SECTOR SHEET

MARCH 2023

CTE: ENERGY DEVELOPING THE 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.[1]

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.

ELECTRIC POWER

- **One in 20** jobs in the United States depends on the electric power industry.[2]
- The median compensation for electric power workers is **$75,000** per year.[3]
- **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.[4]
- Jobs in wind power pay between **$40,500** and **$83,500** per year.[5]
- 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.[6]
- **Jobs** include pipefitters, gas control operators, mechanical engineers and more.
- Natural gas service technicians can earn from **$40,000** to **$96,000** annually.[7]
- **Beneficial credentials** include postsecondary certificates, degrees, apprenticeship credentials and industry certifications.

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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 and MyNextMove.org.

Citations

[1] 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

[2] 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

[3] Ibid.

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

[5] 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

[6] 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

[7] 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