

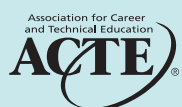
# CTE: DEVELOPING THE ENERGY WORKFORCE

## Career and technical education (CTE) supports America's energy needs by

preparing learners to enter this critical workforce, which employs **7.8 million** people and is growing faster than the total U.S. workforce – there was a **4%** increase in energy jobs in 2021 compared to 2.8% growth in jobs overall.<sup>1</sup>

CTE programs related to energy develop students' technical, academic and employability skills through work-based and hands-on learning, ensuring that they are prepared to enter **high-wage, in-demand** careers in areas such as power generation; transmission, distribution and storage; fuels; energy efficiency; and motor vehicles.

This infographic describes a small sample of the career opportunities available in the energy sector.



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## ELECTRIC POWER



- **One in 20** jobs in the United States depends on the electric power industry.<sup>2</sup>
- The median compensation for electric power workers is **\$75,000** per year.<sup>3</sup>
- **Occupations** include lineworkers, substation technicians and electric vehicle program managers.
- Apprenticeship credentials, industry certifications, postsecondary certificates and degrees can help workers build **fulfilling careers** in electric power.

## WIND POWER



- Wind power jobs include equipment operators, meteorological technicians and wind turbine technicians, which is one of the **fastest-growing** occupations in the United States.<sup>4</sup>
- Jobs in wind power pay between **\$40,500** and **\$83,500** per year.<sup>5</sup>
- Industry certifications, apprenticeship credentials, postsecondary certificates and degrees are **valuable credentials** in wind power.
- Technician jobs can lead to **opportunities** in plant management.

## NATURAL GAS



- Natural gas supports more than **3.4 million** jobs in the United States.<sup>6</sup>
- **Jobs** include pipefitters, gas control operators, mechanical engineers and more.
- Natural gas service technicians can earn from **\$40,000** to **\$96,000** annually.<sup>7</sup>
- **Beneficial credentials** include postsecondary certificates, degrees, apprenticeship credentials and industry certifications.





## MORE JOBS IN ENERGY

Beyond careers in electricity, wind and natural gas, CTE prepares youth and adults for these additional energy occupations:

- Weatherization installer
- Nuclear reactor operator
- Fuel cell technician
- Solar photovoltaic installer
- Petroleum service technician
- Energy auditor
- Hydroelectric plant operator
- Geothermal technician
- Electrical engineer
- Sustainability specialist

Graduates of the Natural Gas Field Technician Certificate program at Middlesex Community College in Connecticut train at an Eversource Energy facility and earn a job interview with the company.

## HOW CTE PREPARES THE ENERGY WORKFORCE

CTE programs of study and career pathways prepare secondary, postsecondary and adult learners for the energy workforce in many ways:

- **Courses** in electricity and electronics; wind turbine construction and operations; hybrid engines; heating, ventilation and air conditioning; and more that spans secondary and postsecondary education.
- Opportunities to earn **postsecondary certificates and degrees** in oil and gas production; plant operations; energy auditing; manufacturing and construction technology; electric and hybrid vehicle maintenance; and more.
- Opportunities to earn **industry credentials** from the Center for Energy Workforce Development, Home Builders Institute (HBI) and National Center for Construction Education and Research, among many other partners.
- **Work-based learning** experiences like job shadowing, internships and apprenticeships.
- Competitive events, service learning and leadership development through **career and technical student organizations** such as SkillsUSA and the Technology Student Association.
- **Activities** that build technical, academic and employability skills such as teamwork, communication and problem solving.

### Learn More

This Sector Sheet highlights just a few occupations within the energy workforce. To learn more, please visit the U.S. Department of Labor at [www.CareerOneStop.org/ExploreCareers](http://www.CareerOneStop.org/ExploreCareers) and [MyNextMove.org](http://MyNextMove.org).

### Citations

<sup>1</sup> U.S. Department of Energy. (June 2022). *United States energy & employment report 2022*. Retrieved from <https://www.energy.gov/policy/us-energy-employment-jobs-report-useer>

<sup>2</sup> Get Into Energy with the Center for Energy Workforce Development. (N.d.). *Get into energy: Get into electric power*. Retrieved from <https://getintoenergy.com/wp-content/uploads/2021/03/GIE-Electric-Flyer-FINAL-2.pdf>

<sup>3</sup> Ibid.

<sup>4</sup> U.S. Bureau of Labor Statistics. (September 8, 2022). *Fastest-growing occupations*. Retrieved from <https://www.bls.gov/ooh/fastest-growing.htm>

<sup>5</sup> Get Into Energy with the Center for Energy Workforce Development. (N.d.). *Career pathway spotlight: Discover a career as a wind technician*. Retrieved from [https://cewd.org/wp-content/uploads/2021/08/10\\_Wind-Technician-FINAL.pdf](https://cewd.org/wp-content/uploads/2021/08/10_Wind-Technician-FINAL.pdf)

<sup>6</sup> Get Into Energy with the Center for Energy Workforce Development. (N.d.). *Get into energy: Get into natural gas*. Retrieved from <https://cewd.org/wp-content/uploads/2021/03/GIE-Gas-Flyer-FINAL.pdf>

<sup>7</sup> Get Into Energy with the Center for Energy Workforce Development. (N.d.). *Career pathway spotlight: Discover a career as a natural gas service technician*. Retrieved from [https://getintoenergy.org/wp-content/uploads/pdfs/career\\_pathways/09\\_Natural%20Gas%20Service%20Technician-FINAL.pdf](https://getintoenergy.org/wp-content/uploads/pdfs/career_pathways/09_Natural%20Gas%20Service%20Technician-FINAL.pdf)