Prepare Yourself to be a More Effective Professional in the New

Net Zero World

Earn a GWU Energy Resilience Certificate

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC

The Environmental and Energy Management Institute (EEMI)'s **Energy Resilience Certificate (ERC) or the Advanced Energy Resilience Certificate (AERC).** Leading industry experts designed the courses. These continuing education noncredit short courses help prepare the professional workforce to be better leaders, energy advisors, decision-makers, investors, regulators, and educators. EEMI certificates document your professional education advancement.

Learn about resilience, renewable energy design and financing, energy strategies, electric vehicle markets, energy policy, and related topics critical to understanding how energy systems function and evolve.

Students who earn the certificate will be able to:

- Apply resilience principles in a turbulent world
- Understand the landscape of resilience and clean energy technologies and applications
- Clearly communicate their understanding of the energy and resilience topics
- Confidently advise decision-makers on energy solutions and energy analysis techniques

GWU instructors are US professionals with multinational and multicultural backgrounds from India, China, Iran, Greece, the UK, and the US. They are international practitioners and bring an understanding of US and global energy to their courses. Perfect for learners interested in thought leadership on global energy and environmental solution.

Course Format

Each course consists of 10 to 12 hours of tutorial videos, which you can access on any device and take at any time over three months. Each course also includes optional live Q&A webinars with the instructor. **These certificate programs are ideal for busy professionals!**

TUITION $550/course
CONTINUING EDUCATION 1 CEU/course
MORE INFORMATION Contact
esaltzberg@gwu.edu

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The EEMI Energy Resilience Certificate (ERC)

Take any four of seven non-credit short courses to earn the ERC and all seven for the AERC

Complete each 10-to-12-hour course at your own pace.

Several webinars for instructor summaries, Q&A, guest speakers, and business networking

Enroll anytime and take up to three months to finish a course.

A certificate of completion comes with each course.

Free Lifetime access to online events, jobs alerts, and business networking

Students can earn the ERC in as little as two months. Complete all seven for the Advanced Energy Resilience Certificate.

Enterprise Resilience

The principles of resilience and the capacity for systems to survive, adapt, and grow in the face of turbulent change are foundational to understanding energy assurance and security. Students learn how designing for resilience helps enterprises and communities overcome disruption, whether from human or natural causes, and improve their adaptability to changing conditions. The course draws extensively on case studies of companies that have adopted resilience strategies and have kept their operations and energy systems functioning. More about the course.

Instructor: Dr. Joseph Fiksel *is the author of Resilient by Design, the seminal book on the topic, and co-founder of the Center forResilience at The Ohio State University. In addition, he has provided consulting support to industry and government organizations worldwide.*

Energy Strategies That Thrive in a Decarbonized World

The realities of climate change are already starting to affect corporate bottom lines, forcing C-Suite executives to seek new ways to mitigate risk in their business operations and supply chains. Moreover, investor, employee, consumer, and community pressure are driving companies to contribute to the United Nation's Sustainable Development Goals (SDGs) in meaningful ways. In this course, you will learn how to use energy consumption and carbon emissions as key performance indicators to reduce the cost of doing business and as a basis to optimize business operations. More about the course.

Instructor: Jimmy Jia *is a Managing Partner of the Jia Group. For over a decade, he has specialized in creating strategies for corporations, governments, and non-profits advance their missionand vision while reducing their impacts on the planet.*

continued

The EEMI Energy Resilience Certificate (ERC)

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How to Design, Finance, and Integrate Renewables in the Power Grid

A key to understanding resilience is to know how the electric grid works and how renewable energy fits into it. This course provides participants with a grounding in the electric power grid and the knowledge needed to oversee, plan, finance, and implement renewable energy projects. More about the course.

Instructor: Stratos Tavoulareas *is an energy advisor working globally. He was the Lead for Global Power at the International Finance Corp. Advisory Services, part of the World Bank Group. He has 40 years of experience in the energy sector working in eighty countries on renewable energy and transforming the power sector to accommodate new technologies.*

On the Road to Mass Market Electric Vehicles

Electric vehicles are leading the way to the electrification of the economy. Students will learn about the types of electric vehicles, the EV market and factors driving market growth, barriers to growth, and how the market may overcome them. Key to the modernization of the energy system is the integration of electric vehicles into the grid system. More about the course.

Instructor: Julian Bentley *is the Managing Director and founder of Bentley Energy Consulting, with more than 20 years of experience helping the federal government address energy and environmental challenges.*

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The EEMI Advanced Energy Resilience Certificate (AERC

Professionals will gain a more complete range of competencies by taking **three additional short courses** to obtain the AERC.

How Electricity Markets Work

Launching in early 2022

In the United States, how electricity is bought and sold varies by region of the country. Municipally owned utilities and customer-owned rural cooperatives support some communities, but most customers are served by investor-owned electric utilities, and each is regulated differently. Learn how retail and wholesale electricity prices are set, how power is procured, how the markets are regulated, and implications for the future given the greening and modernization of the electricity sector.

Instructor: Venki Venkateshwara *is President of Epoch Energy Advisory Services and a long-time energy consultant who has worked at the world's leading management consulting firms, including McKinsey & Company, Charles River Associates, and FTI Consulting.*

Smart Energy Systems and Cybersecurity

LAUNCHING IN early 2022

Smart energy systems incorporate information and communication technology (ICT) and control systems in power networks to increase the quality and reliability of power supply, facilitate the integration of renewable and distributed energy sources, optimally plan transmission and distribution systems, and reduce system costs. Learn how smart energy systems work and use network controls to optimize other utility services, including water, waste, transportation, building services, etc.

Instructor: Payman Dehghanian *is an Assistant Professor of Electrical and Computer Engineering at George Washington University and an expert in power system reliability and electrical cybersecurity.*

Building Decarbonization

LAUNCHING in early 2022

Why does the path to a zero-carbon economy go right through our buildings? Because the buildings sector has an outsized impact on global emissions. By increasing the efficiency of how buildings and their sites use energy, water, and materials, 'green' buildings can reduce their impacts on human health and the environment, including climate change, for the entire lifecycle of a building. This course introduces you to the foundational concepts and range of approaches to decarbonize the built environment and provides you with a framework to apply them to green building projects, programs, or policies for maximum benefit to society and the planet.

Instructor: Smita Chandra Thomas *is the founder and principal of DC-based consulting practice Energy Shrink, LLC, serves as a senior green building consultant to IFC (World Bank), and is a LEED Accredited Professional (AP) and Certified Passive House Consultant (CPHC).*

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Affiliations of Past Students

Shell Global Solutions

Dow Chemical

Arup

Energy Experts International

USGAO

American Family Assurance

Alaska Center for Energy and Power

Connecticut Green Bank

Sierra Club

Siemens

World Wildlife Fund

Clif Bar

Seattle Public Utilities

American Council for an Energy Efficient Economy

University Corporation for Atmospheric Research

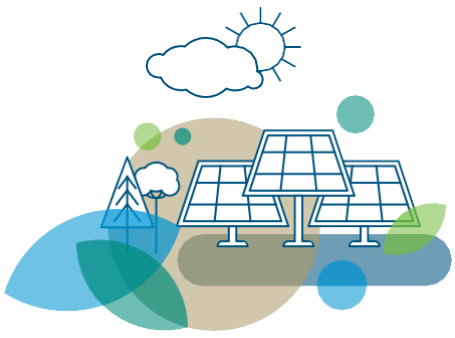
Dow Chemical

International Renewable Energy Agency

Port of Portland

Deloitte

and many others



What Students Say About the Courses

"Who would not like to be more resilient? Take the course!"

—NELSON LEE, GREEN SKY SUSTAINABILITY, PRESIDENT

"I am a senior systems and electrical engineer with 25+ years of experience in the public, private, and government sectors. This course has provided me with knowledge, resources, and examples that I can use to communicate and emphasize the importance and inherent need for resilience."

—STEPHANIE KELLER, IEEE, MEMBER

"The course gave me better knowledge to perform a technical, business, and policy analysis for Electric Vehicle adoption."

—ANDREW NEWENS, US DEPARTMENT OF ENERGY

"The sound technical knowledge and experience of the lecturer guided me through the components, technology, factors, drivers, and forecasts of the EV market."

—SANDRINE BOUKERCHE, THE WORLD BANK

"The Enterprise Resilience short course is an excellent introduction to powerful techniques of systems thinking and dynamics used to assist complex businesses and governments to not only anticipate and manage the wide range of threats and circumstances detrimental to their operations but also to maximize their potential for generating desired and positive outcomes."

—DOUG SHARP, UNIVERSITY OF NEVADA LAS VEGAS,
INSTRUCTOR AND FORMER EPA EMERGENCY MANAGEMENT OFFICIAL