tennessee	84,375	83,659	68,102	16,367	12,799	10,000	3,225,424	3,123,276	3,002,549
Texas	158,723	154,447	125,362	26,636	22,218	17,360	13,587,904	13,012,661	12,251,110
Utah	18,078	18,122	17,903	3,126	2,912	2,248	1,677,840	1,624,055	1,557,772
Vermont	1,615	1,638	2,755	1,718	1,707	1,424	303,744	298,675	286,056
Virginia	39,623	39,870	36,626	7,782	6,533	5,182	4,016,939	3,917,973	3,796,069
Washington	25,391	23,902	25,610	4,150	3,751	3,139	3,558,959	3,427,042	3,219,711
West Virginia	6,743	6,490	7,667	1,049	1,066	854	683,438	674,428	654,099
Wisconsin	37,272	36,920	37,452	6,158	5,774	4,569	2,912,288	2,832,567	2,762,522
Wyoming	2,738	2,599	2,632	413	379	297	270,607	267,245	260,201
United States	**2,014,071**	**1,983,055**	**1,836,018**	**373,604**	**325,844**	**261,253**	**152,317,914**	**148,293,597**	**140,881,253**

TABLE 7A // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, total clean energy jobs

State	County	Clean Energy Jobs	Renewable Generation Jobs	Storage & Grid Jobs	Biofuel Jobs	EE Jobs	Clean Vehicles
CA	Los Angeles	97,849	14,940	5,662	418	61,634	15,194
TX	Harris	60,987	11,019	4,227	1,107	40,968	3,665
CA	Orange	56,562	10,868	3,819	245	34,883	6,747
IL	Cook	54,181	8,021	1,753	228	39,496	4,682
CA	San Diego	50,551	13,508	2,175	501	30,160	4,207
AZ	Maricopa	47,775	10,239	1,705	97	33,065	2,670
CA	Santa Clara	47,707	16,514	1,991	119	27,029	2,055
NY	New York	47,337	4,805	744	443	41,189	155
MA	Middlesex	36,104	7,046	2,388	127	24,742	1,800
CA	Alameda	35,875	9,130	1,205	102	15,943	9,496
CA	San Francisco	35,388	16,172	1,264	100	17,335	517
TX	Dallas	34,787	4,219	1,364	132	26,326	2,747
WA	King	33,673	3,660	1,503	187	26,841	1,480
MI	Oakland	28,174	2,849	368	34	20,699	4,224
CA	Riverside	25,865	7,052	1,297	212	13,198	4,107
MA	Suffolk	23,060	4,287	1,395	171	16,744	463
MN	Hennepin	20,867	3,041	1,019	117	15,862	828
MI	Wayne	20,658	886	266	20	11,190	8,296
CA	Sacramento	19,235	4,741	629	645	10,992	2,228
VA	Fairfax	19,041	1,467	294	24	16,625	631
NC	Mecklenburg	18,935	2,711	585	184	14,454	1,001
TX	Travis	18,517	4,611	1,021	34	12,069	782
FL	Miami-Dade	18,416	2,160	174	174	14,474	1,434
UT	Salt Lake	17,537	2,267	440	28	13,678	1,123
IN	Marion	17,358	5,163	532	34	10,484	1,145
FL	Palm Beach	17,046	4,725	2,645	118	8,835	723
TX	Bexar	17,007	3,184	917	69	10,002	2,835
CA	San Bernardino	16,709	2,124	880	60	9,006	4,639
FL	Orange	16,619	3,785	155	1,150	10,377	1,152
OR	Multnomah	16,342	2,385	847	48	12,079	983
NC	Wake	16,336	1,258	860	79	13,470	670
TX	Tarrant	16,255	1,460	475	80	11,162	3,078
NV	Clark	15,771	5,524	575	72	8,512	1,088
CA	Contra Costa	15,408	5,477	523	125	8,121	1,163
DC	District of Columbia	14,996	2,333	337	42	11,827	458
FL	Hillsborough	14,982	2,238	507	530	10,841	865
NY	Suffolk	14,882	2,375	395	139	10,622	1,352
FL	Broward	14,865	2,009	166	53	11,477	1,160
MD	Montgomery	13,744	1,361	175	22	11,819	368
OH	Cuyahoga	13,419	904	226	68	10,749	1,471
CT	Hartford	13,349	1,135	215	<10	11,112	887
GA	Fulton	13,325	1,821	775	87	9,888	754
WI	Milwaukee	13,103	1,094	420	14	10,982	593

TABLE 7A // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, total clean energy jobs

State	County	Clean Energy Jobs	Renewable Generation Jobs	Storage & Grid Jobs	Biofuel Jobs	EE Jobs	Clean Vehicles
MI	Macomb	12,984	1,053	111	34	7,061	4,725
MA	Essex	12,945	3,238	553	32	8,395	728
OH	Franklin	12,794	462	221	61	10,551	1,499
IL	DuPage	12,740	1,307	762	80	9,411	1,180
NY	Nassau	12,710	1,841	228	56	9,469	1,117
PA	Allegheny	12,705	1,834	506	82	9,658	625
CO	Denver	12,692	4,227	424	245	7,328	468
MD	Baltimore	12,579	1,365	672	25	10,090	427
OR	Washington	12,467	2,348	903	77	8,813	326
MO	St. Louis	12,452	986	264	107	10,369	725
CA	San Mateo	12,433	2,336	688	42	8,267	1,099
UT	Utah	11,892	5,060	231	32	6,190	379
NY	Queens	11,590	667	207	35	9,601	1,079
CT	Fairfield	11,465	725	188	364	9,631	557
MA	Norfolk	11,403	1,334	813	72	8,290	895
TN	Davidson	11,079	397	1,606	233	8,028	815
MD	Prince George's	10,993	1,396	201	<10	8,934	455
OH	Hamilton	10,635	761	154	52	8,750	918
TN	Shelby	10,439	339	1,000	67	8,094	939
FL	Duval	10,077	1,281	267	131	7,543	855
KY	Jefferson	9,626	670	278	51	6,249	2,379
MI	Kent	9,459	986	124	58	6,019	2,272
PA	Montgomery	9,249	1,013	439	59	6,984	754
NY	Erie	9,145	1,365	1,008	53	5,402	1,317
NY	Westchester	9,136	1,624	125	39	6,790	559
MO	Jackson	8,998	719	136	133	7,191	820
PA	Philadelphia	8,991	818	196	118	7,356	503
GA	Henry	8,935	39	<10	<10	8,786	100
CT	New Haven	8,928	1,139	127	<10	6,954	708
MA	Worcester	8,922	1,151	429	68	6,115	1,159
CA	Fresno	8,878	1,882	241	217	4,773	1,764
HI	Honolulu	8,815	3,073	419	766	4,208	348
NV	Storey	8,704	<10	8,599	<10	78	18
CA	Kern	8,631	2,919	358	274	3,855	1,224
WI	Dane	8,617	874	300	27	6,940	476
FL	Pinellas	8,589	2,104	522	36	5,370	557
CA	Ventura	8,541	1,362	303	287	5,438	1,150
DE	New Castle	8,495	473	173	10	7,558	281
RI	Providence	8,384	1,334	369	149	6,233	300
IN	Elkhart	8,074	334	218	25	1,738	5,760
NY	Kings	8,060	840	112	36	6,438	633
KS	Johnson	7,947	1,763	199	45	5,542	399
CA	Sonoma	7,862	3,145	211	55	3,722	729

TABLE 7A // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, total clean energy jobs

State	County	Clean Energy Jobs	Renewable Generation Jobs	Storage & Grid Jobs	Biofuel Jobs	EE Jobs	Clean Vehicles
MD	Anne Arundel	7,838	1,260	155	12	6,043	369
WI	Waukesha	7,762	841	176	17	6,356	372
PA	Lehigh	7,734	155	113	25	6,797	644
CO	Arapahoe	7,354	1,293	430	114	5,041	476
TX	Collin	7,200	607	1,082	15	4,636	860
MD	Baltimore City	7,161	243	151	<10	6,537	225
WA	Snohomish	7,143	1,021	323	35	5,427	337
TN	Hamilton	7,073	883	1,173	61	3,345	1,612
CA	Yolo	7,010	5,204	95	38	1,194	479
CA	San Luis Obispo	6,979	4,394	132	30	2,010	412
AL	Jefferson	6,970	491	224	17	5,503	735
GA	Cobb	6,735	523	204	30	5,560	418
SC	Greenville	6,719	1,016	192	153	4,727	631
IA	Polk	6,675	1,007	152	33	4,714	769

Note: 69,059 clean energy jobs are in an unknown or undefined county

TABLE 7B // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, clean energy job density[4]

State	County	Clean Energy Jobs	Overall County Employment	Clean Energy Workers Per 1,000 Jobs
TX	Kenedy	113	244	463.1
IL	Pulaski	551	1,196	461.1
NV	Storey	8,704	19,636	443.3
NE	Blaine	35	130	267.6
TX	Somervell	903	3,575	252.6
VA	Surry	564	2,251	250.6
GA	Pulaski	595	2,675	222.4
TX	Roberts	51	232	218.6
IL	Edwards	411	2,102	195.6
OK	Jefferson	204	1,050	194.3
NE	McPherson	13	67	189.8
MS	Jefferson	149	957	155.5
GA	Montgomery	220	1,478	148.7
ND	Oliver	90	684	130.9
GA	Jefferson	614	4,858	126.5
IN	Fountain	645	5,098	126.5
TX	Borden	59	479	123.5
LA	Cameron	488	4,029	121.2
IL	Pope	74	613	120.6

TABLE 7B // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, clean energy job density[4]

State	County	Clean Energy Jobs	Overall County Employment	Clean Energy Workers Per 1,000 Jobs
GA	Henry	8,935	74,397	120.1
UT	Beaver	330	2,756	119.8
IL	Calhoun	86	746	114.8
KY	Webster	287	2,653	108.2
IA	Wayne	214	2,042	104.8
KS	Lincoln	96	926	104.2
SD	Hyde	54	518	103.5
TN	Union	295	2,864	103.0
GA	Burke	1,036	10,138	102.2
WI	Florence	93	915	101.4
FL	Jefferson	291	2,882	101.0
TX	Baylor	152	1,517	100.5
TN	DeKalb	601	6,247	96.2
TX	Madison	434	4,524	95.9
VT	Essex	102	1,071	95.6
IL	De Witt	486	5,155	94.4
IL	Boone	1,229	13,196	93.2
IL	Washington	609	6,758	90.2
KS	Coffey	305	3,401	89.5
SD	Aurora	75	846	88.6
NE	Jefferson	299	3,378	88.5
MS	Benton	97	1,104	87.7
GA	Taylor	127	1,485	85.7
TX	Oldham	71	845	84.3
GA	Madison	325	3,866	84.0
IA	Delaware	544	6,609	82.3
IA	Winnebago	338	4,114	82.2
CO	Broomfield	3,547	43,353	81.8
TN	Houston	115	1,418	80.8
SD	Stanley	102	1,270	80.7
NC	Madison	314	3,908	80.4
IN	Decatur	1,121	13,954	80.4
VA	Louisa	833	10,374	80.3
TX	Hall	65	834	77.8
OH	Morrow	383	4,971	77.1
TX	Floyd	116	1,513	76.4
OH	Wood	5,670	74,505	76.1
IN	Gibson	1,673	22,175	75.5
IN	Shelby	1,328	17,609	75.4
TX	Scurry	458	6,095	75.2
NE	Sioux	14	186	74.3
GA	Crawford	89	1,204	74.0
IL	Putnam	130	1,761	73.7

TABLE 7B // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, clean energy job density[4]

State	County	Clean Energy Jobs	Overall County Employment	Clean Energy Workers Per 1,000 Jobs
VT	Orange	545	7,482	72.8
SC	Fairfield	409	5,617	72.7
OR	Morrow	452	6,271	72.0
VT	Grand Isle	77	1,078	71.1
GA	Webster	36	514	70.7
IA	Hancock	414	6,064	68.2
MD	Calvert	1,464	21,502	68.1
LA	Madison	210	3,094	67.9
MN	Stearns	5,773	85,169	67.8
CO	Logan	513	7,726	66.5
NV	Lincoln	87	1,318	66.2
OH	Shelby	1,789	27,089	66.0
NE	Boyd	35	532	65.4
OR	Sherman	62	959	65.1
CA	Yolo	7,010	107,684	65.1
WI	Adams	240	3,696	65.0
GA	Calhoun	73	1,131	64.7
WA	Jefferson	584	9,075	64.4
VT	Chittenden	6,536	101,977	64.1
OH	Wyandot	644	10,111	63.7
IN	Noble	1,042	16,479	63.2
AL	Crenshaw	205	3,264	62.9
MO	Douglas	160	2,554	62.8
TN	Lincoln	642	10,243	62.7
TN	Benton	263	4,276	61.6
VA	Manassas Park City	264	4,333	60.9
KY	Washington	202	3,358	60.2
CA	San Luis Obispo	6,979	115,935	60.2
SD	Meade	479	7,956	60.2
TX	Jack	151	2,544	59.4
TX	Nolan	358	6,076	58.9
KS	Wichita	42	716	58.8
TX	Ward	329	5,612	58.6
IL	Shelby	277	4,738	58.5
ID	Adams	54	917	58.4
IN	Elkhart	8,074	138,387	58.3
IN	Benton	125	2,146	58.1
MS	Claiborne	187	3,228	58.1

TABLE 7C // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, clean energy job growth

State	County	Clean Energy Jobs	Net New Jobs	Growth Rate
OK	Dewey	109	80	281.3%
NC	Hoke	277	183	195.3%
VA	Hopewell City	176	111	173.4%
AL	Cleburne	51	29	135.3%
NY	Orleans	409	234	133.7%
TX	Willacy	36	20	119.1%
KS	Elk	38	20	118.7%
TX	Deaf Smith	134	68	102.3%
CO	Yuma	142	71	100.2%
IL	Warren	142	71	99.5%
TX	Donley	31	14	82.5%
MN	Cottonwood	90	36	67.0%
IL	Putnam	130	51	65.6%
CO	Logan	513	194	60.6%
KS	Ellis	503	188	59.6%
TX	Baylor	152	55	56.8%
MN	Lincoln	79	27	52.7%
TX	Starr	142	49	52.6%
NE	Cherry	74	25	52.5%
TX	Glasscock	26	9	51.9%
NM	Los Alamos	159	54	51.5%
TX	Concho	44	15	51.4%
AZ	Pinal	1,289	432	50.3%
MS	Leflore	405	134	49.4%
TX	Lipscomb	34	11	48.9%
TX	Nolan	358	117	48.9%
MN	Martin	196	63	47.7%
ND	Oliver	90	29	47.6%
TX	Somervell	903	291	47.5%
KS	Wichita	42	13	47.2%
TX	Scurry	458	146	46.9%
WA	Klickitat	246	77	45.7%
MT	Wheatland	32	10	44.9%
TX	Borden	59	18	44.5%
TX	Palo Pinto	158	48	44.4%
OK	Love	14	4	44.0%
MN	Becker	334	101	43.6%
NM	Quay	86	26	43.6%
MO	Carroll	47	14	42.6%
TX	Mills	66	20	42.2%
KS	Republic	34	10	41.5%
TX	Hale	225	66	41.4%
OK	Woodward	371	106	40.0%

TABLE 7C // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, clean energy job growth

State	County	Clean Energy Jobs	Net New Jobs	Growth Rate
IA	Butler	64	18	39.8%
MN	Swift	117	33	39.1%
OR	Gilliam	45	13	38.6%
IN	Wabash	442	120	37.4%
KS	Rice	38	10	36.7%
VA	Radford City	189	51	36.6%
WV	Mingo	87	23	36.3%
KS	Seward	114	30	35.9%
KS	Ellsworth	72	19	35.8%
IA	Palo Alto	75	20	35.7%
TN	Scott	219	57	35.4%
KY	Magoffin	43	11	35.1%
CA	Del Norte	113	28	33.7%
IN	Fountain	645	161	33.2%
TX	Howard	676	168	33.2%
TX	Zapata	94	23	33.0%
IL	McLean	1,355	336	32.9%
OK	Caddo	321	79	32.6%
MS	Newton	109	27	32.5%
OR	Morrow	452	110	32.3%
IL	Ford	138	33	31.9%
CO	Kit Carson	52	13	31.9%
MN	Redwood	108	26	31.7%
CA	Alpine	15	4	31.7%
SD	Hyde	54	13	31.4%
CO	Clear Creek	56	13	31.4%
OH	Paulding	117	28	31.1%
ND	McLean	125	30	31.1%
ND	Griggs	20	5	30.7%
MS	Claiborne	187	44	30.7%
IA	Guthrie	78	18	30.5%
IA	Delaware	544	126	30.2%
MN	Jackson	89	21	29.9%
TX	Jack	151	34	29.6%
LA	West Feliciana	210	48	29.6%
OK	Bryan	153	35	29.5%
KS	Clay	47	11	29.5%
TX	Young	119	27	29.4%
NC	Brunswick	876	196	28.9%
MN	Sibley	102	23	28.6%
TX	Childress	31	7	27.9%
TX	Matagorda	571	125	27.9%
TX	Carson	91	20	27.8%

TABLE 7C // U.S. CLEAN ENERGY EMPLOYMENT by top 100 counties, clean energy job growth

State	County	Clean Energy Jobs	Net New Jobs	Growth Rate
IA	Osceola	51	11	27.7%
WI	Iowa	300	65	27.5%
TX	Floyd	116	25	27.1%
ID	Custer	14	3	26.9%
NY	Wyoming	294	62	26.7%
UT	Beaver	330	69	26.5%
ND	Rolette	39	8	26.4%
IL	Boone	1,229	256	26.3%
SD	Turner	58	12	25.8%
TX	Pecos	151	31	25.8%
SD	Deuel	68	14	25.4%
OK	Roger Mills	40	8	25.1%
NM	Rio Arriba	78	16	24.9%
MO	Macon	110	22	24.8%

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
New York-Newark-Jersey City, NY-NJ-PA	157,562	22,722	3,565	995	119,836	10,443
Los Angeles-Long Beach-Anaheim, CA	154,411	25,808	9,482	663	96,517	21,942
San Francisco-Oakland-Hayward, CA	103,216	34,334	3,795	379	52,068	12,640
Boston-Cambridge-Newton, MA-NH	95,129	18,375	5,605	479	65,770	4,900
Chicago-Naperville-Elgin, IL-IN-WI	92,929	12,571	4,166	649	66,844	8,700
Washington-Arlington-Alexandria, DC-VA-MD-WV	87,777	10,849	2,160	147	71,196	3,424
Houston-The Woodlands-Sugar Land, TX	72,325	12,686	4,730	1,137	48,968	4,805
Dallas-Fort Worth-Arlington, TX	68,590	8,119	3,316	251	48,232	8,673
Detroit-Warren-Dearborn, MI	66,586	4,995	801	138	41,966	18,686
Atlanta-Sandy Springs-Roswell, GA	50,836	4,820	2,418	275	39,665	3,657
San Diego-Carlsbad, CA	50,551	13,508	2,175	501	30,160	4,207
Miami-Fort Lauderdale-West Palm Beach, FL	50,327	8,894	2,984	345	34,786	3,317
Phoenix-Mesa-Scottsdale, AZ	49,064	10,311	1,725	290	33,613	3,125
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	48,468	5,550	1,624	610	36,683	4,001
San Jose-Sunnyvale-Santa Clara, CA	48,079	16,534	2,001	132	27,312	2,100
Seattle-Tacoma-Bellevue, WA	47,338	4,976	2,302	246	37,523	2,290
Riverside-San Bernardino-Ontario, CA	42,574	9,176	2,177	271	22,204	8,746
Portland-Vancouver-Hillsboro, OR-WA	39,765	5,384	2,664	307	29,353	2,057
Minneapolis-St. Paul-Bloomington, MN-WI	39,528	3,886	1,929	267	30,945	2,501
Baltimore-Columbia-Towson, MD	38,991	3,693	1,155	96	32,609	1,439
Denver-Aurora-Lakewood, CO	38,353	11,700	2,045	754	21,278	2,576

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Sacramento--Roseville--Arden-Arcade, CA	34,258	12,187	994	698	16,668	3,710
Charlotte-Concord-Gastonia, NC-SC	33,692	5,608	758	295	23,881	3,149
Indianapolis-Carmel-Anderson, IN	28,572	6,103	921	165	18,570	2,812
Nashville-Davidson--Murfreesboro--Franklin, TN	27,474	1,289	3,047	449	16,808	5,881
St. Louis, MO-IL	27,368	2,606	677	322	21,018	2,745
Tampa-St. Petersburg-Clearwater, FL	26,386	4,571	1,100	584	18,430	1,702
Austin-Round Rock, TX	24,156	5,813	1,252	134	15,579	1,378
Orlando-Kissimmee-Sanford, FL	24,103	4,420	331	1,197	16,373	1,781
Kansas City, MO-KS	24,080	3,086	679	253	16,419	3,642
Milwaukee-Waukesha-West Allis, WI	23,087	2,072	637	42	19,120	1,216
San Antonio-New Braunfels, TX	20,497	3,580	1,112	80	12,198	3,527
Columbus, OH	19,924	1,550	356	117	14,276	3,624
Providence-Warwick, RI-MA	19,614	3,147	761	317	14,063	1,326
Cleveland-Elyria, OH	19,610	1,529	303	206	14,704	2,869
Pittsburgh, PA	19,448	2,729	838	169	14,306	1,406
Cincinnati, OH-KY-IN	19,400	1,481	313	104	14,616	2,886
Raleigh, NC	17,880	1,343	893	110	14,740	796
Salt Lake City, UT	17,848	2,277	454	30	13,920	1,167
Hartford-West Hartford-East Hartford, CT	16,175	1,557	268	<10	13,162	1,188
Las Vegas-Henderson-Paradise, NV	15,771	5,524	575	72	8,512	1,088
Richmond, VA	15,274	1,765	539	136	11,781	1,053
Virginia Beach-Norfolk-Newport News, VA-NC	15,059	766	330	34	12,565	1,363
Grand Rapids-Wyoming, MI	14,590	1,163	1,856	161	8,033	3,378
Reno, NV	14,360	2,670	8,659	35	2,644	352
Louisville/Jefferson County, KY-IN	13,417	1,165	366	113	8,643	3,130
Jacksonville, FL	12,752	1,703	314	144	9,546	1,046
Memphis, TN-MS-AR	12,609	497	1,061	181	9,432	1,438
Toledo, OH	12,188	3,006	988	52	5,361	2,780
Provo-Orem, UT	12,017	5,064	234	38	6,295	386
Knoxville, TN	11,502	581	1,044	169	7,476	2,232
Bridgeport-Stamford-Norwalk, CT	11,465	725	188	364	9,631	557
Birmingham-Hoover, AL	10,804	1,169	432	29	7,956	1,219
Buffalo-Cheektowaga-Niagara Falls, NY	10,497	1,462	1,042	79	6,239	1,674
Madison, WI	9,698	968	315	78	7,603	734
Allentown-Bethlehem-Easton, PA-NJ	9,520	288	174	56	8,095	907
Albany-Schenectady-Troy, NY	9,396	1,646	455	104	6,547	645
Greenville-Anderson-Mauldin, SC	8,999	1,106	224	196	6,098	1,376
New Orleans-Metairie, LA	8,987	1,846	368	28	6,263	482
New Haven-Milford, CT	8,928	1,139	127	<10	6,954	708
Worcester, MA-CT	8,922	1,151	429	68	6,115	1,159
Fresno, CA	8,878	1,882	241	217	4,773	1,764
Urban Honolulu, HI	8,815	3,073	419	766	4,208	348
Omaha-Council Bluffs, NE-IA	8,728	984	248	55	6,674	768

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Bakersfield, CA	8,631	2,919	358	274	3,855	1,224
Charleston-North Charleston, SC	8,591	1,690	342	61	5,358	1,140
Oklahoma City, OK	8,590	968	501	266	5,755	1,100
Ogden-Clearfield, UT	8,544	374	153	39	6,918	1,060
Oxnard-Thousand Oaks-Ventura, CA	8,541	1,362	303	287	5,438	1,150
Rochester, NY	8,350	882	207	441	5,683	1,137
Elkhart-Goshen, IN	8,074	334	218	25	1,738	5,760
Santa Rosa, CA	7,862	3,145	211	55	3,722	729
Chattanooga, TN-GA	7,735	1,002	1,203	74	3,664	1,793
Huntsville, AL	7,719	1,160	294	17	5,093	1,156
Des Moines-West Des Moines, IA	7,550	1,149	173	72	5,309	847
Baton Rouge, LA	7,444	646	381	28	5,974	414
Boise City, ID	7,280	1,056	649	62	4,929	584
Greensboro-High Point, NC	7,099	335	108	73	5,439	1,145
Durham-Chapel Hill, NC	7,097	1,922	113	36	4,520	506
Tulsa, OK	7,011	801	484	205	4,834	687
Burlington-South Burlington, VT	7,005	875	567	168	4,775	621
San Luis Obispo-Paso Robles-Arroyo Grande, CA	6,979	4,394	132	30	2,010	412
Albuquerque, NM	6,944	3,074	159	18	3,178	514
Columbia, SC	6,716	913	229	73	4,925	576
Dayton, OH	6,682	310	102	69	5,090	1,110
Tucson, AZ	6,642	1,047	186	16	4,925	469
Springfield, MA	6,545	1,539	281	149	3,913	663
St. Cloud, MN	6,290	4,058	146	<10	1,732	345
Lexington-Fayette, KY	6,162	307	130	28	3,977	1,718
Little Rock-North Little Rock-Conway, AR	6,020	599	183	73	4,693	472
Portland-South Portland, ME	6,004	1,080	281	87	4,223	333
North Port-Sarasota-Bradenton, FL	5,938	551	114	85	4,625	563
Cape Coral-Fort Myers, FL	5,833	549	111	40	4,701	433
Stockton-Lodi, CA	5,822	1,226	138	225	2,845	1,388
Fort Wayne, IN	5,794	508	211	44	3,533	1,499
Colorado Springs, CO	5,648	1,247	224	98	3,513	566
Asheville, NC	5,583	1,172	51	50	3,853	456
Akron, OH	5,573	205	84	68	4,413	804
Jackson, MS	5,420	469	234	38	3,578	1,102
Winston-Salem, NC	5,288	240	954	58	3,628	408
Spartanburg, SC	5,273	841	444	41	1,775	2,172
Manchester-Nashua, NH	5,020	895	77	36	3,710	302
Boulder, CO	4,937	2,018	236	97	2,327	259
Wichita, KS	4,828	308	62	35	3,937	485
Syracuse, NY	4,825	512	229	58	3,441	585
Spokane-Spokane Valley, WA	4,819	479	249	53	3,637	401
Lancaster, PA	4,809	730	88	57	3,222	712

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Augusta-Richmond County, GA-SC	4,798	739	521	35	3,146	358
Beaumont-Port Arthur, TX	4,644	1,325	203	188	2,691	237
Kennewick-Richland, WA	4,641	1,515	145	173	2,653	155
Santa Maria-Santa Barbara, CA	4,500	585	162	168	3,117	467
Palm Bay-Melbourne-Titusville, FL	4,483	592	80	15	3,506	291
Corpus Christi, TX	4,452	897	523	85	2,650	296
El Paso, TX	4,425	495	116	14	3,068	732
Sioux Falls, SD	4,386	1,061	167	58	2,678	422
Modesto, CA	4,362	519	134	482	2,456	771
Lansing-East Lansing, MI	4,306	389	60	14	2,399	1,444
Harrisburg-Carlisle, PA	4,060	427	189	48	2,973	422
Springfield, MO	4,026	240	267	37	2,547	934
Salem, OR	3,898	195	289	105	2,983	326
Green Bay, WI	3,805	222	106	15	3,247	215
Mobile, AL	3,702	257	188	27	2,918	311
Roanoke, VA	3,692	378	183	<10	2,613	514
Fayetteville-Springdale-Rogers, AR-MO	3,658	316	153	33	2,862	294
Fort Collins, CO	3,627	502	112	134	2,546	333
York-Hanover, PA	3,622	557	214	51	2,377	423
Reading, PA	3,585	1,221	123	82	1,684	474
Montgomery, AL	3,581	195	90	<10	2,324	963
Davenport-Moline-Rock Island, IA-IL	3,575	803	130	68	2,191	384
Ann Arbor, MI	3,557	350	164	13	2,372	658
Kalamazoo-Portage, MI	3,535	576	66	80	2,275	537
Lincoln, NE	3,527	434	92	<10	2,589	404
Youngstown-Warren-Boardman, OH-PA	3,459	383	162	33	2,361	520
Lakeland-Winter Haven, FL	3,456	589	63	29	2,388	388
Appleton, WI	3,432	226	85	<10	2,761	357
Flint, MI	3,356	264	30	<10	1,593	1,462
Peoria, IL	3,340	412	108	224	2,389	206
Rockford, IL	3,307	215	44	25	2,096	926
Evansville, IN-KY	3,304	325	110	86	2,465	317
South Bend-Mishawaka, IN-MI	3,251	845	110	22	1,847	427
Oshkosh-Neenah, WI	3,237	203	239	23	2,085	687
Wilmington, NC	3,228	338	106	20	2,558	207
Eugene, OR	3,221	310	180	20	2,359	352
Anchorage, AK	3,214	201	168	30	2,646	169
Bend-Redmond, OR	3,172	991	143	<10	1,882	149
Naples-Immokalee-Marco Island, FL	3,153	211	19	44	2,679	200
Port St. Lucie, FL	3,110	592	30	19	2,210	260
Deltona-Daytona Beach-Ormond Beach, FL	3,078	281	91	27	2,373	305
Salinas, CA	3,075	618	65	310	1,658	424
Kingsport-Bristol-Bristol, TN-VA	3,045	262	172	44	2,137	430

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Vallejo-Fairfield, CA	3,019	192	330	23	1,951	523
Scranton--Wilkes-Barre--Hazleton, PA	3,013	421	192	53	2,013	335
Canton-Massillon, OH	3,001	72	44	25	2,255	606
Trenton, NJ	2,992	769	97	11	1,892	223
Cedar Rapids, IA	2,973	781	86	62	1,799	246
Greeley, CO	2,973	824	230	368	1,305	246
Charlottesville, VA	2,955	934	80	22	1,817	103
Pensacola-Ferry Pass-Brent, FL	2,937	231	44	23	2,341	297
Saginaw, MI	2,901	1,070	18	<10	1,165	642
Visalia-Porterville, CA	2,891	406	67	371	1,507	540
Fargo, ND-MN	2,850	554	91	41	1,814	349
Tallahassee, FL	2,835	543	82	29	1,918	263
Lafayette-West Lafayette, IN	2,788	205	40	23	1,168	1,352
Lynchburg, VA	2,711	418	70	<10	2,022	198
Barnstable Town, MA	2,668	462	87	<10	1,903	211
Bellingham, WA	2,643	650	77	62	1,696	159
Tuscaloosa, AL	2,589	111	64	10	1,378	1,026
Myrtle Beach-Conway-North Myrtle Beach, SC-NC	2,586	238	30	28	2,160	130
Longview, TX	2,528	178	112	<10	2,050	182
Shreveport-Bossier City, LA	2,505	604	184	<10	1,462	249
Fort Smith, AR-OK	2,490	106	327	32	1,832	193
Norwich-New London, CT	2,484	407	76	<10	1,888	114
Santa Cruz-Watsonville, CA	2,480	469	95	116	1,321	479
Battle Creek, MI	2,460	122	10	<10	1,582	742
McAllen-Edinburg-Mission, TX	2,458	367	64	20	1,586	422
Fayetteville, NC	2,342	79	92	199	1,715	257
Gulfport-Biloxi-Pascagoula, MS	2,326	113	65	<10	1,982	163
Duluth, MN-WI	2,303	232	136	<10	1,743	187
Lafayette, LA	2,270	98	151	42	1,757	222
Huntington-Ashland, WV-KY-OH	2,258	105	89	<10	1,622	441
Amarillo, TX	2,246	467	77	<10	1,397	301
Billings, MT	2,238	82	106	<10	1,826	216
Rapid City, SD	2,219	510	109	<10	1,456	142
Lubbock, TX	2,209	203	56	16	1,570	365
Blacksburg-Christiansburg-Radford, VA	2,186	91	55	<10	1,104	927
Racine, WI	2,141	94	25	<10	1,710	307
Bowling Green, KY	2,137	128	22	<10	1,187	792
Columbus, IN	2,120	54	53	<10	1,353	654
Wausau, WI	2,107	100	31	<10	1,792	178
Hickory-Lenoir-Morganton, NC	2,075	109	42	21	1,430	473
Crestview-Fort Walton Beach-Destin, FL	2,045	171	38	11	1,688	136
Savannah, GA	2,020	149	41	<10	1,625	202
Clarksville, TN-KY	2,011	232	92	47	1,140	500

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Eau Claire, WI	2,010	99	44	15	1,669	182
Chico, CA	1,995	655	43	50	1,019	229
Yakima, WA	1,969	198	51	447	1,142	132
Ocala, FL	1,950	252	25	12	1,305	356
Jackson, TN	1,939	453	157	28	961	340
Tyler, TX	1,919	237	131	16	1,283	252
Lake Charles, LA	1,902	38	118	37	1,631	78
Waco, TX	1,901	139	49	<10	1,443	265
Olympia-Tumwater, WA	1,900	148	89	29	1,505	129
Bloomington, IL	1,842	448	37	24	813	520
Gainesville, FL	1,821	392	23	16	1,285	105
St. George, UT	1,787	30	98	<10	1,483	173
Medford, OR	1,781	206	92	13	1,312	159
Killeen-Temple, TX	1,756	168	47	<10	1,223	311
Springfield, IL	1,717	299	41	27	1,188	162
La Crosse-Onalaska, WI-MN	1,693	84	27	<10	1,422	159
Sioux City, IA-NE-SD	1,673	253	45	23	1,122	230
Odessa, TX	1,649	304	79	<10	1,042	223
Charleston, WV	1,630	115	188	<10	1,160	167
College Station-Bryan, TX	1,629	179	62	<10	1,217	166
Jefferson City, MO	1,627	564	49	16	849	149
Topeka, KS	1,622	153	71	<10	1,214	177
Midland, TX	1,619	189	157	<10	1,017	251
Bismarck, ND	1,604	468	64	<10	948	120
Pittsfield, MA	1,595	123	77	<10	1,238	150
Champaign-Urbana, IL	1,589	160	60	45	1,063	260
Hagerstown-Martinsburg, MD-WV	1,571	75	46	<10	1,292	151
Rochester, MN	1,549	31	63	38	1,273	144
Erie, PA	1,549	178	57	82	1,065	166
Redding, CA	1,535	274	46	10	921	286
Monroe, MI	1,523	746	43	11	547	176
Morristown, TN	1,517	574	40	<10	424	472
Bremerton-Silverdale, WA	1,513	106	73	<10	1,238	93
Terre Haute, IN	1,511	134	45	10	872	450
Salisbury, MD-DE	1,477	140	19	19	1,195	104
Waterloo-Cedar Falls, IA	1,466	280	26	24	964	172
Harrisonburg, VA	1,462	50	17	15	1,093	286
Janesville-Beloit, WI	1,429	39	44	<10	1,090	249
Warner Robins, GA	1,428	695	19	<10	511	195
Kokomo, IN	1,423	37	32	<10	386	965
Johnson City, TN	1,422	69	109	10	1,069	165
Columbia, MO	1,415	85	16	11	1,107	195
Lima, OH	1,412	393	<10	125	479	409

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Brownsville-Harlingen, TX	1,408	300	66	<10	785	251
Dalton, GA	1,403	1,055	18	<10	233	95
Panama City, FL	1,402	84	31	<10	1,170	112
Bangor, ME	1,387	285	48	23	879	152
Napa, CA	1,383	140	41	35	1,043	124
Columbus, GA-AL	1,379	106	32	<10	1,030	207
Cleveland, TN	1,368	673	68	33	520	73
Atlantic City-Hammonton, NJ	1,363	262	89	70	831	111
Dover, DE	1,361	67	18	20	1,183	73
Dothan, AL	1,360	319	36	14	890	102
Cheyenne, WY	1,352	53	54	17	1,157	70
Utica-Rome, NY	1,346	95	54	10	884	303
Binghamton, NY	1,344	82	62	<10	1,010	180
Casper, WY	1,339	53	67	<10	1,116	93
Mount Vernon-Anacortes, WA	1,338	301	98	44	826	69
Greenville, NC	1,334	146	14	16	1,059	98
Florence, SC	1,332	312	23	<10	842	147
Gainesville, GA	1,306	78	28	<10	762	434
Fond du Lac, WI	1,291	48	154	<10	966	120
Jackson, MI	1,269	92	12	<10	777	386
El Centro, CA	1,263	469	26	211	415	142
Yuma, AZ	1,253	47	345	40	705	116
Missoula, MT	1,230	93	38	<10	988	104
Niles-Benton Harbor, MI	1,230	161	21	40	722	286
Logan, UT-ID	1,228	45	147	<10	881	151
Idaho Falls, ID	1,227	268	72	17	735	135
Joplin, MO	1,226	35	136	22	748	285
Pueblo, CO	1,208	227	98	26	768	89
Prescott, AZ	1,178	74	23	<10	979	99
Iowa City, IA	1,176	255	25	13	804	79
Mansfield, OH	1,174	21	18	<10	833	297
Abilene, TX	1,162	190	36	<10	766	167
Grand Junction, CO	1,155	157	57	43	739	159
Florence-Muscle Shoals, AL	1,143	69	37	<10	709	320
Muskegon, MI	1,141	169	63	13	693	202
Merced, CA	1,141	215	21	89	541	275
Glens Falls, NY	1,137	571	<10	<10	485	67
Dubuque, IA	1,130	157	25	15	774	159
Decatur, IL	1,124	133	24	<10	652	310
Coeur d'Alene, ID	1,117	211	72	<10	749	82
Laredo, TX	1,096	128	60	<10	656	250
Auburn-Opelika, AL	1,095	51	28	14	761	241
Macon, GA	1,091	122	25	10	825	109

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Santa Fe, NM	1,084	502	20	<10	498	59
Wenatchee, WA	1,081	155	25	206	650	44
Bloomington, IN	1,080	207	41	<10	740	87
Athens-Clarke County, GA	1,076	307	22	<10	659	81
Rocky Mount, NC	1,069	51	14	60	890	54
Decatur, AL	1,059	76	53	<10	852	72
Grand Forks, ND-MN	1,049	194	29	29	687	109
State College, PA	1,032	159	69	<10	752	49
Alexandria, LA	1,008	269	85	26	551	77
Las Cruces, NM	994	228	16	62	617	70
Monroe, LA	991	118	32	<10	739	100
Weirton-Steubenville, WV-OH	977	583	18	<10	341	35
Michigan City-La Porte, IN	976	56	22	10	809	79
Hattiesburg, MS	968	47	45	<10	770	98
Albany, GA	956	146	20	<10	686	97
St. Joseph, MO-KS	954	91	264	10	502	88
Kingston, NY	949	107	10	33	674	124
Sheboygan, WI	945	87	31	10	759	58
Sebastian-Vero Beach, FL	940	130	<10	10	728	68
Ithaca, NY	931	190	<10	<10	506	225
Lewiston-Auburn, ME	924	165	29	<10	642	80
Ames, IA	924	354	16	18	468	68
San Angelo, TX	923	98	180	<10	521	123
Corvallis, OR	922	159	50	<10	673	33
Burlington, NC	920	48	<10	<10	706	152
Winchester, VA-WV	914	26	21	12	737	119
Sandusky, OH	900	159	<10	30	307	395
Flagstaff, AZ	899	262	27	<10	544	64
Springfield, OH	884	25	<10	18	353	482
Valdosta, GA	876	20	262	10	539	44
Mankato-North Mankato, MN	870	<10	36	19	673	133
Goldsboro, NC	859	24	10	25	688	113
Punta Gorda, FL	848	68	<10	<10	681	87
Holland, MI	847	90	33	17	575	132
Elizabethtown-Fort Knox, KY	844	20	12	<10	511	297
Muncie, IN	836	45	26	<10	546	212
Morgantown, WV	829	61	61	<10	654	51
Farmington, NM	821	64	407	10	272	68
Jacksonville, NC	817	57	<10	<10	663	81
Jonesboro, AR	813	51	18	48	595	101
Houma-Thibodaux, LA	809	39	70	11	617	73
Yuba City, CA	804	96	45	45	478	140
Madera, CA	801	117	13	36	499	136

TABLE 8 // U.S. CLEAN ENERGY EMPLOYMENT by metro 2022

Metro	Clean Energy Jobs	Renewable Generation	Storage & Grid	Biofuels	Energy Efficiency	Clean Vehicle
Sherman-Denison, TX	775	90	149	<10	429	106
Owensboro, KY	768	15	11	20	524	198
Altoona, PA	757	39	59	<10	530	127
Texarkana, TX-AR	753	51	17	<10	471	207
Fairbanks, AK	753	87	60	<10	556	46
Lake Havasu City-Kingman, AZ	750	46	34	<10	538	130
Wheeling, WV-OH	744	89	36	<10	554	64
Great Falls, MT	740	27	27	<10	621	61
Wichita Falls, TX	723	109	27	<10	471	114
Williamsport, PA	712	47	48	20	505	93
Gadsden, AL	687	34	166	<10	348	137
Danville, VA	672	49	16	<10	411	191
Johnstown, PA	635	45	27	<10	425	135
Lawrence, KS	626	85	<10	10	484	43
Lebanon, PA	625	69	20	<10	391	136
Longview, WA	620	48	40	<10	475	47
Pocatello, ID	613	66	92	12	407	37
Anniston-Oxford-Jacksonville, AL	594	46	16	<10	349	180
Elmira, NY	592	34	14	<10	427	110
Kankakee, IL	589	49	25	28	376	112
Bay City, MI	578	58	19	<10	367	131
Cape Girardeau, MO-IL	575	42	13	<10	421	93
Manhattan, KS	571	37	17	<10	464	47
Sumter, SC	570	73	82	<10	377	29
Vineland-Bridgeton, NJ	567	25	12	84	376	70
Victoria, TX	566	67	45	<10	385	68
Hot Springs, AR	543	42	<10	17	432	43
Cumberland, MD-WV	464	24	<10	<10	397	34
Parkersburg-Vienna, WV	447	29	28	<10	322	69
Hanford-Corcoran, CA	446	54	15	27	240	111
Lawton, OK	431	52	11	62	275	30
Brunswick, GA	416	50	<10	<10	295	62
Pine Bluff, AR	383	66	<10	17	247	50
Ocean City, NJ	370	26	<10	<10	285	45
Carson City, NV	362	82	<10	<10	186	87
Lewiston, ID-WA	358	27	24	<10	275	28
Rome, GA	356	33	<10	<10	184	129
Danville, IL	292	26	14	11	174	68
Hinesville, GA	108	<10	<10	<10	78	25

Note: An additional 417,883 clean energy jobs are found in rural or nonmetropolitan areas[5]

ENDNOTES

1 Unless otherwise stated, all data is from the 2023 U.S. Energy and Employment Report (USEER), June 2023, Department of Energy (DOE). See Pages 201-206 for methodology questions.

2 E2. Clean Economy Works: IRA One-Year Review. August 2023. Available at https://e2.org/reports/clean-economy-works-2023.

3 Information on the representation of people with disabilities, lesbian, gay, bisexual, transgender, intersex, and queer people, immigrants, religious minorities, and young people in clean energy is limited. Based on the available data from the Bureau of Labor Statistics (BLS) and the supplemental employer survey used by the USEER, this analysis was unable to produce any findings regarding those groups.

4 United States Bureau of Labor Statistics (BLS) 2022 Q4 employment, all ownerships (accessed June 2023)

5 Rural clean energy jobs are calculated based on the Bureau of Labor Statistics' (BLS) nonmetropolitan area for every state, which is any area not designated as a metropolitan area by BLS. This is the most commonly used definition to analyze rural and small-town trends, and is available at https://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural. New Jersey, Rhode Island, and the District of Columbia contain no nonmetropolitan statistical areas.

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