

# CLEAN JOBS NEW JERSEY

## 51,852 CLEAN ENERGY JOBS ACROSS NEW JERSEY<sup>1</sup>

### NEW JERSEY'S CLEAN ENERGY TRANSITION: JOBS, ECONOMIC JUSTICE PRIMARY BAROMETERS OF SUCCESS

New Jersey is changing how it generates electricity. Companies are replacing fossil fuels with more solar, offshore wind, energy storage, and a smarter grid. As the state commits to scale energy efficiency, demand for the power we need to go about our daily lives is flattening and will decrease. As these major changes occur, New Jersey has an opportunity to capitalize on clean energy's economic benefits—including job growth and lower electric bills. A successful transition to a highly efficient electric sector, powered by more wind and solar, will assist communities and workers currently reliant on nuclear and fossil fuels for their tax revenue and jobs. With nearly 52,000 clean energy jobs across New Jersey already, the state has a solid foundation on which to build a just and thriving 21st-century economy powered by clean energy—not fossil fuels.

### CLEAN ENERGY JOBS IN PERSPECTIVE

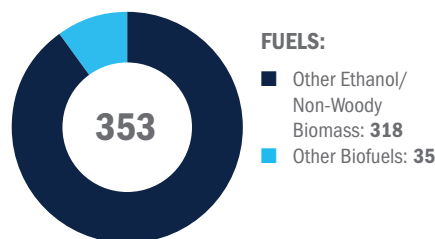
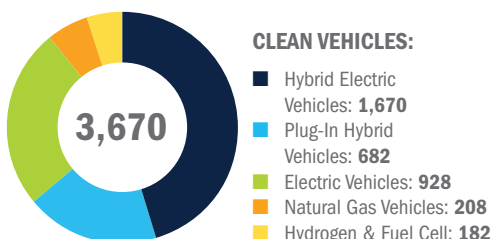
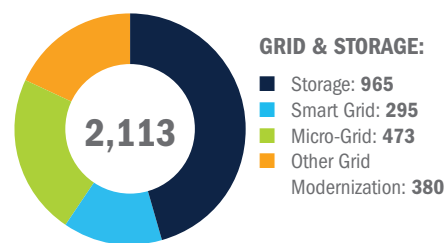
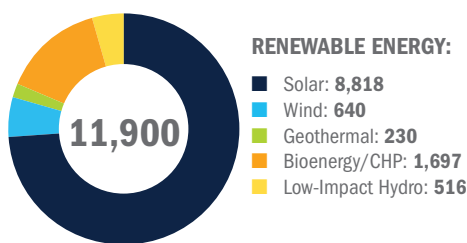
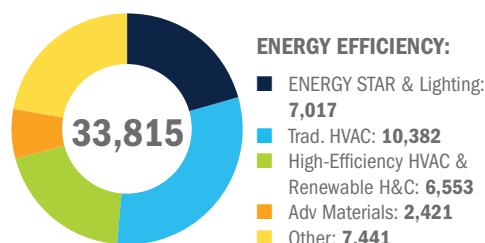
**13.3%** of New Jersey clean energy workers are veterans

**All 21 COUNTIES** in New Jersey employ clean energy workers. 15 employ over 1,000

**2/3** of clean energy jobs in New Jersey are in energy efficiency

**#9** New Jersey ranks ninth in the U.S. for renewable energy jobs

### INDUSTRY BREAKDOWN: JOBS



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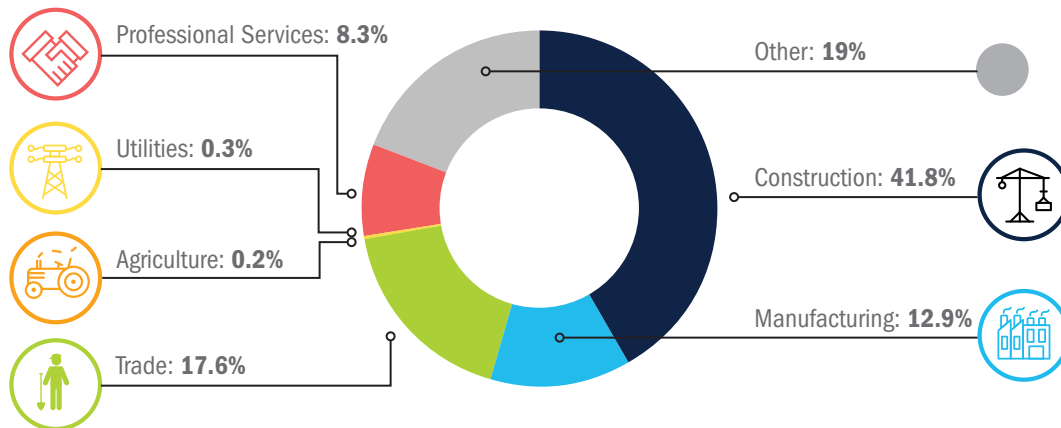
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For questions regarding this report, visit E2's Clean Jobs America  
FAQ at [www.e2.org/reports/clean-jobs-america-faq](http://www.e2.org/reports/clean-jobs-america-faq).



## CLEAN JOBS BREAKDOWN BY VALUE CHAIN



## POLICIES MATTER

### OVERVIEW

New Jersey was one of the early leaders in clean energy, launching a billion-dollar investment program for energy efficiency, adopting a renewable portfolio standard (RPS) in 1999, and committing to reduce greenhouse gas emissions 80 percent by 2050 in the 2007 Global Warming Response Act. The state was also a founding member of the Regional Greenhouse Gas Initiative (RGGI) and consistently ranks in the top 5 states for solar power.

Although the state lost its leadership status under Gov. Chris Christie, dropping out of RGGI and plummeting to 24th in the ACEEE energy efficiency rankings, it has a strong foundation on which to build. In 2018, the state passed a sweeping Clean Energy Act that will drive billions of dollars of investment in energy efficiency and renewable energy, setting New Jersey on a course for a dramatic increase in clean energy jobs.



### SOLAR POWER

While New Jersey remains a top performer for solar power, the state's incentive program has created boom and bust cycles that resulted in high financing and project costs. The new Clean Energy Act directs the Board of Public Utilities (BPU) to transition to a new approach that will continually reduce costs. Today, solar energy costs 86 percent less across North America than it did in 2009, and similar cost declines have occurred in New Jersey. New Jersey must develop and implement new incentive programs that are stable and predictable, so that as costs continue to decline, solar development will continue to flourish.

The Clean Energy Act also calls for community and utility scale solar. As a densely populated state with longstanding and ongoing land preservation and natural resource protection efforts, New Jersey must continue to direct large scale solar development to locations that protect New Jersey's remaining open space.

***New Jersey consistently ranks in the top 5 states for solar power generation, and is No. 9 for jobs in solar.***



### ENERGY EFFICIENCY

New Jersey's energy efficiency performance slid from a ranking of eighth to a low of 24th during the Christie administration. The state's current programs deliver a paltry 0.55 percent annual savings.

The Clean Energy Act directs the state to get back in the game and more than quadruple annual electricity savings to at least 2 percent (0.75 percent for gas). The BPU must define "all cost-effective" energy efficiency; approve a comprehensive package of residential, commercial and industrial programs; determine the appropriate administrative structure; and ensure a smooth transition from the current slate of programs.

New Jersey can help residents save even more energy and further lower energy bills by adopting minimum performance standards for a host of appliances and equipment not subject to federal regulation, such as showerheads, computer monitors, portable air conditioners, and commercial dishwashers.

## POLICIES MATTER



### NEW UTILITY BUSINESS MODEL

To realize the promise of New Jersey's clean energy policies, the state must overhaul the regulatory framework governing the way utilities do business. Current regulation ties utility financial health to sales—the more kilowatt-hours of electricity or therms of gas they sell, the more they make. This framework made sense when the goal was to electrify the country, but now we need a framework that “decouples” sales and profits and instead rewards utilities for delivering clean, safe, and affordable energy resources.



### OFFSHORE WIND

New Jersey's strong RPS helped launch the wind industry in the eastern United States, but it drove development primarily in Pennsylvania, since New Jersey—the most densely populated state—itself has little room for onshore wind. However, offshore wind is a different story. Gov. Phil Murphy has an ambitious goal—3,500 megawatts. The state is in the middle of its first utility-scale procurement, and must take steps to attract ports and staging, ensuring offshore wind interconnection to New Jersey. It is critical the BPU include a mandate for “Best Management Practices” within its procurement mechanism in order to ensure that offshore development does not impact the fragile ecosystem of the endangered right whale.



### CLIMATE

New Jersey was a founding member of RGGI, an innovative program under which nine northeast and mid-Atlantic states cap carbon pollution from power plants and auction pollution permits to the plant owners, providing a revenue stream they can use to invest in clean energy solutions like efficiency, solar, and wind. This approach creates a virtuous cycle that lowers pollution, lowers energy costs, creates tens of thousands of jobs, and keeps energy dollars in the state. The New Jersey Department of Environmental Protection (DEP) is launching a rulemaking that will bring the state back into RGGI in 2020.

New Jersey is also engaging in the Transportation and Climate Initiative, a new effort among many northeast and mid-Atlantic states to explore options for a regional policy that will reduce transportation sector climate emissions on the scale and timeframe needed to meet the states' commitments to reduce greenhouse gases economy-wide 80 percent by 2050, while driving investment in a modern, cleaner, more equitable transportation system.



### ELECTRIC VEHICLES

New Jersey has begun to demonstrate leadership on electric vehicles (EVs) by formally joining the Zero Emissions Vehicle (ZEV) Memorandum of Understanding (MOU) with eight other northeastern and western states to accelerate transportation electrification. This agreement commits New Jersey and automakers to having approximately 330,000 EVs on the road by 2025.

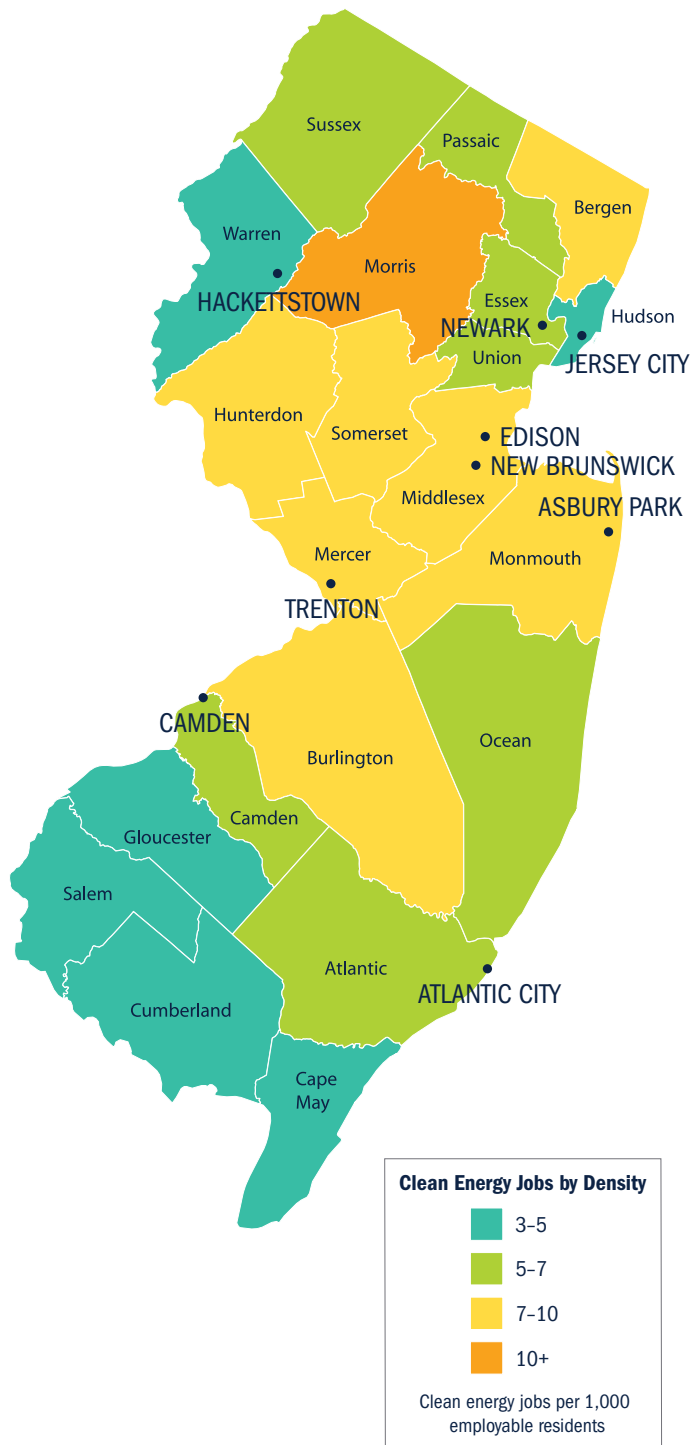
To further drive innovation and provide greater consumer choices, New Jersey can pursue a suite of clean transportation policies that bolster its commitment to the ZEV MOU. First, New Jersey should pass legislation that provides a clear pathway for electric utility investment in market acceleration programs—such as charging stations and customer education and outreach—for electric transportation. Second, New Jersey should establish a baseline charging station network that is accessible to all EV drivers and supports the growth of the market. Third, New Jersey should establish a rebate program for the purchase of EVs to incentivize greater adoption.

New Jersey also has a significant opportunity to drive transportation electrification with the administration of approximately \$72 million in allocated Volkswagen Settlement funds. These funds should be used to support not only EV charging infrastructure, but also replacements of old, diesel-powered vehicles for cleaner medium- and heavy-duty vehicles like buses, trucks, and port equipment. The DEP should, in line with other states in the region, publish a draft plan for public comment outlining how the state plans to leverage the funds to meet state goals.

Finally, two of the state's large investor-owned utilities have announced plans to support transportation electrification in New Jersey. In September 2018, PSE&G announced a \$364 million initiative to accelerate EV growth in New Jersey through investments in charging stations, customer education and outreach, and other initiatives. Similarly, Atlantic City Electric has also proposed a \$15 million program to drive EV adoption in its service area. The BPU—the utilities' regulator—should expeditiously review and approve these programs to reduce barriers to transportation electrification and increase New Jersey's competitiveness in the EV market.

***As the most densely populated state, New Jersey has so little room for onshore wind. But offshore wind is a different story. Gov. Phil Murphy has set the most ambitious goal of any state—3,500 megawatts.***

## NEW JERSEY CLEAN JOBS BY DENSITY<sup>2</sup>



## TOP COUNTIES

County	Clean Energy Jobs*	Renewable Energy Jobs	Energy Efficiency Jobs
Bergen	6,426	1,257	4,209
Middlesex	5,196	932	3,521
Morris	5,003	929	3,502
Monmouth	4,794	1,690	2,583
Essex	3,870	723	2,721
Union	3,004	574	1,966
Camden	2,640	503	1,768
Burlington	2,608	559	1,616
Mercer	2,537	461	1,766
Somerset	2,466	745	1,465
Ocean	2,402	1,390	1,402
Passaic	2,063	500	1,288
Hudson	1,990	374	1,360
Atlantic	1,193	230	767
Gloucester	1,140	172	765
Hunterdon	905	281	532
Sussex	746	289	381
Cumberland	491	80	341
Cape May	389	73	266
Warren	276	17	201
Salem	177	34	123

\* Total includes all clean energy jobs categories, including solar, wind, energy efficiency, clean vehicles, battery storage, advanced biofuels, low-impact hydro and other areas.

## TOP METROS FOR CLEAN ENERGY JOBS

Metro Area (MSA)	Clean Energy Jobs*	Renewable Energy Jobs	Energy Efficiency Jobs
New York-Northern New Jersey-Long Island	39,186	9,478	25,131
Philadelphia-Camden-Wilmington	6,989	1,448	4,720
Trenton-Ewing	2,463	520	1,632
Atlantic City	1,272	164	934
Ocean City	724	124	504

\* Total includes all clean energy jobs categories, including solar, wind, energy efficiency, clean vehicles, battery storage, advanced biofuels, low-impact hydro and other areas.

### CLEAN ENERGY CASE STUDY: N.J. PROPERTY DEVELOPER CREATES JOBS—AND PROVIDES AFFORDABLE CLEAN ENERGY ACCESS

When you think about jobs in the clean energy and clean transportation industries, what scenes come to mind? A solar installer perched on a suburban rooftop? A machinist on a Chevy Volt manufacturing line? While certainly counted among America's 3 million clean energy jobs, products resulting from these occupations are simply unaffordable for many people across the country, including in New Jersey.

In 1986, New Jersey tax attorney Ed Martoglio and two partners recognized an opportunity in the federal tax code. By constructing energy-efficient housing for low-income residents, Martoglio could build a successful property business that would be able to provide for his family, and maybe even create a few local jobs. At the same time, Martoglio's company—RPM Development Group, headquartered in Montclair—could also build homes for people who otherwise might not enjoy access to clean energy and clean transportation technologies.

"We believe in the idea of serving the whole population," said Kevin Kavanaugh, vice president of development at RPM. "There's an underserved part of the population that for no reason other than their circumstances can't afford expensive housing but they deserve nice homes like anyone else."

RPM is a mission-driven private company. It employs 150 New Jerseyans, most of whom are involved in property management activities like leasing, or in other major segments of the business including construction and property development. Many of RPM's workers have helped procure or install clean energy technologies like PV solar, solar hot-water heaters and electric vehicle charging stations. RPM workers have also installed energy efficiency measures like LED lighting in hallways, double-paned windows in bedrooms, air curtains at building entrances, and extra insulation in attics and walls.

Over the past three decades, RPM has invested hundreds of millions of dollars in residential property development statewide. New construction has risen on underutilized land. Polluted industrial properties have been cleaned up and redeveloped. Historic buildings have been restored.

Now home to thousands of low-income New Jerseyans, dozens of RPM's residential communities are showcases for how clean energy can improve residents' quality of life while boosting a property owner's bottom line.

For example, by leveraging the financial benefits of a federal low-income housing tax credit, RPM

recently developed a multi-family property in Westville. The energy-efficient property optimizes its orientation to the sun and, by using clean energy technologies like solar PV, it's considered a "net-zero" property because it produces as much energy as it consumes. This improves the air quality of the home, cuts carbon emissions, and slashes energy bills.

All residents of New Jersey's first net-zero multi-family house will be low-income, and a quarter of the units are reserved for residents with developmental disabilities.

RPM is proving clean energy isn't just for people whose income allows them to invest in rooftop solar installations or purchase the latest electric vehicle rolling off the assembly line.

"There are two main reasons why we focus on sustainability," Kavanaugh said. "The first is the argument that, above all, people deserve the opportunity to live with dignity in a nice home. The other reason is practical. We are owner-operators. So from a bottom-line perspective, it makes sense to build an efficient building."

"Furthermore, if the technology—to make homes more efficient and sustainable—is out there and can reduce your carbon footprint, why not?"

***"Furthermore, if the technology — to make homes more efficient and sustainable — is out there and can reduce your carbon footprint, why not?"***

Solar panels on an RPM building in Orange. The residential property has 70 units of affordable housing, including five units set aside for homeless veterans. (Photo courtesy of RPM)





## NEW JERSEY CLEAN ENERGY JOBS BY DISTRICT

Data shows that distribution of clean energy jobs in New Jersey crosses all political boundaries, with clean energy jobs in every congressional and state assembly district.

### U.S. CONGRESSIONAL DISTRICT

District	Clean Energy Jobs*	Renewable Energy Jobs	Energy Efficiency Jobs
1 (Rep. Norcross)	3,924	773	2,662
2 (Rep. Van Drew)	3,437	607	2,397
3 (Rep. Kim)	4,886	1,109	3,191
4 (Rep. Smith)	5,372	1,691	3,108
5 (Rep. Gottheimer)	6,117	1,178	4,169
6 (Rep. Pallone Jr.)	3,223	770	2,070
7 (Rep. Malinowski)	7,555	1,711	4,934
8 (Rep. Sires)	3,847	774	2,595
9 (Rep. Pascrell)	4,385	994	2,938
10 (Rep. Payne Jr.)	1,421	297	950
11 (Rep. Sherrill)	4,727	1,156	3,014
12 (Rep. Watson Coleman)	2,957	842	1,787

\* Total includes all clean energy jobs categories, including solar, wind, energy efficiency, clean vehicles, battery storage, advanced biofuels, low-impact hydro and other areas.

### STATE LEGISLATURE

District	Representatives	Clean Energy Jobs	District	Representatives	Clean Energy Jobs	District	Representatives	Clean Energy Jobs
1	Sen. Andrzejczak Asm. Land	1,410	9	Sen. Connors Asm. Rumpf Asm. Gove	1,466	16	Sen. Bateman Asm. Freiman Asm. Zwicker	2,167
2	Sen. Brown Asm. Mazzeo Asm. Armato	1,428	10	Sen. Holzapfel Asm. McGuckin Asm. Wolfe	1,542	17	Sen. Smith Asm. Egan Asm. Danielson	1,211
3	Sen. Sweeney Asm. Burzichelli Asm. Taliaferro	922	11	Sen. Gopal Asm. Houghtaling Asm. Downey	2,792	18	Sen. Diegnan Jr. Asm. Pinkin Asm. Karabinchak	817
4	Sen. Madden Asm. Mosquera Asm. Moriarty	793	12	Sen. Thompson Asm. Dancer Asm. Clifton	1,598	19	Sen. Vitale Asm. Coughlin Asm. Lopez	719
5	Sen. Cruz-Perez Asm. Egan Jones Asm. Spearman	1,144	13	Sen. O'Scanlon Asm. Handlin Asm. DiMaso	947	20	Sen. Cryan Asm. Quijano Asm. Holley	821
6	Sen. Beach Asm. Greenwald Asm. Lampitt	991	14	Sen. Greenstein Asm. DeAngelo Asm. Benson	1,594	21	Sen. Kean Jr. Asm. Bramnick Asm. Munoz	2,048
7	Sen. Singleton Asm. Conaway Jr. Asm. Murphy	1,494	15	Sen. Turner Asm. Verrelli Asm. Reynolds-Jackson	1,348	22	Sen. Scutari Asm. Carter Asm. Kennedy	1,006
8	Sen. Addiego Asm. Howarth ASM. Peters	1,124				23	Sen. Doherty Asm. DiMaio Asm. Peterson	1,202

**STATE LEGISLATURE CONTINUED**

District	Representatives	Clean Energy Jobs	District	Representatives	Clean Energy Jobs	District	Representatives	Clean Energy Jobs
24	Sen. Oroho Asm. Space Asm. Wirths	1,457	30	Sen. Singer Asm. Kean Asm. Thomson	752	36	Sen. Sarlo Asm. Schaer Asm. Calabrese	968
25	Sen. Bucco Asm. Carroll Asm. Bucco	2,058	31	Sen. Cunningham Asm. Chiaravalloti Asm. McKnight	914	37	Sen. Weinberg Asm. Johnson Asm. Huttie	2,021
26	Sen. Pennacchio Asm. DeCroce Asm. Webber	1,929	32	Sen. Sacco Asm. Mejia Asm. Jimenez	807	38	Sen. Lagana Asm. Swain Asm. Tully	1,443
27	Sen. Codey Asm. Jasey Asm. McKeon	1,257	33	Sen. Stack Asm. Mukherji Asm. Chaparro	496	39	Sen. Cardinale Asm. Auth Asm. Schepisi	1,836
28	Sen. Rice Asm. Caputo Asm. Tucker	840	34	Sen. Gill Asm. Giblin Asm. Timberlake	914	40	Sen. Corrado Asm. Rooney Asm. DePhillips	1,326
29	Sen. Ruiz Asm. Pintor Marin Asm. Speight	988	35	Sen. Pou Asm. Sumter Asm. Wimberly	1,261			

**ENDNOTES**

- 1 Unless otherwise stated, all data is from the 2018 U.S. Energy & Employment Report (USEER) released in May 2018 by the National Association of State Energy Officials and the Energy Futures Initiative. Visit [www.usenergyjobs.org](http://www.usenergyjobs.org) to download USEER and see pages 15-17 for methodology questions. This fact sheet differs from previous reports released by E2 in New Jersey as the methodology has been adjusted to more accurately count the number of clean energy workers in the state. For more questions regarding methodology, visit [www.e2.org/cleanjobsamerica/FAQ](http://www.e2.org/cleanjobsamerica/FAQ).
- 2 County employable population data based on 2017 American Community Survey (ACS) 5-year estimate of residents 16 years and older from the U.S. Census Bureau accessible at <https://factfinder.census.gov>.

**PRESENTED BY:**


E2 is a national, nonpartisan group of business leaders, investors and others who advocate for smart policies that are good for the environment and good for the economy.



Clean Jobs Count is a campaign to raise awareness of the economic importance of the clean economy. Visit [www.cleanjobscount.org](http://www.cleanjobscount.org) to join thousands of business leaders, workers and others to tell lawmakers and policymakers that clean jobs count.

**THANKS TO SUPPORT FROM:**

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2019 U.S. Energy  
and Employment  
Report

