



Fact Sheet

Climate Jobs

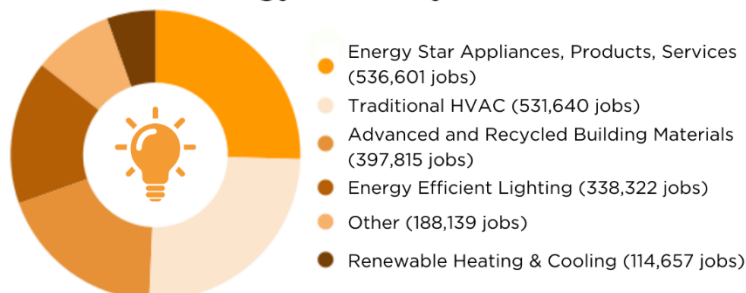
September 2021

Responding to the climate crisis provides an immense opportunity for job creation. Those jobs—jobs that help mitigate and adapt to climate change—are climate jobs. In recent years, climate jobs have been **on the rise** in the United States.¹ However, the economy-wide impacts of the COVID-19 pandemic affected climate employment: **eight percent** of climate jobs were shed in 2020.² Despite this, employment in some climate industries **increased** in 2020, and many climate jobs are expected to recover in 2021.² In total, there were **well over 4.1 million climate jobs in 2020**.

Energy Efficiency Jobs

Energy efficiency supported 2.1 million jobs in 2020.² This includes people who design, install, distribute, and manufacture energy-efficient products and services. The states with the **most energy efficiency jobs** in 2020 were California (283,800 jobs), Texas (152,100), New York (121,000), and Florida (108,900).³ While energy efficiency jobs fell **11.4 percent** in 2020, they are expected to increase 10.1 percent in 2021.²

Energy Efficiency Jobs

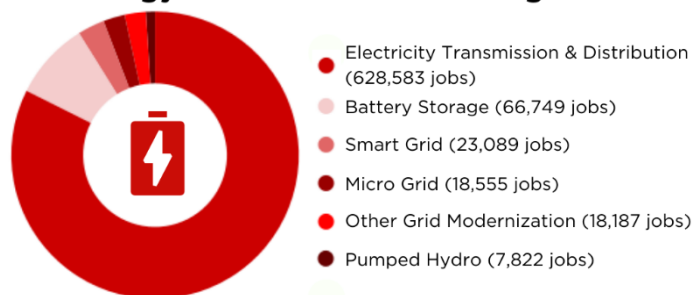


Source: U.S. Energy and Employment Report, 2021. Graph by Emma Johnson, EESI

Energy Transmission, Distribution, and Storage Jobs

Energy transmission, distribution, and storage supported 763,000 jobs in 2020.² The sector overall lost three percent of its jobs in 2020, but battery storage added **800 jobs**.² California had the highest energy **storage and grid** employment (22,600 jobs), with Texas (12,400) and Nevada (9,200) following.⁴ In the coming years, transmission, distribution, and storage **employment will likely grow** to support increased renewable energy connecting to the electric grid.⁵

Energy Transmission and Storage Jobs

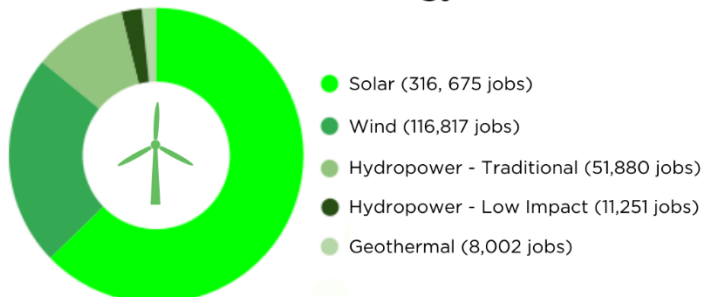


Source: U.S. Energy and Employment Report, 2021. Graph by Emma Johnson, EESI

Renewable Energy Jobs

Renewable energy supported 504,600 jobs in 2020.² Employment in the sector decreased by six percent in 2020, but wind energy added **2,000 jobs**.² Significant job growth in renewable energy is anticipated; wind turbine service technicians and solar photovoltaic installers are projected to be the **fastest and third-fastest** growing occupations, respectively, across the entire economy in the coming decade.⁶

Renewable Energy Jobs



Source: U.S. Energy and Employment Report, 2021. Graph by Emma Johnson, EESI

Clean Transportation Jobs

Clean vehicles supported 261,300 jobs in 2020.² This includes about 119,700 jobs in hybrid electric vehicles, 83,700 jobs in electric vehicles, 47,800 jobs in plug-in hybrid vehicles, and 10,000 jobs in hydrogen/fuel cell vehicles.² Despite the economic impacts of COVID-19, employment in the hybrid electric and electric vehicle industry increased **six and eight percent**, respectively, in 2020.²

Renewable fuels supported 103,000 jobs in 2020.² This includes about **33,500 jobs** in corn ethanol, 19,500 jobs in other ethanol fuels, 32,400 jobs in woody biomass, and 17,600 jobs in other biofuels.²

Public transportation agencies supported 435,000 direct jobs in 2018, and every \$1 billion invested in public transportation can yield 50,000 jobs.⁷

Adaptation and Resilience Jobs

Climate adaptation and resilience are rapidly emerging areas of employment as a result of climate change impacts. The **American Society of Adaptation Professionals (ASAP)**, the sector's main professional association, represents 38 organizational members that employ over 100,000 people.⁸ ASAP reports that at least 1,000 professional-level adaptation jobs were hired for in 2019 and another 1,200 in 2020.⁹ Adaptation jobs exist in all 50 states, with the most opportunities in California, Washington, D.C., and New York.⁹ Adaptation and resilience are incorporated into existing jobs and also result in new jobs. In fact, job creation in this sector is expected to accelerate, especially with additional federal investment in adaptation and resilience. For example, it is estimated that for every \$1 billion invested in flood resilience, **40,000 jobs** would be created, mostly in construction and retail.¹⁰

Further investment in adaptation and resilience workforce tracking, such as revisions to the Standard Occupation Classification (SOC) system managed by the Bureau of Labor Statistics, would aid analysis of employment in this sector. To learn more about adaptation jobs, check out [EESI's explainer](#).

The Future of Climate Jobs

There is significant potential for job creation in the climate sector. It is estimated that achieving 50 to 70 percent renewable energy by 2030 could create **500,000–600,000 jobs in solar, wind, and battery storage**.¹¹ Other climate policies—such as a national Clean Electricity Payment Program that could create **7.7 million job-years*** over the next decade—could further boost the climate workforce.¹² Another emerging area of climate employment, **plugging orphaned and abandoned oil and gas wells**, could also create thousands of jobs with federal investment.¹³ Several other types of climate jobs exist; for example, ecological restoration supported **126,000 jobs** in 2015.¹⁴ While millions of these climate jobs already exist, millions more could be created through federal efforts focused on reducing greenhouse gas emissions and adapting to climate impacts.

* A job-year is one job worked by one person for one year.

This fact sheet is available electronically (with hyperlinks and endnotes) at www.eesi.org/papers.

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The Environmental and Energy Study Institute (EESI) is a non-profit organization founded in 1984 on a bipartisan basis by members of Congress to help educate and inform policymakers, their staff, stakeholders, and the American public about the benefits of a low-emissions economy that prioritizes energy efficiency, renewable energy, and new clean energy technologies. In 1988, EESI declared that addressing climate change is a moral imperative, which has since guided our work toward our vision: a sustainable, resilient, and equitable world.

ENDNOTES

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- ¹ “Fact Sheet: Jobs in Renewable Energy, Energy Efficiency, and Resilience” (2019). Environmental and Energy Study Institute (EESI), https://www.eesi.org/files/FactSheet_REEE_Jobs_0719.pdf
- ² “United States Energy and Employment Report 2021” (July 2021). U.S. Department of Energy, <https://www.energy.gov/sites/default/files/2021-07/USEER%202021%20Executive%20Summary.pdf>
- ³ “Energy Employment by State: 2021” (July 2021). U.S. Department of Energy, <https://www.energy.gov/sites/default/files/2021-07/USEER%202021%20State%20Reports.pdf>
- ⁴ “Clean Jobs America 2021” (April 19, 2021). E2, <https://e2.org/reports/clean-jobs-america-2021/>
- ⁵ “Mobilizing for a Zero Carbon America” (July 29, 2020). Rewiring America, https://static1.squarespace.com/static/5e540e7fb9d1816038da0314/t/5f209173294b6f5ee41ea278/1595969952405/Jobs_White_Paper_Compressed_Release.pdf
- ⁶ “Fastest Growing Occupations” (April 9, 2021). Bureau of Labor Statistics, <https://www.bls.gov/ooh/fastest-growing.htm>
- ⁷ “2020 Public Transportation Fact Book” (March 2020). American Public Transportation Association, <https://www.apta.com/wp-content/uploads/APTA-2020-Fact-Book.pdf>
- ⁸ “About.” American Society of Adaptation Professionals, <https://adaptationprofessionals.org/about/> (Accessed September 10, 2021)
- ⁹ “ASAP Jobs Database” (unpublished data). American Society of Adaptation Professionals.
- ¹⁰ “The Local Economic Impact of Flood-Resilient Infrastructure Projects” (December 2020). Johns Hopkins 21st Century Cities Initiative and American Flood Coalition, <https://floodcoalition.org/resources/flood-infrastructure-and-job-creation/>
- ¹¹ “Clean Energy Labor Supply Report” (2021). American Clean Power, <https://cleanpower.org/resources/cleanenergylaborsupply/>
- ¹² “Economic Impact of a Clean Electricity Payment Program” (September 2021). Analysis Group, <https://www.analysisgroup.com/globalassets/insights/publishing/2021-Economic-Impact-of-a-Clean-Electricity-Payment-Program.pdf>
- ¹³ “Plugging Orphaned Oil and Gas Wells Provides Climate and Jobs Benefits” (August 12, 2021). Environmental and Energy Study Institute, <https://www.eesi.org/articles/view/plugging-orphaned-oil-and-gas-wells-provides-climate-and-jobs-benefits>
- ¹⁴ “Estimating the Size and Impact of the Ecological Restoration Economy” (June 17, 2015). PLoS ONE, <https://doi.org/10.1371/journal.pone.0128339>