Virginia

Energy Efficiency Jobs in America

Oct 2020
71,483*
Dec 2019
80,181

Clean energy workers are a huge and important part of America's workforce. We know from our country's last economic crisis that clean energy can lead the way to recovery.

Hundreds of thousands of workers are ready to return to work to build a better, cleaner, more equitable economy for tomorrow. With innovative policies we could get these workers back on the job today. Congress can start by spurring investments in energy efficiency (EE) and help the economy recover and grow for years to come.

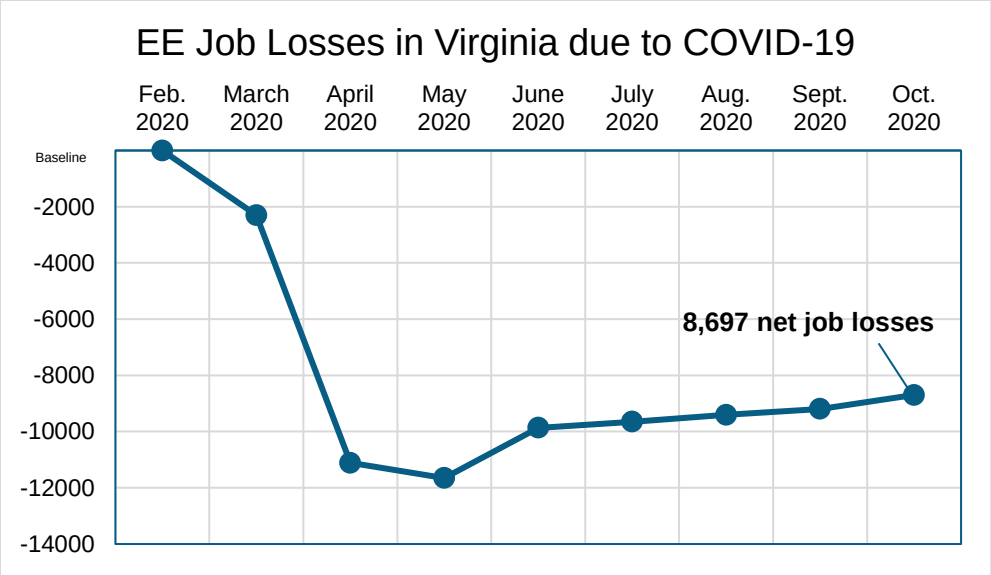
COVID-19 Impacts on the EE Job Sector

The 2020 pandemic shocked our nation's labor market with massive job losses. Virginia's energy efficiency industry lost as many as 8,697 jobs since its onset, a 10.8% decrease compared to total jobs in December 2019—wiping out the last 3 years of gains.

This disruption continues to ripple throughout the supply chain, slowing or halting the manufacture of efficiency equipment and components including insulation; windows; heating, ventilation, and air conditioning (HVAC) equipment; and other building systems technologies.

The energy efficiency workforce has the skills and expertise to meet this moment. Historically the Virginia EE workforce grew steadily, gaining 6.1% since 2016.**

As the U.S. advances our economic recovery, policy solutions must create conditions to return to work laid-off/furloughed EE workers and to create a pathway for new workers to join this vital sector.



10.8% DECLINE in Employment since COVID-19

Presented by:

*Source: Clean Energy Employment Initial Impacts from the COVID-19 Economic Crisis, March 2020-October 2020.
**first available sector-specific data

What are EE Jobs?

Jobs that deliver goods and services that lower energy use by improving technologies, appliances, buildings, and energy systems.

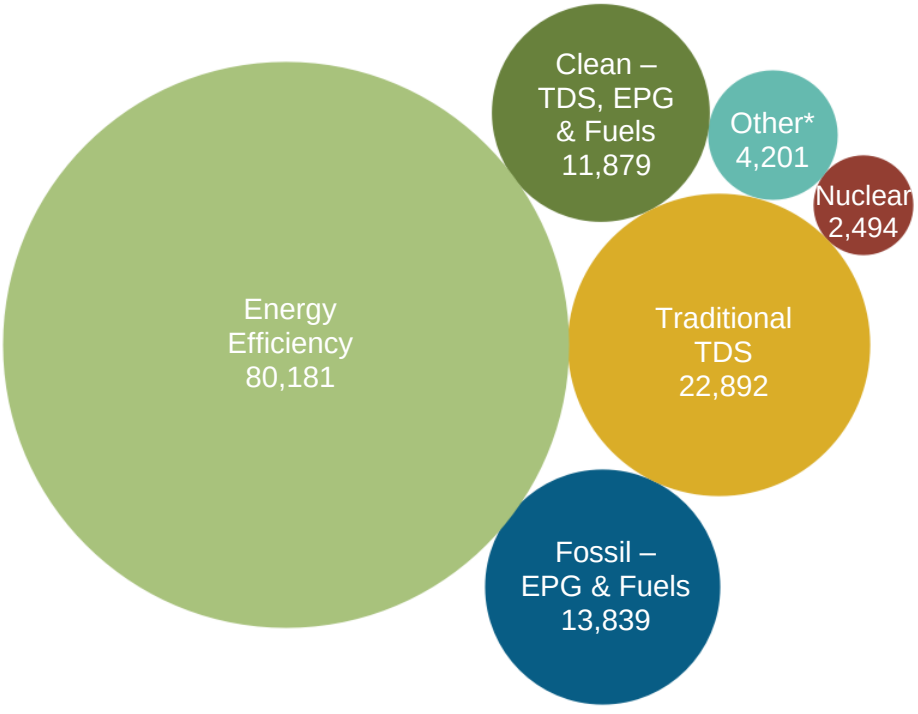
What type of work are EE workers doing?

- Manufacture and install high efficiency systems, controls, windows, insulation and ENERGY STAR-certified appliances and products 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
- Educate property owners and managers on building improvements to unlock savings for businesses, homeowners, schools, states, municipalities, military bases and more
- Analyze building energy data using software to maximize savings through targeted performance improvements and behavioral changes
- Review and approve loans to finance energy savings performance contracts to improve the comfort, health and operational costs of buildings

All EE jobs counted in this report enhance energy efficiency. The above descriptions provide illustrative examples of what some EE workers do, and should not be considered an exhaustive list of all efficiency work.

How does EE compare in Virginia?

Energy efficiency is the largest energy sector in Virginia.



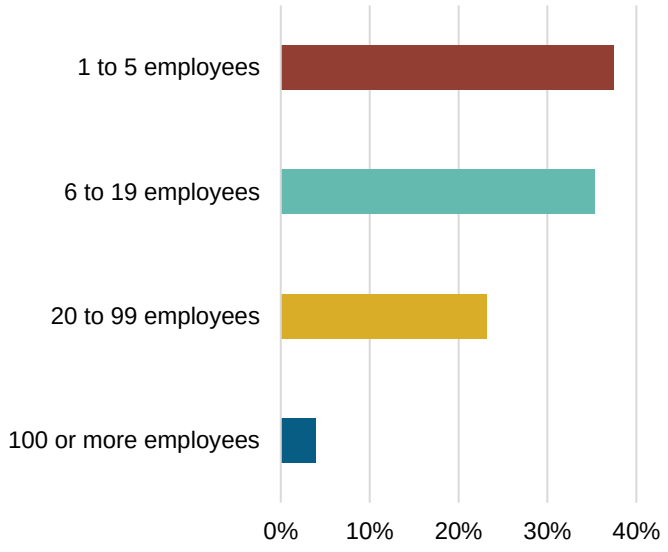
*Includes other energy subsectors such as corn ethanol, woody biomass, large hydropower, and others.

Energy efficiency in Virginia has seen consistent, reliable job growth – 6.1 percent since 2016.

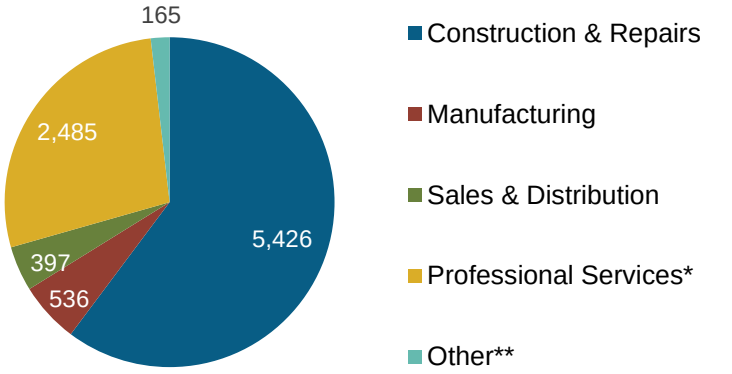
What do the EE businesses look like in Virginia?

EE Sector =
9,009
Businesses in VA
(Dec. 2019)
↑ **170** over 2018

95.9% of VA Businesses Have Less Than 100 Employees



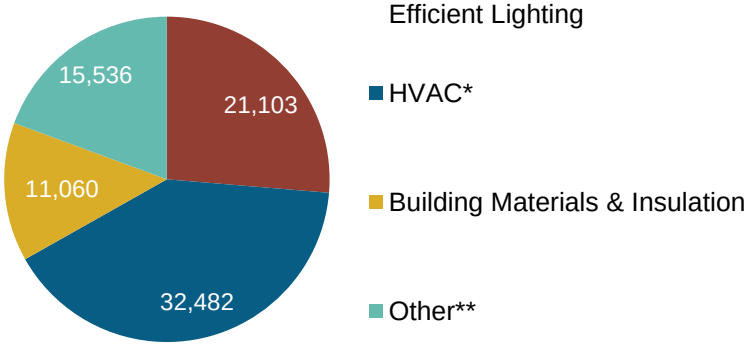
Firms by Supply Chain



* Professional services includes finance/accounting, architecture, engineering, R&D, etc.
** Other such as maintenance, and business and nonprofit organizations

7.7%
of Virginia residents employed in EE are **Veterans**

Jobs by Sector



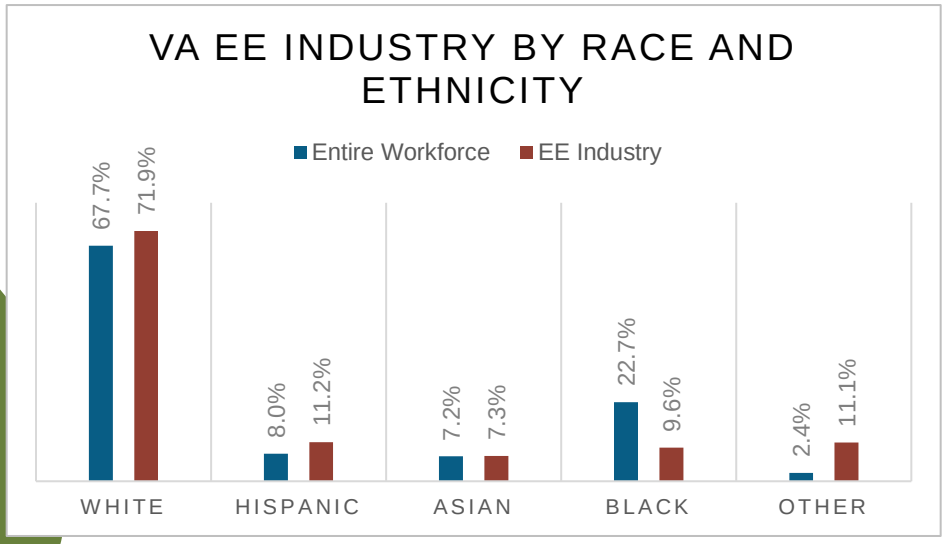
* Heating, Ventilation, Air Conditioning of higher than standard efficiency/renewable heating & cooling
** Other such as energy audits, building certifications, and software services

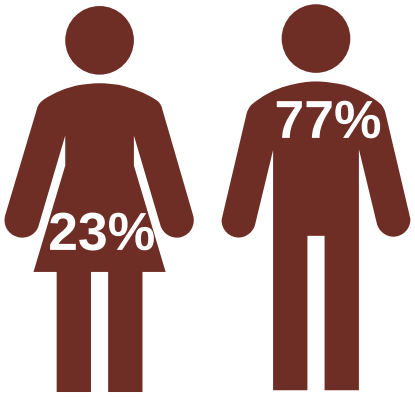
Energy Efficiency Construction Workers Make Up 23% of VA Construction Workers

How is EE Doing regarding Diversity in Virginia?

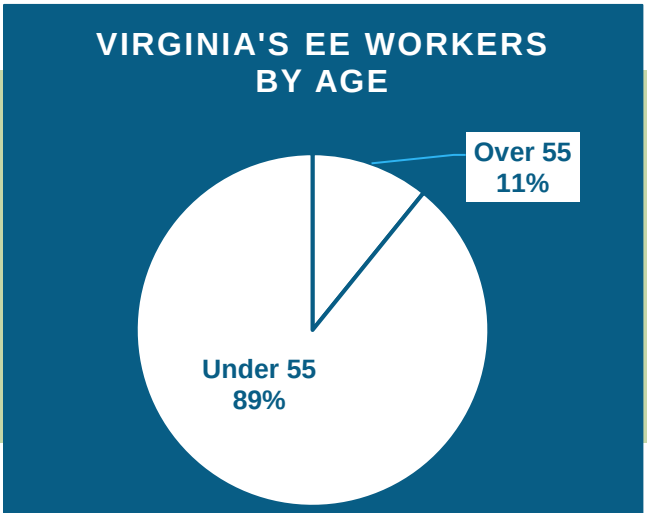
Demographic data is crucial for benchmarks and to measure progress in the energy efficiency industry. In striving for more diversity in EE jobs, we can create a stronger and more inclusive industry. Promoting diversity in hiring is key to maintaining a future workforce of talented professionals and ensuring all Virginia communities are represented in the EE sector.

The EE industry needs to do more to prioritize minorities and women for training and support that will enable them to obtain and/or retain employment at EE businesses.





Note: The U.S. Bureau of Labor Statistics (BLS) only includes two genders in their survey. Non-binary gender data is missing from this document due to this limitation.



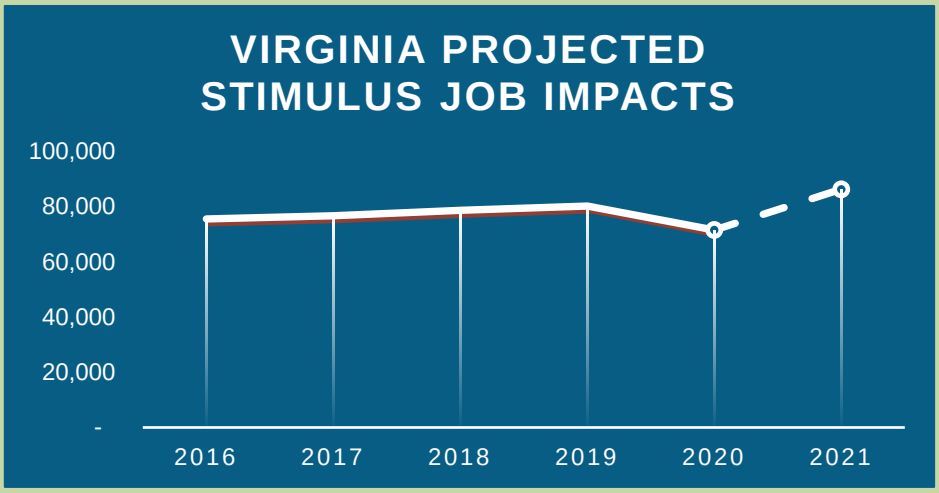
A significant portion of the Virginia efficiency workforce is in the “55+” category. 11% are likely to retire within the next ten years, providing career opportunities for current and future professionals.

Why invest in EE?

Economic benefits of a federal energy efficiency stimulus package include high-quality jobs for U.S. residents, worker income, boosts to local, state, and federal tax revenues, contributions to Gross Domestic Product (GDP), and energy cost savings.

All these benefits ultimately translate to greater cash flow and stronger local economies. Energy efficiency jobs are proven to be sustainable wage positions that are accessible to all localities nationwide — regardless of geography or politics — providing new jobs that cannot be outsourced.

Updates to U.S. energy infrastructure are investments in the collective economic future of Americans; the creation of a more resilient energy system is vital to economic growth and security.

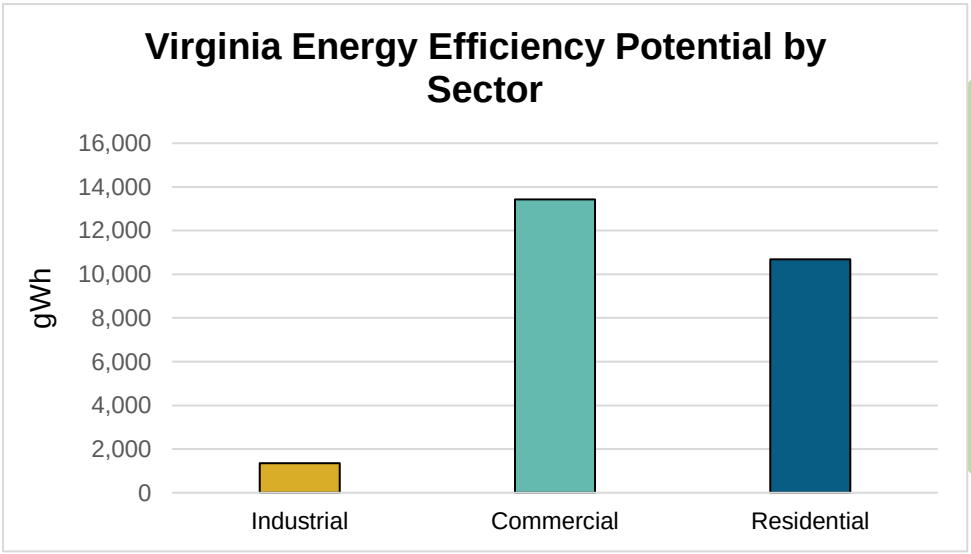


Source: Build Back Better, Faster.

Modeling finds that federal investment would create **14,794 full-time direct, indirect, and induced VA jobs** that will last for at least five years: Over **73,970 job-years** total.

A stimulus of this level and the jobs it would create would also generate more than **$1.0 billion in GDP** each year for the next five years – resulting in **$5.2 billion in economic activity**, more than 3.8 times the investment.

How much energy efficiency is untapped in your state?



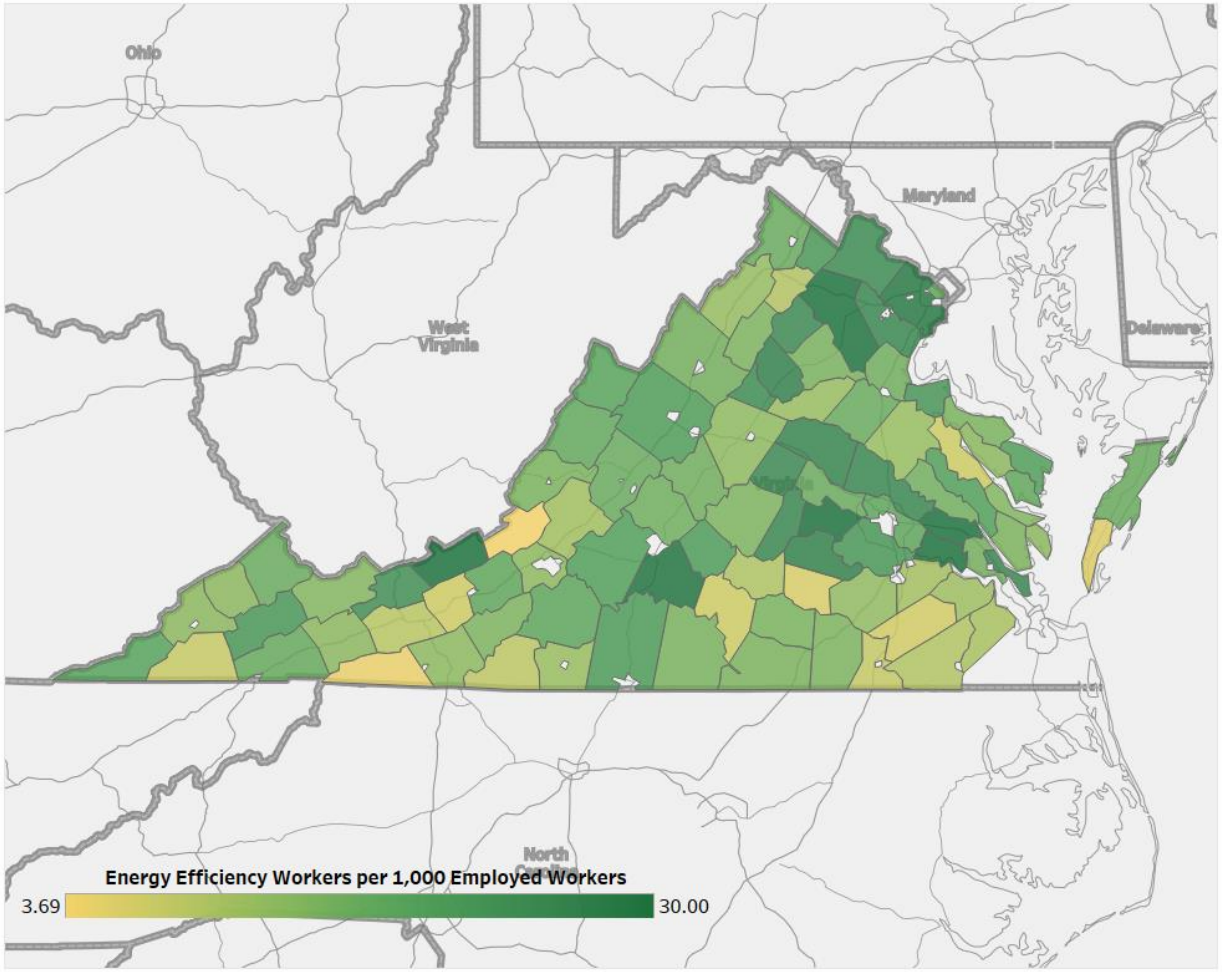
Combined, this would displace the annual electricity consumption of **1,891,397** homes.

Source: State and Local Planning for Energy (SLOPE) Platform.

Where are EE Jobs?

Congressional		Metropolitan Areas	
District	Jobs	Area	Jobs
1	8,671	Blacksburg-Christiansburg-Radford	1,149
2	7,798	Charlottesville	3,338
3	7,573	Danville	729
4	6,065	Harrisonburg	1,154
5	10,427	Kingsport-Bristol-Bristol	860
6	6,253	Lynchburg	2,286
7	5,516	Richmond	13,460
8	10,306	Roanoke	3,151
9	4,259	Virginia Beach-Norfolk-Newport News	14,671
10	11,887	Virginia-Arlington-Alexandria	30,293
11	1,426	Winchester	1,110
		Rural	7,980

Energy Efficiency Jobs by County



State Senate

District	Jobs	District	Jobs	District	Jobs	District	Jobs
1	3,185	11	1,041	21	1,385	31	6,153
2	1,074	12	999	22	1,694	32	3,333
3	1,126	13	4,597	23	471	33	<5
4	3,115	14	1,450	24	2,563	34	3,275
5	3,518	15	2,570	25	2,466	35	1,398
6	784	16	12	26	1,085	36	658
7	3,079	17	2,147	27	2,509	37	406
8	1,249	18	649	28	1,635	38	1,177
9	4,991	19	3,904	29	1,065	39	<5
10	3,944	20	601	30	3,732	40	1,140

State House of Delegates

District	Jobs	District	Jobs	District	Jobs	District	Jobs
1	500	26	37	51	<5	76	720
2	1,041	27	2,643	52	23	77	127
3	667	28	822	53	<5	78	523
4	605	29	799	54	841	79	1,625
5	617	30	401	55	1,697	80	68
6	456	31	1,083	56	1,482	81	1,245
7	1,027	32	1,317	57	1,615	82	<5
8	1,134	33	192	58	291	83	1,220
9	1,097	34	4,084	59	516	84	<5
10	2,304	35	2,406	60	432	85	<5
11	1,577	36	1,700	61	736	86	<5
12	94	37	564	62	1,366	87	<5
13	1,844	38	1,658	63	287	88	11
14	658	39	1,626	64	1,069	89	155
15	1,024	40	395	65	69	90	<5
16	210	41	172	66	69	91	990
17	109	42	210	67	919	92	273
18	1,336	43	464	68	2,255	93	771
19	831	44	191	69	1,808	94	1,370
20	1,190	45	2,293	70	<5	95	<5
21	4,100	46	<5	71	310	96	179
22	1,160	47	1,891	72	614	97	524
23	173	48	595	73	<5	98	469
24	401	49	<5	74	706	99	665
25	1,823	50	82	75	259	100	281

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

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. Visit www.e2.org

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Data Source: Unless otherwise stated, all data are from the 2020 U.S. Energy and Employment Report, March 2020, by NASEO and EFI (see Appendix A, pages 201-206 for methodology details). 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 U.S. Bureau of Labor Statistics -- provides the broadly accepted best accounting of all U.S. energy workers.