



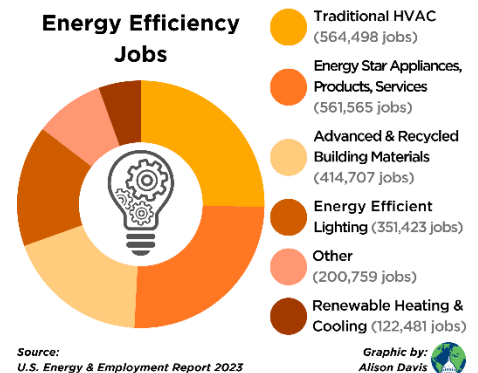
# Fact Sheet

## U.S. Climate Jobs (February 2024)

U.S. efforts to confront the climate crisis have propelled a demand for jobs that will help the country mitigate and adapt to climate change. These climate jobs have been steadily **on the rise** in the United States.<sup>1</sup> The energy sector as a whole has regained 71% of the jobs lost due to the pandemic in 2020. With a 3.9% growth rate, clean energy job creation **outpaced** overall job growth in 2022.<sup>2</sup> In total, there were **more than 4.2 million climate jobs in 2022**.

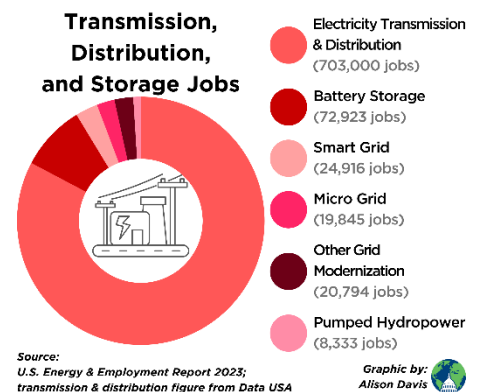
### Energy Efficiency Jobs

**Energy efficiency supported 2.2 million jobs in 2022.**<sup>2</sup> This includes the work of designing, manufacturing, distributing, and installing energy-efficient products and services. Though remaining below pre-pandemic levels, every job category within this sector has experienced growth since 2021. The states with the **most energy efficiency jobs** in 2022 were California (294,396 jobs), Texas (164,470), New York (126,008), and Florida (118,904).<sup>3</sup>



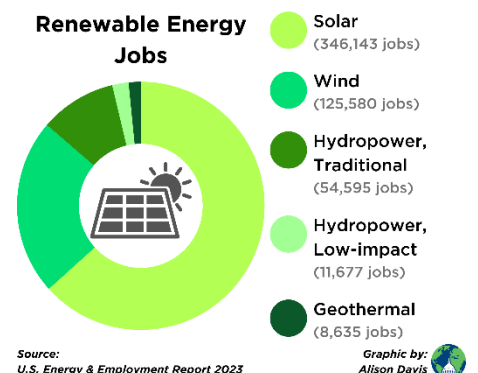
### Energy Transmission, Distribution, and Storage Jobs

**In 2022, employment in clean energy storage and grid technology and modernization supported 146,811 jobs,** while **electricity transmission and distribution supported more than 703,000 jobs.**<sup>2,4</sup> Texas had the highest storage and grid-related employment (57,030), followed by California (50,787) and Illinois (20,662).<sup>3</sup> The sector grew by 2.2% in 2022, with the highest growth rate (11.6%) occurring in electricity transmission and distribution system modernization (indicated by the label, “other grid modernization”).<sup>2</sup>



### Renewable Energy Jobs

**Renewable energy supported 546,630 jobs in 2022.**<sup>2</sup> Employment has increased across the sector since 2021, with wind energy experiencing the most growth (**5,416 additional jobs**). California had the highest number of solar, wind, and traditional hydropower jobs (133,173), followed by Texas (43,063) and New York (23,915).<sup>3</sup> Solar and wind power continue to be the largest employers in renewable energy generation, and solar photovoltaic installers and wind turbine service technicians are among the **15 fastest-growing occupations** in the United States.<sup>2,5</sup>



## Clean Transportation Jobs

**Clean vehicles supported 373,605 jobs in 2022.**<sup>2</sup> This includes 152,846 jobs in hybrid electric vehicles, 134,060 jobs in battery electric vehicles, 68,925 jobs in plug-in hybrid vehicles, and 17,774 jobs in hydrogen/fuel cell vehicles.<sup>2</sup> Overall, employment in the clean vehicle sector increased by **14.7%** in 2022. Within this sector, battery electric vehicle employment saw the greatest increase, growing by almost **27%**.<sup>2</sup>

**Renewable fuels supported 109,464 jobs in 2022.**<sup>2</sup> This includes about 35,152 jobs in corn ethanol, 20,939 jobs in other ethanol fuels, 34,164 jobs in woody biomass, and 19,209 jobs in other biofuels.<sup>2</sup> Job growth for these fuels occurred across the board between 2021 and 2022, and was expected to continue into 2023.<sup>2</sup>

**Public transportation supported 821,220 jobs in 2022.**<sup>6</sup> Every \$1 billion invested in public transportation can yield **50,000 jobs**.<sup>7</sup>

## Adaptation and Resilience Jobs

**As climate change impacts grow more frequent and severe, employment related to adaptation and resilience is rapidly emerging across many sectors**, including natural resource management, transportation, infrastructure, public health, tourism, and disaster risk management.<sup>8</sup> The **American Society of Adaptation Professionals** (ASAP) represents about **1,400 individuals and over 40 organizational members** that employ more than 180,000 people. ASAP reports that at least **1,500 professional-level adaptation jobs were hired for** in 2022.<sup>9</sup> Though the total number of adaptation and resilience jobs is far greater, exact figures are unavailable. Adaptation jobs exist in all 50 states, with the most hiring opportunities in California; Washington, D.C.; Massachusetts; Texas; and New York.<sup>9</sup> While new jobs are being created in this sector, existing jobs not traditionally considered to be climate jobs have begun to incorporate adaptation and resilience components as climate change intensifies. Job creation in this sector is expected to accelerate, especially with additional federal investment in adaptation and resilience—such as through the **Federal Emergency Management Agency** and the *Infrastructure Investment and Jobs Act* (**P.L. 117-58**).<sup>10,11</sup>

Further developments in adaptation and resilience workforce tracking, such as revisions to the **Standard Occupational Classification system**, would aid analysis of employment in this sector. To learn more about adaptation jobs, check out **EESI's explainer**.

## The Future of Climate Jobs

Since 2021, the passage and implementation of the *Infrastructure Investment and Jobs Act* (**P.L. 117-58**), the *Inflation Reduction Act* (IRA) (**P.L. 117-169**), and the *CHIPS and Science Act* (**P.L. 117-167**) have cemented long-term certainty for investment and work in the fields of energy efficiency, renewable energy, and climate resilience. Investments from the IRA alone are **expected to create** more than **303,500 jobs** each year for new energy project construction, and about **100,000 permanent jobs** every year.<sup>12</sup> Within the law's first six months, companies had already announced more than 100,000 new clean energy jobs.<sup>13</sup> Climate and energy jobs will also continue to diversify, with new jobs addressing emerging issues such as **abandoned oil and gas wells** and **decarbonization of the construction industry**.<sup>14,15</sup>

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This fact sheet is available electronically (with hyperlinks) at [www.eesi.org/papers](http://www.eesi.org/papers).

*The Environmental and Energy Study Institute ([www.eesi.org](http://www.eesi.org)) is an independent nonprofit advancing science-based solutions for climate change, energy, and environmental challenges. Founded on a bipartisan basis by members of Congress, EESI has been informing policymakers about the benefits of energy efficiency, renewable energy, and environmental conservation since 1984. In 1988, EESI declared that all energy policy must be examined through a climate lens, which has since guided us toward our vision: a sustainable, resilient, and equitable world.*



## ENDNOTES

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- <sup>1</sup> “Clean Economy Works: IRA One-Year Review” (August 14, 2023). Environmental Entrepreneurs, <https://e2.org/reports/clean-economy-works-2023/>
- <sup>2</sup> “United States Energy and Employment Report 2023” (June 2023). U.S. Department of Energy, [www.energy.gov/policy/us-energy-employment-jobs-report-useer](http://www.energy.gov/policy/us-energy-employment-jobs-report-useer)
- <sup>3</sup> “Energy Employment by State: 2023” (June 2023). U.S. Department of Energy, [www.energy.gov/sites/default/files/2023-06/2023%20USEER%20States%20Complete.pdf](http://www.energy.gov/sites/default/files/2023-06/2023%20USEER%20States%20Complete.pdf)
- <sup>4</sup> “Electric Power Generation, Transmission & Distribution” (accessed November 2, 2023). Data USA, <https://datausa.io/profile/naics/electric-power-generation-transmission-distribution>
- <sup>5</sup> “Fastest Growing Occupations” (September 3, 2023). U.S. Bureau of Labor Statistics, [www.bls.gov/ooh/fastest-growing.htm](http://www.bls.gov/ooh/fastest-growing.htm)
- <sup>6</sup> “Employment in Transportation: Annual Employment in Transportation and Related Industries” (2023). U.S. Department of Transportation Bureau of Transportation Statistics, <https://data.bts.gov/stories/s/Transportation-Economic-Trends-Transportation-Empl/caxh-t8jd/>
- <sup>7</sup> “2022 Public Transportation Fact Book” (January 2023). American Public Transportation Association, [www.apta.com/wp-content/uploads/APTA-2022-Public-Transportation-Fact-Book.pdf](http://www.apta.com/wp-content/uploads/APTA-2022-Public-Transportation-Fact-Book.pdf)
- <sup>8</sup> “Adaptation Jobs Explainer: Understanding this Critical and Growing Workforce” (September 23, 2021). Environmental and Energy Study Institute, [www.eesi.org/articles/view/adaptation-jobs-explainer-understanding-this-critical-and-growing-workforce](http://www.eesi.org/articles/view/adaptation-jobs-explainer-understanding-this-critical-and-growing-workforce)
- <sup>9</sup> “ASAP Jobs Database” (unpublished data). American Society of Adaptation Professionals.
- <sup>10</sup> “The Local Economic Impact of Flood-Resilient Infrastructure Projects” (December 8, 2020). The Johns Hopkins University 21st Century Cities Initiative and American Flood Coalition, <https://assets.floodcoalition.org/2020/12/d5f501c65174d5402f4aff96e8103387-AFC-JHU-economic-impact-of-flood-resilient-infrastructure.pdf>
- <sup>11</sup> “Biden-Harris Administration Announces \$4.9 Billion in Funding for Transformational Infrastructure Projects” (January 25, 2024). U.S. Department of Transportation, [www.transportation.gov/briefing-room/biden-harris-administration-announces-49-billion-funding-transformational](http://www.transportation.gov/briefing-room/biden-harris-administration-announces-49-billion-funding-transformational)
- <sup>12</sup> “Clean Economy Works: An Economic Impact Analysis of Major Clean Energy Projects Announced In Year One of the Inflation Reduction Act” (October 2023). Environmental Entrepreneurs, [https://e2.org/wp-content/uploads/2023/10/E2-BW-Clean-Economy-Works\\_-Economic-Impact-Report-FINALpdf.pdf](https://e2.org/wp-content/uploads/2023/10/E2-BW-Clean-Economy-Works_-Economic-Impact-Report-FINALpdf.pdf)
- <sup>13</sup> “Clean Energy Boom” (February 2023). Climate Power, <https://climatepower.us/wp-content/uploads/sites/23/2023/02/Clean-Energy-Boom-100K-Report.pdf>
- <sup>14</sup> “Considering a Federal Program to Permanently Plug and Abandon Offshore Oil and Gas Wells” (April 18, 2022). Center on Global Energy Policy at Columbia University, School of International and Public Affairs, [www.energypolicy.columbia.edu/publications/considering-federal-program-permanently-plug-and-abandon-offshore-oil-and-gas-wells](http://www.energypolicy.columbia.edu/publications/considering-federal-program-permanently-plug-and-abandon-offshore-oil-and-gas-wells)
- <sup>15</sup> “Potential for US Competitiveness in Emerging Clean Technologies” (revised October 2022). Boston Consulting Group, <https://thirdway.imgix.net/pdfs/override/Potential-for-US-Competitiveness-in-Emerging-Clean-Technologies.pdf>

