BUILDING THE 21ST CENTURY ENERGY WORKFORCE

THURSDAY, SEPTEMBER 10, 2020
3:00 PM ET / 2:00 PM CT / 1:00 PM MT / NOON PT
ENERGY, ENVIRONMENT AND TRANSPORTATION FALL 2020 WEBINAR SERIES

- Forever Chemicals? State and Federal Actions on PFAS
- Building the 21st Century Energy Workforce
- Green Means Go? What’s Next for a New Federal Transportation Infrastructure Package
- Exploring Climate Action Opportunities for Sustainable and Resilient Agriculture
- Is the Clock Running Out for Standard Time?

For more information on the webinars, and how to register visit NCSL’s Webpage
SPEAKERS

Sandy Fazeli
National Association of State Energy Officials

Senator Eric Koch
Indiana State Senate

Michael Makarski
Engineers Labor-Employer Cooperative
The U.S. Energy Workforce

Data, Trends, and COVID-19 Impacts

September 10, 2020

NASEO
National Association of State Energy Officials

Image c/o R.L. Martin
About NASEO

- Membership includes the 56 Energy Officials from the states, territories, and the District of Columbia, as well as private-sector Affiliate partners.
- Serves as a resource for and about the Energy Offices on a number of topics, including building energy efficiency, clean energy financing, fuels and grid integration, government affairs, transportation, energy policy planning, and climate.
- Works through topical committees to facilitate peer learning across states to improve the effectiveness of energy policies and programs.
- Visit [www.naseo.org](http://www.naseo.org) for more information.
About the U.S. Energy and Employment Report

- A supplemental survey of employers with energy sector employment, based on the BLS Quarterly Census of Employment and Wages (n = app. 25,000 businesses)
- Five sectors: Fuels; Electric Power Generation; Transmission, Distribution and Storage; and Motor Vehicles
- Determines: employment numbers, employer hiring expectations, hiring difficulty, high-demand jobs and skills gaps, workforce demographics by race, ethnicity, gender, and veteran’s status
- 2016 and 2017 editions were completed by the U.S. Department of Energy
- EFI, BW, and NASEO teamed up to produce the 2018, 2019, and 2020 USEERs
A More Complete Picture of U.S. Energy Employment

- Changing business models in virtually all energy sectors have resulted in undercounting of direct employment.
- Jobs in newer technologies such as wind and solar are only counted as such when employed directly by utility companies (rather than by renewable energy development firms, for instance).
- No definition exists under the North American Industrial Classification System for jobs in energy efficiency, which cut across multiple industries.

Wind: 25,507 workers (vs. BLS 2,717)
Solar: 12,242 workers (vs. BLS 185)
2016-2019: A Trajectory of Growth
Key Takeaways

- 6.8 million workers in Fuels, EPG, T&D/Storage, and Energy Efficiency. These sectors grew by 120k jobs in 2019, outperforming the economy as a whole for the fifth year.

- Another 2.55 million in Motor Vehicles, inc. 266k in alternative fuels.

- Energy efficiency led with 54k new jobs (330k new jobs in 4 years).

- Fuels production added 26k new jobs in 2019 (18k in oil/gas).

- After two years of decline, solar jobs bounced back, adding 5,700 jobs in 2020.

- Jobs in low emissions natural gas, wind, CHP, and geothermal all continued to grow.
Key Considerations and Challenges

- Surveyed employers predicted continued growth in their workforce in 2020 (pre-COVID)
- Overall hiring difficulty continued to rise, with employers citing lack of experience, training, or technical skills
- Women represent a smaller portion of the energy workforce compared to the overall economy
- The construction workforce is closely linked to the U.S. energy sector of the 7.1 million construction jobs the US, about 26% are directly supported by energy firms
Changing Resources → Changing Workforce
COVID-19 Impacts

The tough battle to regain clean energy jobs

Research from BW Research Partnership:

• As of August 2020:
  • +1.14 million energy workers jobless
  • +500,000 clean energy workers jobless

• Weekly unemployment claims are being filed at an unprecedented pace

• BLS data indicates that racial and ethnic minorities, women, young workers, and those with less educational attainment are currently suffering higher unemployment rates

• [https://bwresearch.com/covid/](https://bwresearch.com/covid/)
States Acting on Workforce Data

2019 Minnesota Energy & Employment Report

Massachusetts Clean Energy Industry Report

2019 Vermont Clean Energy Industry Report

2020 Rhode Island Clean Energy Industry Report

2020 Pennsylvania Clean Energy Employment Report

New York Clean Energy Industry Report

2019 Florida Energy & Employment Report
THANK YOU!

Sandy Fazeli, Managing Director, Policy, NASEO
sfazeli@naseo.org

U.S. Energy and Employment Report:
https://www.usenergyjobs.org/

U.S. Energy and Employment Report Partners:
   Energy Futures Initiative
   BW Research Partnership
A CASE STUDY FROM INDIANA

Senator Eric Koch, Indiana State Senate
Career and technical education programs fall into specific career clusters.

Career clusters are a group of jobs and industries related by skills or products.

Each career cluster has cluster pathways that include courses and training opportunities preparing students for a particular career.

The States’ Career Clusters Initiative developed sixteen career clusters that are recognizable in schools across the country.
The National Career Clusters® Framework

The National Career Clusters® Framework (www.careertech.org) provides a structure for organizing career and technical education (CTE) programs through learning and comprehensive programs of study. The 16 Career Clusters represent more than 79 Career Pathways to help students navigate their way to great success in college and careers.

- Agriculture, Food & Natural Resources
- Architecture & Construction
- Arts, A/V Technology & Communications
- Business Management & Administration
- Education & Training
- Finance
- Government & Public Administration
- Health Science
- Hospitality & Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections & Security
- Manufacturing
- Marketing
- Science, Technology, Engineering & Mathematics (STEM)
- Transportation, Distribution & Logistics
Requires the state board of education to approve a utility career and technical education cluster. And requires state officials to create corresponding course sequences.

The new utility career cluster will allow students to acquire knowledge and skills related to employment in the electric, natural gas, communications, water and wastewater utility industries.
SENNATE BILL No. 195

A BILL FOR AN ACT to amend the Indiana Code concerning utilities.

Be it enacted by the General Assembly of the State of Indiana:

SECTION 1. IC 20-32-4-15 is added to the Indiana Code as a new section to read as follows: Effective July 1, 2020: Sec. 15. (a) The following definitions apply throughout this section:

(1) "Utility career cluster" means a list:

(A) compiled for purposes of college and career pathways relating to career and technical education under section 1.5(g) of this chapter; and

(B) setting forth industries or occupational fields that:

(i) are related to the provision of utility services; and

(ii) share similar knowledge and skill training requirements.

(2) "Utility services" includes:

(A) production, transmission, or distribution of electricity;

(B) acquisition, transportation, distribution, or storage of natural gas;

(C) provision of communications service (as defined in IC 8-1-32.5-3); (D) treatment, storage, or distribution of water; and

(E) collection or treatment of wastewater.

(b) Not later than December 31, 2020:

(1) the state board shall, for purposes of developing sequences of courses leading to student concentrators in industries or occupational fields related to the provision of utility services under section 1.5(g) of this chapter, approve a utility career cluster; and

(2) the governor's workforce cabinet, in consultation with the state board and the commission for higher education, shall create one (1) or more course sequences:

(A) each of which is comprised of courses approved by the state board for purposes of college and career pathways relating to career and technical education under section 1.5(g) of this chapter; and

(B) each of which provides students with knowledge and skills necessary for employment in an industry or occupational field in the utility career cluster.
Building The 21st Century Energy Work Force

Michael Makarski
Director, External Affairs
Engineers Labor-Employer Cooperative
Building & Maintaining our critical energy infrastructure
Building & Maintaining our critical energy infrastructure
How Operating Engineers Approached The 21st Century Energy Workforce

- Assess Current & Future Energy Market Needs
- Plan & Develop Appropriate Training
- Establish First In The Nation Technical College
- Adopt Training from Current Energy Sources to Future Generation Sources
RESULTS

• FIRST IN THE NATION ACCREDIATED TECHINCAL COLLEGE

• NATIONALLY RENOWNED TRAINING CENTER

• READY ON DAY 1 WORK FORCE
Thank You
Questions re: Energy Workforce?
Kristy.Hartman@ncsl.org or Laura.Shields@ncsl.org

Questions re: Webinar Series?
Contact
Kristen.Hildreth@ncsl.org