Smart Electric Power Alliance
ONLINE LEARNING

SEPA's Online Learning Series

In 2020, SEPA piloted a new member resource in the form of foundational virtual learning courses. These deep-dives with a top subject matter expert facilitator provide an intensive learning experience to bring (and keep) the utility and energy industry on track with the transition to clean and carbon-free energy systems. These bootcamps provide a comprehensive understanding of the markets, trends, technologies, approaches and use-cases that help in their day-to-day jobs and in planning for the future.

Events are limited to 50 individuals for the live event and each individual also gets access to the slides and recording. In 2021, to date, we hosted DER Fundamentals and Energy Storage Fundamentals and both of these events sold out. We also offer these bootcamps for sale as an on-demand-only option.

2022 Topics

6 Boot Camps | 3-Part Series | 2-Hour Sessions

Electric System Fundamentals
Live Dates: March 8 - 10, 2022

Energy Storage Fundamentals
Live Dates: May 16 - 18, 2022

Electric System Fundamentals
Live Dates: June 21 - 23, 2022

DER Fundamentals
Live Dates: July 19 - 21, 2022

Electrification of Transportation Fundamentals
Live Dates: October 18 - 20, 2022

Hydrogen Fundamentals
Live Dates: December 6 - 8, 2022

Meet the Instructor

Peter Kelly-Detwiler has 30 years of experience in the electric energy arena, with much of his career in various areas of competitive power markets. He's a former SVP at Constellation Energy, having run their Demand Response Group. Peter, the author of "The Energy Switch", is a strategist and communicator in the electric industry, focused on the rapid pace of transformation to a sustainable energy economy.

Questions? Contact learning@sepapower.org

Electric System Fundamentals

NEW!

Session 1: *How the electric grid and energy markets function* - Discuss the basics of electric power delivery, energy markets and the key drivers for change.

Session 2: *Address the challenges related to decarbonizing the grid* - Explain challenges related to changes in the supply and demand mix, integration of renewables, and the advent of energy storage.

Session 3: *Planning for the future* - Review cutting edge business cases in the U.S. and overseas that may point the way to a cleaner and more efficient grid, and discuss prospects for emerging technologies including long-duration energy storage, hydrogen modular nuclear and fusion.

DER Fundamentals

Session 1: *Making the case for DERs* - Uncover what current system conditions make DERs necessary, why they are increasingly important, and how they function in the marketplace.

Session 2: *Identifying and qualifying resources* Discover the residential and commercial DER technologies in use, cyber-security concerns, and more.

Session 3: *Resource planning and optimization* - Learn about the regulatory framework that governs DER behavior and compensation and maximizing the benefits of DERs.

Download the full course outline (PDF)

Hydrogen Fundamentals

Session 1: *The initial push for hydrogen* - Industrial, transportation and long-term storage; the Chemistry (Advantages & Challenges); Technology, Costs and Current Applications

Session 2: *Green Hydrogen from Creation to Consumption* - Electrolyzer, Transportation, Storage Technologies, Costs, and Challenges); and Electric Power Grid Applications

Session 3: *Government Programs Driving Scale; Grid Applications Use Cases and Proposed Projects; and What to Watch for in the Coming Years.*

Draft course outline (PDF)

Energy Storage Fundamentals

Session 1: *The Big Picture* - Energy storage to date, applications, and its growing role on the grid today plus battery storage Technologies: Cost and Performance.

Session 2: *Valuing storage as a resource in utility portfolio planning planning*

Session 3: *Storage policy, future considerations and the regulatory framework and rate structures*

Download the full course outline (PDF)

Electrification of Transportation Fundamentals

NEW!

Session 1: *Making the case for electric vehicles* - Discuss the inherent advantages of electric vehicles, and why they are being promoted by policymakers and utilities.

Session 2: *Addressing the critical issues for success* - Explain issues related to range and battery technologies, charging networks, and implications of increased electricity consumption.

Session 3: *Charting the path forward* - Review emerging business models in the U.S. and abroad, evolving battery and charging technologies, and discuss the growing potential for vehicle-to-grid applications.

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