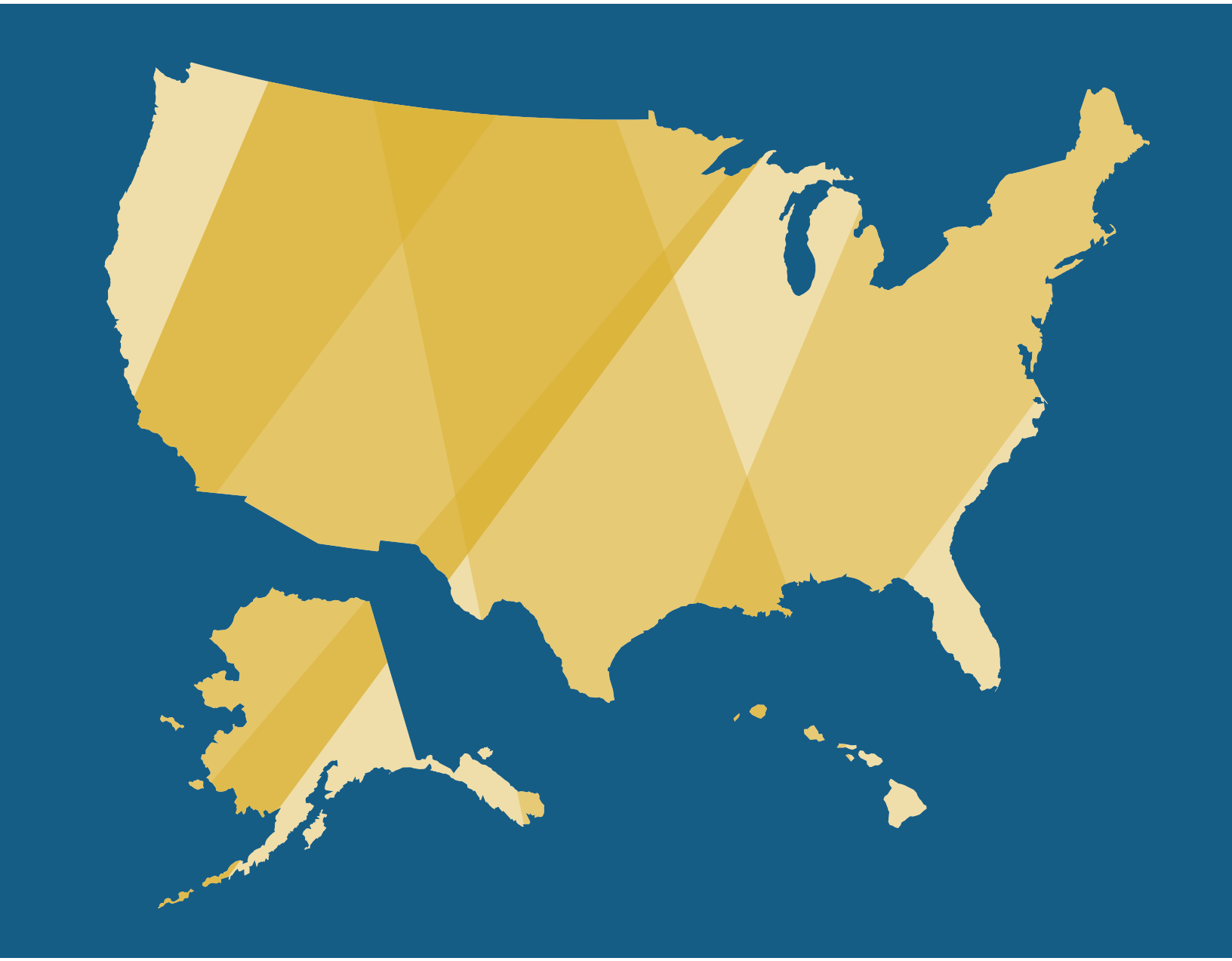
Energy Efficiency Jobs in America

2.3 MILLION AMERICANS WORK IN ENERGY EFFICIENCY



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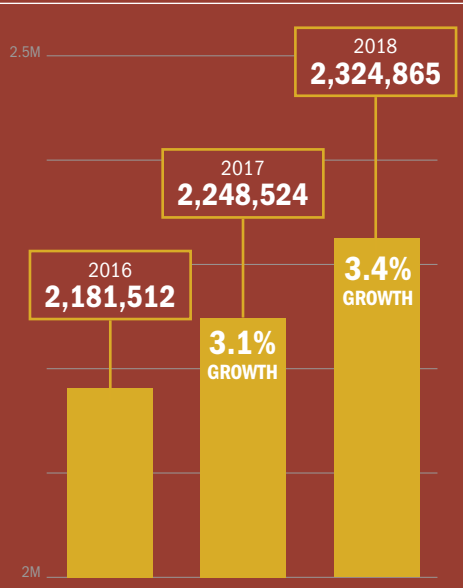
ENERGY EFFICIENCY JOBS IN AMERICA 2019[1]

JOB GROWTH TREND



IN PERSPECTIVE

No. 1

Energy efficiency is the fastest-growing jobs sector in the energy industry, accounting for about half (76,000) of the entire energy industry's new jobs (151,700) in 2018

10%

Percentage of energy efficiency jobs held by veterans (236,000), greater than the national average of veterans in the workforce (6%)

321,582

The number of manufacturing jobs in energy efficiency, an increase of nearly 10% in 2018 alone

2X

Energy efficiency employs twice as many workers in the U.S. as the entire fossil fuel industry

1 of every 4 jobs in the U.S. energy sector is in energy efficiency

LEADING AMERICA'S ENERGY SECTOR WORKFORCE

For the second year in a row, America's energy efficiency businesses led the nation's energy economy in creating jobs—accounting for about half (76,000) of the sector's entire job growth in 2018 (151,700). Energy efficiency employs more Americans than the entire fossil fuel industry in 41 states and the District of Columbia, and twice as many nationwide.

Energy efficiency's consistently strong year-over-year job growth—and growing integration in the economic value chain and built environment—is turning the industry into the energy sector's most viable (and efficient) job creator. Across every time zone, state, county line, and even zip code, energy efficiency solutions are advancing economic opportunities for American workers and their families. Jobs that will grow locally, jobs that become careers, and jobs that cannot be outsourced.

A BIGGER PICTURE

This report focuses solely on the energy efficiency sector of the economy. Jobs in retail trade, vehicle efficiency-related work, and the 4.2 million jobs related to efficient manufacturing processes are excluded from these numbers.

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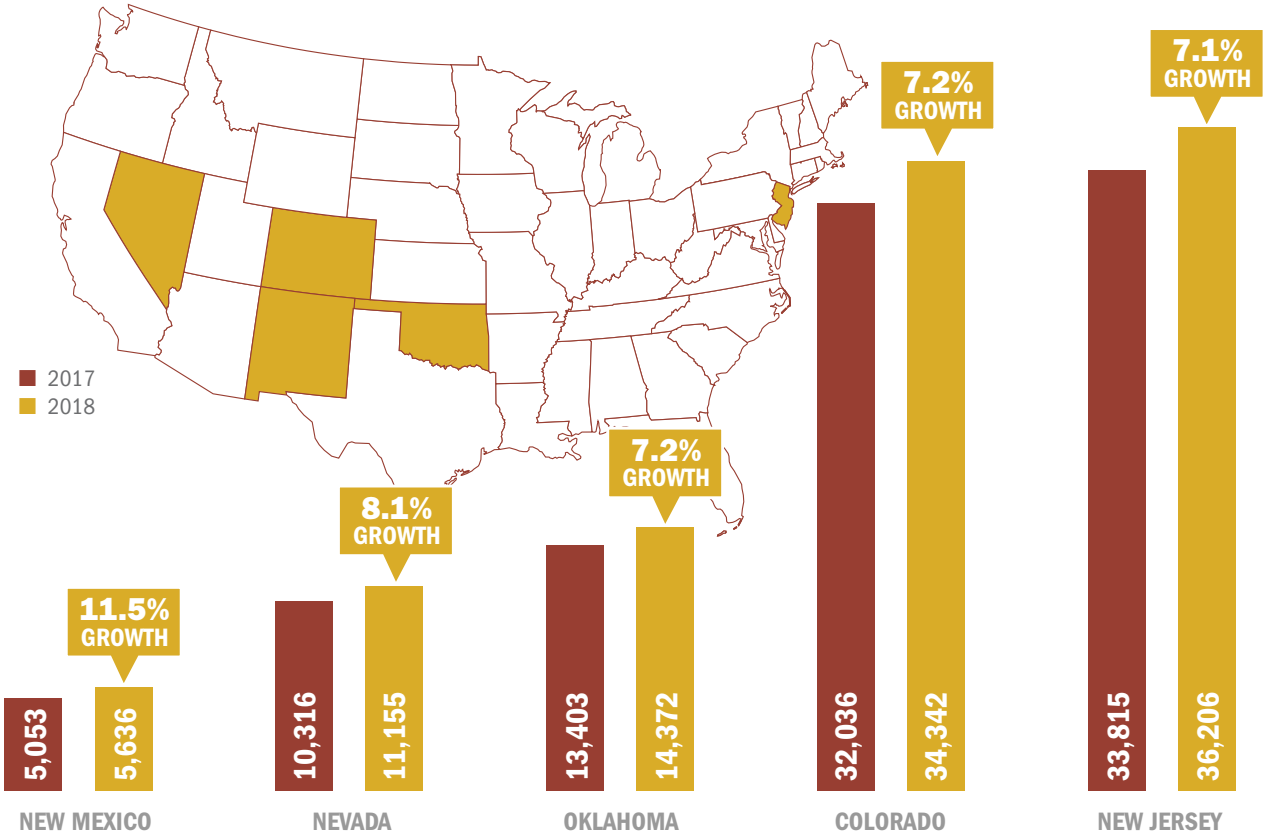
SEPTEMBER 2019

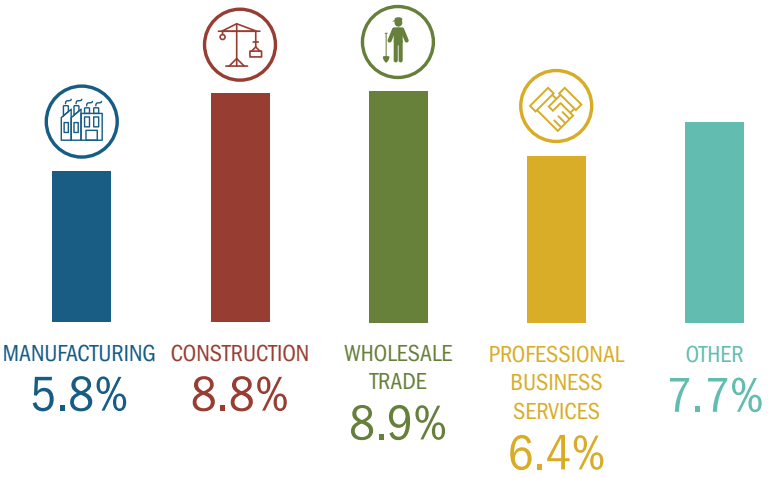
TOP STATES FOR GROWTH IN 2018



MORE JOBS NOW, MORE JOBS IN THE FUTURE

Energy efficiency businesses are not only creating more jobs than traditional energy sectors now, but are on track to outpace future growth across industries. Energy efficiency businesses are projecting 7.8% growth in jobs for 2019—the highest among all energy sectors...and the job gains are expected across all major industries.

2019 EXPECTED GROWTH ACROSS ALL ENERGY EFFICIENCY INDUSTRIES



FUTURE GROWTH[2]

7.8%

Energy efficiency businesses are projecting **7.8% growth in jobs for 2019**— the highest among all energy sectors

2018 JOB GROWTH

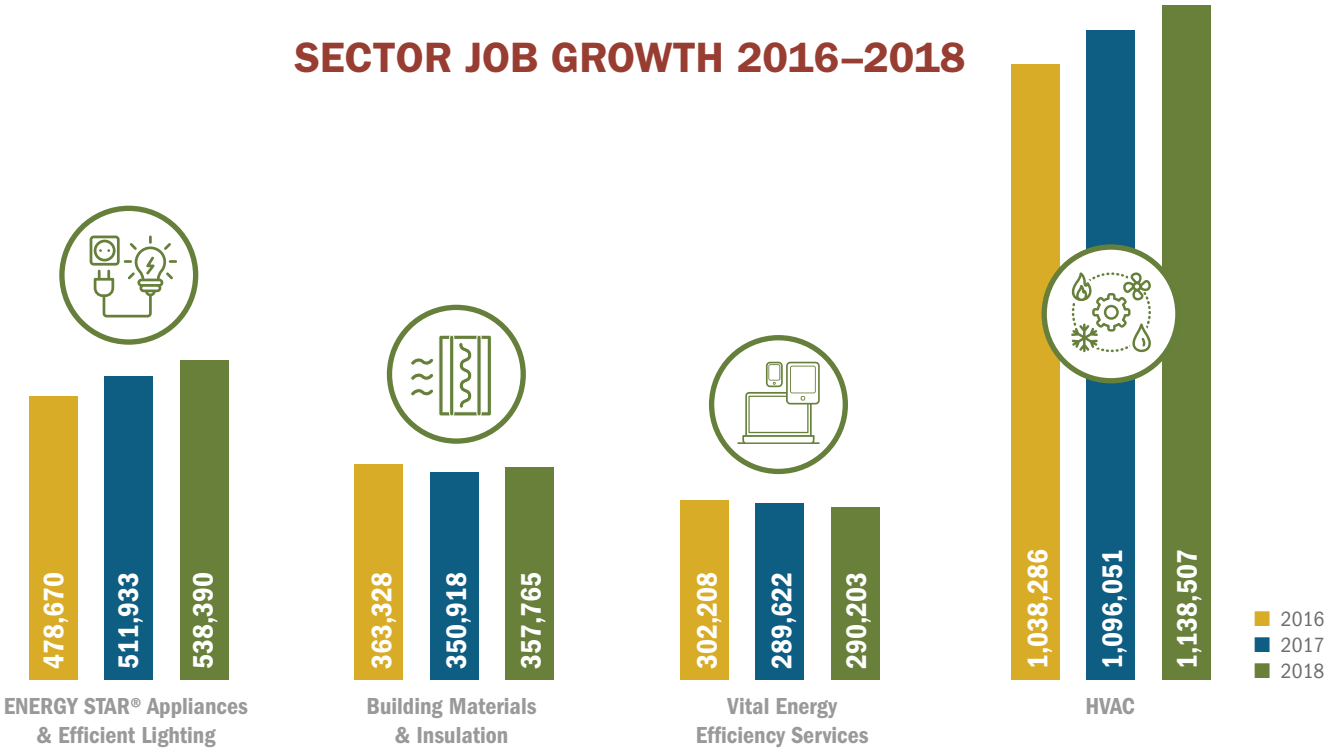
Fuels: **+52,355**

Electric Generation: **-8,258**

Transmission, Distribution, and Storage: **+31,726**

Energy Efficiency: **+76,342**

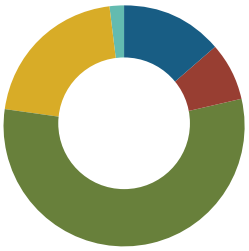
SECTOR JOB GROWTH 2016–2018



ENERGY EFFICIENCY WORKERS—WHERE ARE THEY?

They work in factories, offices, design studios, and data centers. Energy efficiency workers do much more than reduce energy use. They improve operations of existing buildings, and they design and build a better future. Consumers, municipalities, and business owners incorporate lower energy consumption options into everyday procurement decisions; in homes, offices, schools, and municipal infrastructure. Squeezing out waste drives job creation.

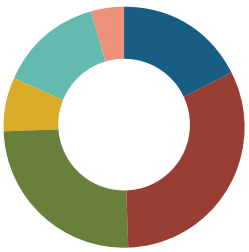
ACROSS INDUSTRIES



- Manufacturing: **321,582**
- Wholesale Trade: **180,337**
- Construction: **1,295,783**
- Professional Services: **484,482**
- Other:* **46,682**

*Other such as maintenance, and business and nonprofit organizations

ACROSS POSITIONS



- Production & Manufacturing: **17.7%**
- Installation & Repairs: **31.7%**
- Administrative: **25%**
- Sales: **7.3%**
- Management:**13.9%**
- Other: **4.2%**

TECHNOLOGIES

- ENERGY STAR Appliances: **167,828**
- LED, CFL, and Other Efficient Lighting: **370,562**
- Trad. HVAC: **582,108**
- High Efficiency Heating & Cooling: **427,503**
- Renewable Heating & Cooling: **128,896**
- Advanced Materials & Insulation: **357,765**
- Recycled Building Materials: **82,423**
- Water Efficiency Products: **91,555**
- Other:***116,225**

*Other such as energy audits, building certifications, and software services

JOBS ACROSS THE COUNTRY

// These jobs are local. **99.7%** of U.S. counties have energy efficiency jobs.

// America's top 25 metro areas employ **928,000** workers in energy efficiency.

// **28%** of U.S. energy workers are involved in energy efficiency.

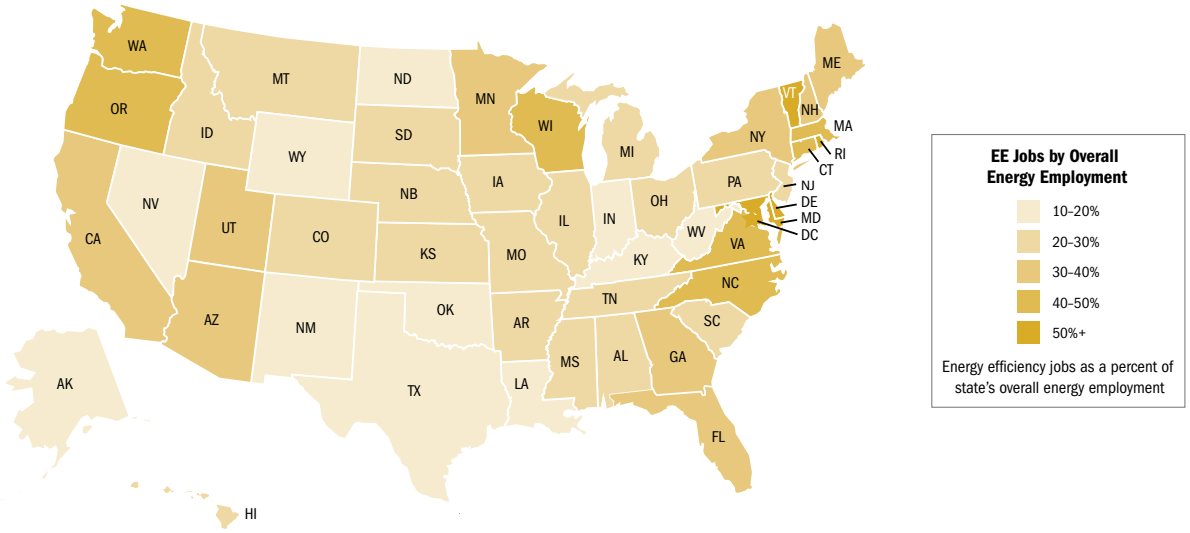
// 40 states employ at least **11,000** energy efficiency workers each, with only Alaska at fewer than 5,000.

TOP 10 STATES FOR ENERGY EFFICIENCY JOBS

RANK	STATE	TOTAL	ENERGY STAR & EFFICIENT LIGHTING	HVAC, RENEWABLE HEATING & COOLING	ADVANCED BUILDING MATERIALS/INSULATION	OTHER*
1	California	318,542	71,893	187,297	20,074	39,278
2	Texas	162,816	59,650	67,346	21,096	14,724
3	New York	123,292	36,848	69,412	8,244	8,788
4	Florida	118,412	32,499	41,381	31,455	13,077
5	Illinois	89,469	13,311	59,722	7,834	8,601
6	North Carolina	86,559	42,893	32,358	6,222	5,086
7	Massachusetts	86,473	14,494	42,558	11,032	18,388
8	Michigan	85,061	14,775	9,197	47,613	13,476
9	Ohio	81,676	16,290	35,515	19,650	10,221
10	Virginia	78,670	20,733	31,522	10,764	15,652

* Other such as energy audits, building certifications, and software services

ENERGY EFFICIENCY NOW EMPLOYS MORE WORKERS THAN THE FOSSIL FUEL INDUSTRY IN 41 STATES AND THE DISTRICT OF COLUMBIA[3]



BEYOND THE BIG CITIES

317,890
Americans living in rural areas work in energy efficiency

308,375
U.S. energy efficiency jobs are in counties with fewer than 100,000 residents

1 Million+
energy efficiency jobs are outside America's top 50 metro areas

MORE ENERGY EFFICIENCY = MORE CONSTRUCTION JOBS

More than 1 out of every 7 U.S. construction workers spend 50% or more of their time on energy efficiency (13.5%)

56% of energy efficiency's 2.3 million employees work in construction (1.29 million)

79%

of energy efficiency construction businesses say employees spend a majority of time on energy efficiency

POLICY LEADERSHIP

To continue creating hundreds of thousands of jobs for Americans across all states and counties, Congress should:

// **Properly fund** policies that advance energy efficiency and workforce development

// **Invest** in related infrastructure, e.g., smart meters to enable interval data analytics and efficiency building upgrades to boost resilience

// **Renew** and update the 179D and 25C Commercial and Residential building tax credits

// **Fund** strong State Energy Programs, Residential Building Programs, and Weatherization Assistance Programs

// **Support** ENERGY STAR which helps people make smart energy choices

State leadership on energy efficiency plays a vital role in driving America's energy economy. To keep energy efficiency jobs growing, state policymakers should support:

// **Strong** energy efficiency building and appliance standards with consistent funding

// **Broader** use of performance contracting in public buildings

// **Innovative** commercial and residential PACE programs

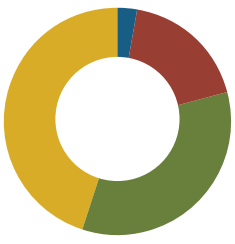
// **Modernized** regulation to align utilities' incentives with energy efficiency investments and assure transparent and comprehensive cost-effectiveness evaluation

SMALL BUSINESSES FUEL SUCCESS ACROSS AMERICA

THERE ARE

361,329

ENERGY EFFICIENCY BUSINESSES IN AMERICA



100+ EMPLOYEES: **3%**

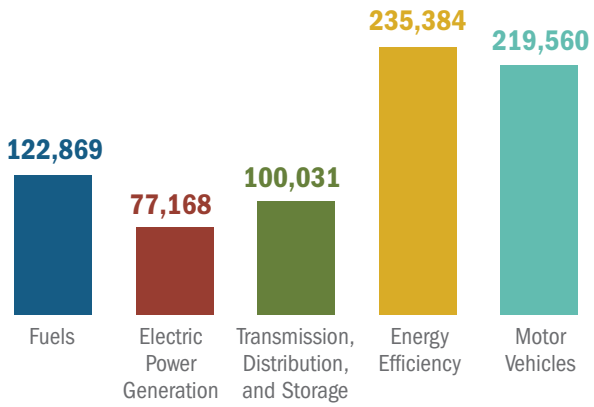
20-99 EMPLOYEES: **18%**

6-19 EMPLOYEES: **34%**

1-5 EMPLOYEES: **45%**

GOOD JOBS FOR VETERANS

Energy efficiency leads the energy sector in employing veterans



NUMBER OF MILITARY VETERANS EMPLOYED BY ENERGY SECTOR

WHAT DO ENERGY EFFICIENCY WORKERS DO?

EE workers:

// Manufacture and install high efficiency systems, controls, windows, and insulation in existing and new homes, commercial & industrial buildings

// Design and construct high performance buildings such as those earning LEED certification

// Upgrade and repair heating, air conditioning and ventilation (HVAC) and water heating equipment

// Manufacture and install ENERGY STAR-certified appliances, lighting, ceiling fans, commercial cooking equipment, refrigerators and boilers

// Save money for businesses, homeowners, schools, states, counties, municipalities, U.S. armed forces, and more

538,390 JOBS

ENERGY STAR® Appliances & Efficient Lighting

// **62%** of jobs are in manufacturing and construction

// **+26,457** jobs in 2018 (5.2% growth)

// Includes household and commercial appliances, e.g., refrigerators, dishwashers, ceiling fans, and various advanced lighting types; ENERGY STAR market penetration continues to increase

// More than the number of real estate agents, telemarketers or librarians in the U.S.[4]

357,765 JOBS

Building Materials & Insulation

// **76%** of jobs are in construction and manufacturing

// **+6,244** jobs in 2018 (1.43% growth)

// Advanced materials create higher-performance buildings; recycled materials mitigate waste stream issues, among other benefits

// More jobs than the number of pharmacists across the U.S.[4]

290,203 JOBS

Vital Energy Efficiency Services

// **72%** of jobs are in construction and manufacturing

// **+1,184** jobs in 2018 (0.5% growth)

// Includes energy audits, building certifications, software services, recycled building materials, and water efficiency products and services

// Nearly equal to the number of taxi drivers and chauffeurs across the U.S.[4]

1,138,507 JOBS

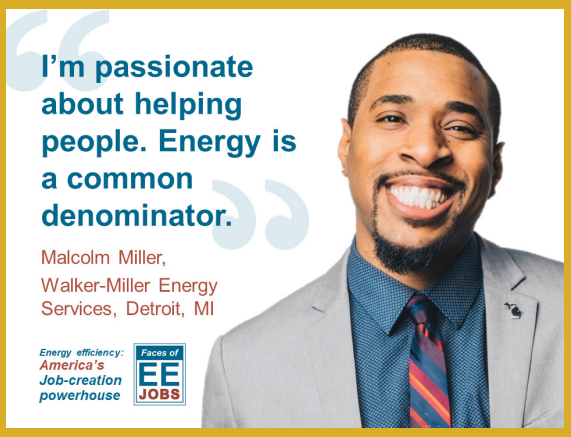
HVAC (Heating Ventilation & Air Conditioning)

// **70%** of jobs are in construction and manufacturing

// **+42,456** jobs in 2018 (3.9% growth)

// Heating, Ventilation, Air Conditioning of higher than standard efficiency. Includes renewable heating and cooling technologies

// More than the number of all U.S. legal professionals combined, including lawyers, court reporters, paralegals, and judges[4]



#FacesOfEE

To meet "real people" working in energy efficiency jobs around the country, follow #FacesOfEE on social media channels, and tweets by @FacesOfEE

ENDNOTES

1 Unless otherwise stated, all data are from the 2019 U.S. Energy and Employment Report (March 2019), produced by the Energy Futures Initiative (EFI) in partnership with the National Association of State Energy Officials (NASEO) and collected and analyzed by BW Research Partnership (BWRP). See Pages 9-13 for methodology questions. This methodology -- adopted by the U.S. Dept. of Energy for its 2017 U.S. Energy and Employment Report, approved by the Office of Management and Budget and grounded on data collected by the Bureau of Labor Statistics -- provides the broadly accepted best accounting of all U.S. energy workers.

2 Projected growth rates and employee size numbers are based on a 15-minute, supplemental survey of approximately 30,000 employers that enriches the employment data published by the U.S. Bureau of Labor Statistics (BLS) in its Quarterly Census on Employment and Wages (QCEW). More information on this survey can be found in Appendix B in the USEER 2019 report at www.usenergyjobs.org.

3 Based on the 2019 U.S. Energy and Employment Report individual state snapshots for all 50 states and the District of Columbia, available at http://usenergyjobs.org.

4 Based on the Bureau of Labor Statistics' May 2018 National Occupational Employment and Wage Estimates United States, available at https://www.bls.gov/oes/current/oes_nat.htm.

ABOUT THE REPORT

The job numbers come from the national 2018 U.S. Energy and Employment Report (USEER), which focuses on all energy jobs. 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 2018 USEER relies on a unique supplemental survey of 23,000 business representatives across the U.S. Created and conducted by BW Research and approved by the Office of Management and Budget 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.

For further questions regarding this report, visit the Energy Efficiency Jobs in America FAQ at to: www.e2.org/reports/energy-efficiency-jobs-in-america-faq or contact E4TheFuture or E2 directly.

E4THE FUTURE

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E4TheFuture is dedicated to bringing clean, efficient energy home for every American and promotes energy solutions to advance climate protection and economic fairness. Visit www.E4TheFuture.org

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ABOUT BW Research

BW Research Partnership is a full-service, economic and workforce research consulting firm with offices in Carlsbad, California and Wrentham, Massachusetts. It is the nation's leading provider of accurate, comprehensive energy and clean energy research studies, including the United States Energy and Employment Report (USEER), National Solar Jobs Census, wind industry analyses for the National Renewable Energy Laboratory and the Natural Resources Defense Council, and state-level clean energy reports for Massachusetts, New York, Illinois, Vermont, Iowa, Rhode Island, Florida, and Missouri, among others.