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The Need

The energy industry will hire hundreds of thousands of employees over the next several years for skilled trade jobs, technical roles, engineering positions, cyber-security needs, and the myriad of positions that support the business of energy. With the competition for talent, the great resignation, the demographic drought, decarbonization objectives, and a reimagined energy grid, business leaders question where tomorrow’s talent will come from.

There has never been a greater need to expose students - especially those from systemically marginalized communities - to careers in energy and demonstrate the need for innovators, technical thinkers, and those who can support a clean energy future than now.
The Solution

A modernized Energy Industry Fundamentals curriculum will serve as that national catalyst for education, exposure, and engagement to create a larger pool of qualified talent to fill energy careers of the future.

EIF 2.0 can also be embedded in incumbent worker training to create a “Student of the Business” and broaden employees' understanding of the energy sector, not just their role.

The curriculum is modular but can also be combined with elective chapters to take a deeper dive into specific career paths while offering stackable credentials.
Supported by Our Generous Donors

Platinum Level Educator  Platinum Level Educator  Gold Level Educator

Silver Level Educator  Silver Level Educator  Silver Level Educator

exelon  National Urban League  DUKE ENERGY

CenterPoint Energy  Constellation  PSEG Foundation
# Modernized Course Architecture

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**Introduction**
- Find Your Career in Energy - Paths for Everyone
- What is Energy?
- The Importance of Energy
- Priority of Safety
- Energy Efficiency
- Energy Infrastructure
- The energy ecosystem & its transformation
- The history & future of energy in the U.S.

**Chapter 1**
- Natural gas: transmission and distribution
- Natural gas equipment, processes, & reliability
- Math for energy: customers & companies
- Metering, billing, rate structure, and the emergence of smart metering

**Chapter 2**
- Introducing diverse fuel sources: natural gas, coal, nuclear, wind, hydro, solar, biomass, geothermal
- What is an "energy company"? How do they operate?
- Power: transmission and distribution
- Power equipment, processes, & reliability
- Distributed generation / storage
- Natural Gas Markets
- Building electrification
- Electric vehicles

**Chapter 3**
- Advantages and limitations of each electrical generation source
- The energy industry regulatory landscape
- Energy deregulation
- Energy policymaking
- Risk management for the energy industry
- Physical and cybersecurity and why it is crucial
- Workplace culture
- Advancing in the energy industry
- Emerging skills & career trends
- Energy Justice

**Chapter 4**
- Generation trends: new generation construction & retiring fuel sources
- Focus on storage & hydrogen
- Other emerging technologies
- The future(s) of energy companies
- A holistic perspective on energy
- Decarbonization goals
- Grid modernization & smart grids
- Microgrids
- Reliability & resiliency: load balancing, blackouts, & crises
- The business of energy

*May 31, 2023*
Bonus Chapters

- Cybersecurity
- Electric Vehicles
- Energy Storage
- Hydrogen
- Military Connection (DoD)
- Nuclear
The Curriculum – Sneak Peak!

Unit A The Power of Energy: Chapter 1

- Unit A The Power of Energy
  - 1.1 The Power of Energy
  - 1.2 What is Energy?
  - 1.3 Energy in Everyday Life
  - 1.4 Energy Efficiency
  - 1.5 Energy Systems
  - 1.6 Energy and Workforce Safety
  - 1.7 Energy and Safety
  - 1.8 Energy and the Environment

Unit B Chapter 5: The Past, Present, and Future of Energy

- Unit B Chapter 5
  - 2.1 An Introduction to Energy
  - 2.2 Energy and Society
  - 2.3 Energy and the Environment
  - 2.4 Energy and Economic Growth

Unit C Chapter 9: The Power Transmission System

- Unit C Chapter 9
  - 3.1 The Power Transmission System
  - 3.2 The Power Transmission System in Practice
  - 3.3 The Power Transmission System and the Environment
  - 3.4 The Power Transmission System and Economic Growth
Timeline

**July 10th:**
Instructors / Group Administrators will have access to the LMS and Library for new curriculum and resources

**August 1st:**
Learners will have access to the new LMS to begin course
Resources

CEWD is here for you!
CEWD is here for Energy Leaders!

As the industry looks to hire hundreds of thousands of people in the coming years to support America’s Clean Energy Future, energy companies have an opportunity — and a responsibility — to develop their talent pipeline in collaboration with local educational partners. And now, the new Energy Industry Fundamentals (EF) 2.0 curriculum, a program powered by the Center for Energy Workforce Development, can provide the connection point to bring much-needed, quality energy education into the classroom.

Energy companies have an opportunity to come together to support EF 2.0 as an industry-recognized program.

**WHAT IS EF 2.0?**

The new EF 2.0 curriculum, available in August 2023, is a 90-hour, interactive course for high school and technical school students (and beyond) to learn about the energy sector and how they can pursue a career in the industry. EF 2.0 familiarizes learners with all that needs to be done to pull, store, engineer, install, manage, advance, and protect our energy system, while safeguarding our natural resources. CEWD is especially eager to ensure the curriculum is integrated into under-served and under-represented communities.

Program completers will earn a certificate that is expected to be accepted as an industry-recognized credential. By earning a certificate, program completers show interest in the energy sector, understand energy industry attributes and gain exposure to power and fuel generation, new and emerging energy environmental stewardship, cybersecurity, engineering, energy policy, and much more.

**WHY SHOULD ENERGY EMPLOYERS RECOGNIZE THE EF 2.0 PROGRAM?**

Electronic recognition of the EF 2.0 certificate in the application and hiring processes can help energy companies:

1. Create a connection with local training providers to build a talent pipeline for careers in highest demand
2. Establish a standard of excellence by creating a baseline level of knowledge for candidates entering the energy workforce
3. Improve baseline knowledge of applicants, which promotes efficiency and reduced turnover
4. increase talent pool of qualified, diverse, committed candidates
5. Identify candidates who understand the energy sector and associated careers to improve retention rates and building-term retention
6. Collaborate with training organizations and compete for talent among other sectors.

"It’s important that we help create interest in opportunities within the energy industry to develop a workforce that reflects the communities we serve. Supporting the Energy Industry Fundamentals 2.0 curriculum provides the opportunity to do just that. This program can have a big impact in educating tomorrow’s leaders today.”

— Ron Reiling, Chief Human Resources Officer at Duke Energy, a corporate partner and contributor to the program.

To learn more about the EF 2.0 curriculum and certification and how to make this program a part of your development strategy, reach out to Kristie Kelley, CEWD’s Workforce Development Director, at Kristie@cewd.org.
CEWD is here for Hiring Managers!

WHAT DOES AN EIF 2.0 CERTIFICATION MEAN?
For energy companies that elect to recognize the EIF 2.0 certification as part of the hiring process, it’s important for hiring managers to understand what this means. Applicants who have an EIF 2.0 certification are coming to the table with:

- 120 hours of industry education and experience across specialties
- An understanding of the energy sector and associated careers to develop company retention rates and build long-term careers
- Work that is done under an industry standard of excellence
- Compliance procedures necessary to ensure a safe and healthy work environment
- Ability to earn verifiable credentials, such as OSHA 10

HOW CAN HIRING MANAGERS USE THE EIF 2.0 CERTIFICATION TO FIND THE BEST CANDIDATES?
An EIF 2.0 certification is a way of approaching the energy industry given the amount of work and training required. This enables companies and hiring managers to identify the best candidates by looking at those who have this certification and promoting the company’s certification adoption.

- Add the EIF 2.0 logo on the website
- Promote the program on social media
- Create a dedicated EIF 2.0 Certification subsection on the website
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- Promote the program on social media

To learn more about the EIF 2.0 certification and what it means for energy employers, reach out to Kristie Kelly, CEWD’s Workforce Development Director, at Kristie@cewd.org.
CEWD is here for Educators!

Energy in the Classroom

Premiering Students for Careers in Energy

FOR EDUCATORS

As the energy industry looks to hire hundreds of thousands of people in the coming years to support America’s Clean Energy Future, educators have an opportunity to teach students the skills and experiences they need to thrive in the energy sector. The new Energy Industry Fundamentals (EIF) curriculum, a program developed by the Center for Energy Workforce Development, can provide this needed content to help high school students develop the skills needed to make quality energy education into the classrooms.

WHAT IS EIF 2.0?

The new EIF 2.0 curriculum, available in August 2023, is a 12-hour, interactive course for high school and technical school students. It is designed to teach about the dynamic energy industry and expose them to sector careers. EIF 2.0 is hands-on, hands-on with all the needs to build, sustain, engineer, innovate, manage, advance, and protect our energy system, while safeguarding natural resources. The industry is especially eager to engage the curriculum's integrated into under-served and under-represented communities.

Program completers will earn a certificate that is expected to be accepted as an industry-recognized credential. By earning a certificate, program completers show interest in the energy sector, demonstrate industry aptitude and gain exposure to power and fuel generation, new and emerging energy environmental stewardship, cybersecurity, engineering, energy policy, and much more.

"As educators, we look to empower students to engage with the world around them, pursue their interests, and succeed to their fullest potential. The Energy Industry Fundamentals curriculum allows me to do that with my students, and I love that it exposes them to an in-demand sector with many career opportunities."

— Natalie Martin, Instructor at Flint Hills Technical College

WHY SHOULD EDUCATORS USE EIF 2.0?

The new EF 2.0 curriculum is created by the energy industry for the energy industry, ensuring learners have access to an educational track that will help them succeed in a long-term career. Educators can:

- Reach our the course content modules with ease all Learning Management Systems
- Use the personalized curriculum for easy embeddability existing career and technical education programs
- Access lesson plans, student materials, interactive activities and pacing guides as part of the curriculum
- Build awareness of career opportunities within the energy sector for learners

- Build a connection between learners and energy companies to build a talent pipeline for in-demand careers
- Develop a relationship with high schools that offer EIF 2.0 and their post-secondary partners with an articulation agreement to encourage early participation

HOW CAN EDUCATORS ACCESS EIF 2.0?

- Visit www.education.energy/EIF-2.0/ and register for a free account
- Complete the "Learn the Power" program
- Register your students and begin EF 2.0

For additional questions about the EIF 2.0 certification or to locate energy companies with which to partner in your community, reach out to Kristie Kelley, CEWD’s Workforce Development Director, at Kristie@cewd.org
CEWD is here for Learners!

FOR LEARNERS

There has never been a more exciting time to work in the energy industry. With hundreds of thousands of jobs currently open across the country, the Clean Energy Future among others can find their place in the sector by gaining the needed education and skills-based expertise through the Energy Industry Fundamentals (EIF) 1.0 curriculum, an industry-recognized program from the Center for Energy Workforce Development.

Not sure a career in energy is the right move? Industry workers with the right education and training have access to:

- High earning potential
- Career advancement
- Transferable skills
- Thousands of career options
- Opportunity to make an impact in the community.

The EIF 2.0 curriculum sets learners on the right path to enjoy these benefits and more.

WHAT IS EIF 2.0?

The new EIF 2.0 curriculum, available in August 2020, is a 120-hour, interactive course for high school and technical school students and beyond to learn about the dynamic energy industry and prepare them to enter careers. EIF 2.0 leverages learners with all that is new to be close to build, work, and energy innovation and advance, and protect our energy system, while gaining the skills to become a useful workforce.

Program completers will earn a certificate that is accredited to be accepted at an industry-recognized institution. By earning a certificate program completers show employers that they have the skills necessary to be competitive in the energy workforce. The curriculum is designed to provide learners with the knowledge and skills to enter and be competitive in the energy industry and make a positive contribution to the world.

HOW CAN LEARNERS ACCESS EIF 2.0?

- Visit www.energyindustry.org/EIF-2.0 and submit an online application.
- Register for EIF 2.0 as an individual by creating an online account.
- Begin the self-paced course using provided student guides and materials.

WHAT ARE LEARNERS’ NEXT STEPS ONCE THEY EARN THE EIF 2.0 CERTIFICATE?

An EIF 2.0 certification is a great step towards advancing your career from the energy industry given the amount of work and time each individual puts into the program. With the completion of the course, learners are encouraged to:

- Include EIF 2.0 completion on their resume.
- Add provided digital badge to their social media profile.
- Connect with employers who prioritize applicants with the EIF certificate in the hiring process.
- Look for and select EIF 2.0 as an earned credential on available job applications.

For additional questions about the EIF 2.0 certification, reach out to Christie Kelby, CEWD’s Workforce Development Director, at Christie@cewd.org.
Next Steps

Reach 500,000 learners in the next decade, or sooner!
It’s your turn…

• Adopt EIF 2.0 as an Industry Recognized Certificate
  • Add to Application for Jobs
• Recognize as foundation to other Stackable Credentials
• Embed in Incumbent Workforce Training
• Support creation of an Energy Career Cluster
• Promote locally
  • Share social media announcements
  • Partner with schools
Database*

*Currently testing and content is subject to change.

 EIF 2.0 Connect with Us

Thank you for your interest in EIF 2.0.

Name (Required)

First

Last

Email (Required)

School or Organization Name: (Required)

State (Required)

Are you currently working with, sponsored or have a partnership by an energy company? (Required)

- Yes
- No

How Did You Hear About EIF? (Required)

Submit
Questions?

Visit our FAQ section of the EIF 2.0 webpage
Contact Kristie@cewd.org
Thank you!

Kristie Kelley, Workforce Development Director
Kristie@cewd.org or 850-549-1298