

Energy in Motion: Industry Trends, Emerging Opportunities and Evolving Careers

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Center on Global Energy Policy
Columbia University
Women in Energy

pillsbury

Event

Energy in Motion: Industry Trends, Emerging Opportunities and Evolving Careers



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Understanding Today's Energy Workforce

Women in Energy

October 22, 2026 | Christina Marshall



A moment to broaden awareness of the careers that keep communities powered.

Career seekers
Explore options

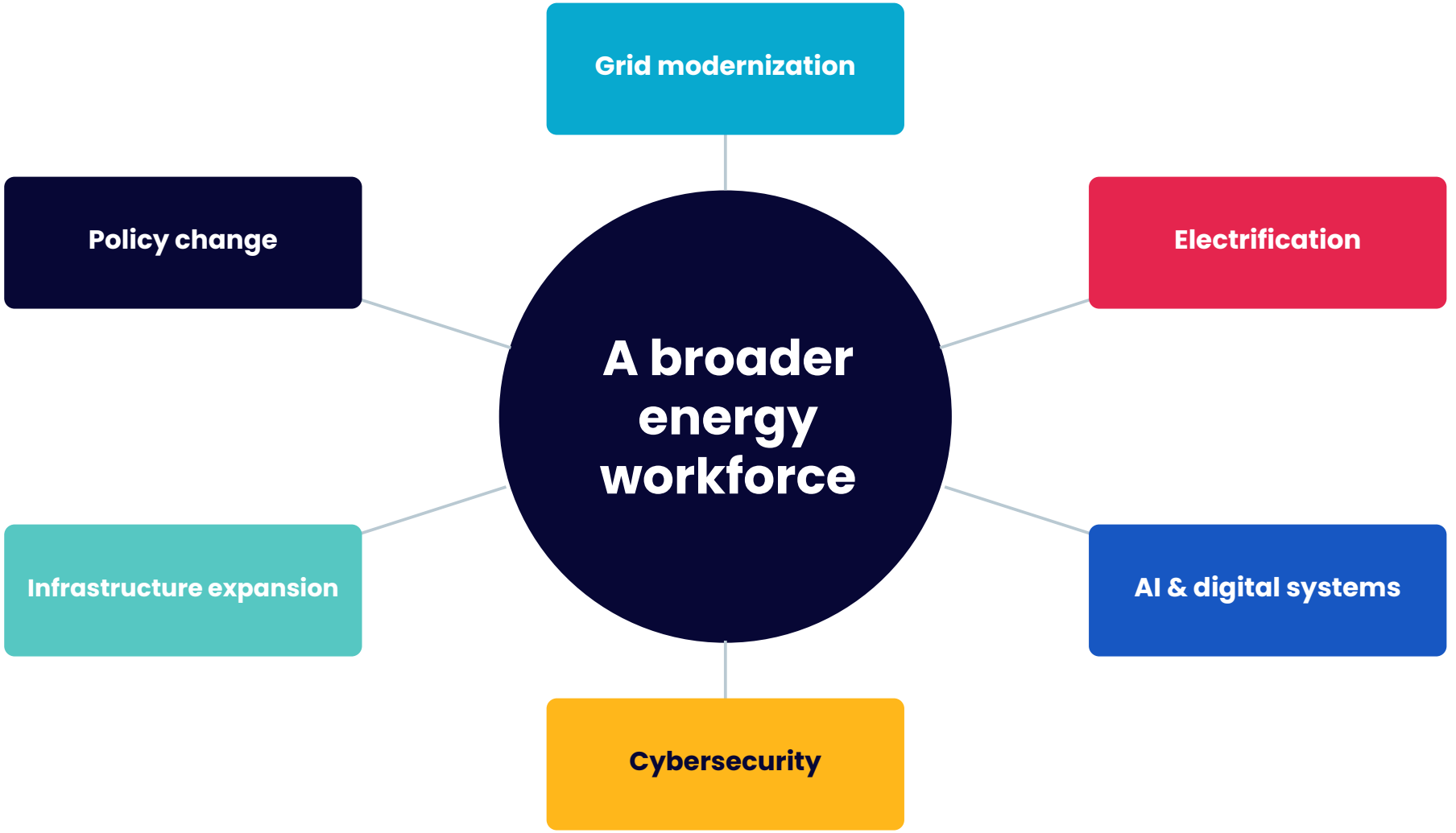
Career changers
Transfer skills

Students & parents
See pathways

Veterans
Translate experience

Energy careers power schools, hospitals, businesses and homes everyday.

The energy workforce is growing and changing



Technical + professional + business talent

Demand signals across the skilled workforce

Long-term forecasts vary, but multiple indicators point to continued hiring needs

81,000

electricians to hire and train each year for the next decade

320,000

projected welder shortfall by 2028

376,000

additional nuclear workers needed by 2050

40%

of the utility workforce retirement-eligible by 2030

More than half

of the current mining workforce to be replaced by 2029

The takeaway: hiring demand remains on the horizon across critical energy occupations.

Energy offers opportunity at every level

A nationwide workforce with strong wages, varied work settings and multiple entry points

8.4M+

people working in energy

5%+

of all U.S. jobs

24%

above the national wage average

GED → PhD

pathways into energy careers

How do you want to work?

- At a computer
- In the field
- Independently
- On a team
- Solving problems
- Leading change

There is a place for you in energy.

Where professional talent is in demand

Energy employers need the functions that plan, deliver, protect and explain complex work

Engineering & technical analysis

Electrical • power systems • civil • mechanical • environmental

Data, technology & cybersecurity

Data analytics • AI applications • IT • digital transformation

Project & program management

Teams • budgets • timelines • business operations

Policy, regulatory & sustainability

Public policy • government affairs • compliance • permitting • ESG

Communications & engagement

Marketing • public affairs • stakeholders • customer experience

Engineering and Technical Analysis

- Electrical engineering
- Power systems engineering
- Civil engineering
- Mechanical engineering
- Environmental engineering

Employers are looking for professionals who can help plan, design, and modernize energy infrastructure while integrating new technologies and energy resources.

Data, Technology, & Cybersecurity

- Data analytics
- Artificial intelligence applications
- Cybersecurity
- Information technology
- Digital transformation

As the grid becomes more digital, companies need professionals who can manage and protect increasingly complex systems.

Project & Program Management

- Project managers
- Program managers
- Business operations professionals

Individuals who can organize teams, manage budgets, oversee timelines, and navigate complex projects bring tremendous value.

Policy, Regulatory Affairs, & Sustainability

- Public policy
- Government affairs
- Regulatory compliance
- Environmental permitting
- Sustainability and ESG strategies

These roles help organizations respond to changing regulations and shape the future of the industry.

Communications, Community Engagement, & Customer Experience

- Communications
- Public Affairs
- External Communications
- Corporate Communications
- Media Relations
- Digital Communications
- Community Relations
- Government & Community Relations

These roles play an increasingly important role in helping companies build trust and communicate complex issues clearly.

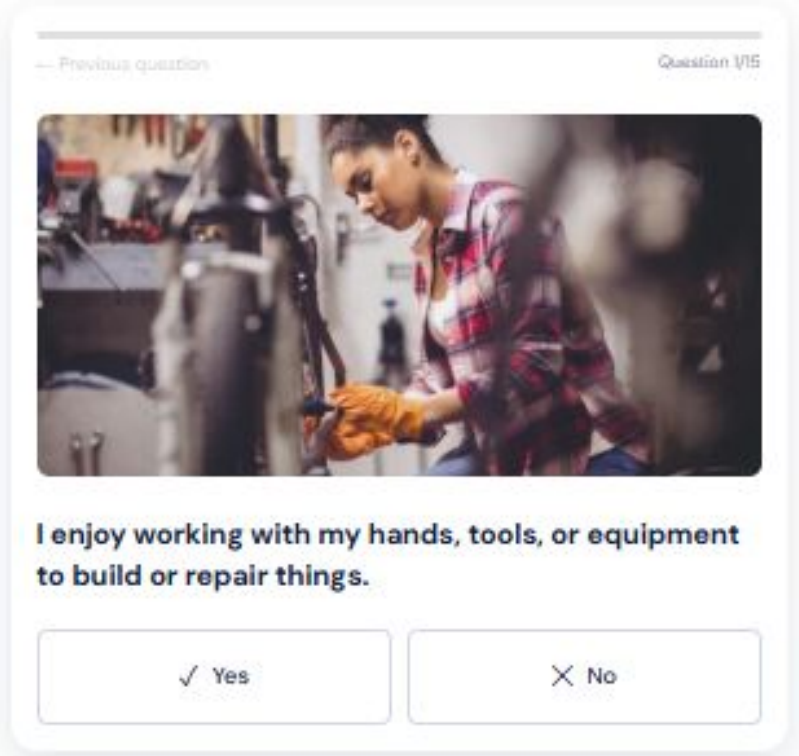
Career Explorer

What energy career is right for you?

There is a wide range of careers available in the energy industry, all highly rewarding, in-demand, and providing excellent opportunities for growth and success.

The quiz below is aimed at helping you find the right career category in the energy industry. **It takes less than 5 minutes and does not require an email address or any sign up.** Simply click yes or no below to get started and see where your energy industry career could lead!

get into energy explorer



The skills employers value most

Technical expertise matters, and durable professional skills help people adapt as the sector changes

1. **Critical thinking & problem solving**
2. **Data-driven decision making**
3. **Communication & presentation**
4. **Project management**
5. **Cross-disciplinary collaboration**
6. **Adaptability & continuous learning**

You do not need an energy-specific background. Business, economics, policy, communications, finance, IT, environmental science and analytics all translate.

Energy is reshaping how we generate, deliver, manage and use power.

That creates opportunity for people ready to solve important challenges across engineering, technology, policy, communications, business and analytics.

YOUR NEXT STEP

Bring your skills. Explore the pathways. Help power the future.

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