

Seventh Annual Expert Workshop: Challenges in Energy Decarbonisation

Big or Small: Decentralised Resources in a Decarbonised Energy System

Tuesday, 27 October 2020: 10:30 AM - 12:00 PM EST; 7:30 AM - 9:00 AM PST; 3:30 PM - 5:00 PM CET

Wednesday, 28 October 2020: 10:30 AM - 12:00 PM EST; 7:30 AM - 9:00 AM PST; 3:30 PM - 5:00 PM CET and

Thursday, 29 October 2020: 10:30 AM - 12:00 PM EST; 7:30 AM - 9:00 AM PST; 3:30 PM - 5:00 PM CET

HELD VIRTUALLY

The *Seventh Annual EPRI-IEA Challenges in Energy Decarbonisation Expert Workshop* will focus on the role of decentralised resources in decarbonising the energy system in the short- to mid- term.

Rapid advances in the electricity system have led to improvements in both centralised and decentralised energy systems. Distributed variable renewable energy, local flexibility markets, and new ways of utilizing buildings and vehicles in order to manage the grid are but a few of these advances. These and other developments have created both challenges and opportunities for customers, utilities, new business entrants, and regulators.

This year's EPRI-IEA workshop will look at currently available and projected distributed resource technologies; the technological, market, and regulatory systems needed to integrate them; and implications for consumers, decarbonisation, and resiliency. The workshop will span three days, with speakers addressing the following topics:

- Developing technologies that will shape the future of our energy systems
- Implications of deployment of decentralised versus centralised resources
- Utilising decentralised resources efficiently
- Regulatory perspectives on decentralisation and networks
- Maintaining reliability in an increasingly decentralised system

The *EPRI-IEA Challenges in Energy Decarbonisation Expert Workshop* series brings together leading experts from government, academia, think-tanks and the private sector from around the world to share experiences relating to decarbonising the electricity system. Participants identify barriers and opportunities for the sector and discuss best practices from various approaches to decarbonisation in different jurisdictions. Past workshops have included deep dives into a diverse set of topics such as near-term market structure, long-term decarbonisation pathways, supply resiliency, and end-use electrification opportunities.

Please register [here](#).

Should you have any questions, please do not hesitate to contact Keith Everhart (Keith.EVERHART@iea.org) or David Hunter (dhunter@epri.com).

Tuesday, 27 October 2020

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Welcome and Opening Remarks

- **David Hunter**, Senior Advisor, EPRI
- **Katie Jereza**, Vice President, External Relations and Communications, EPRI
- **Keisuke Sadamori**, Director, Energy Markets and Security, IEA

Session 1: Innovations in Distributed Resources

As a result of both consumer choice and regulatory actions, distributed resources are growing as a proportion of the electric grid. These resources encompass an array of technologies--rooftop solar, microgrids, battery storage, direct current connections, and many others. This session will examine innovative distributed resources currently deployed around the world, the systems used to integrate them, and their effectiveness in delivering consumer benefits. *Followed by roundtable discussion.*

- Moderator: **Dipka Bhambhani**, Director, External Relations & Communications, EPRI

Buildings as a Distributed Energy Resource

- **David Nemtsov**, Director, Building Technologies Office, U.S. Dept. of Energy

Battery Storage: Current and Future Technologies

- **Haresh Kamath**, Senior Program Manager for Energy Storage, EPRI

Electric Vehicles as Distributed Energy Resources

- **Sotiris Georgiopoulos**, Head of Smart Grid Development, U.K. Power Networks

Batteries as a Business Model

- **Betty Watson**, Senior Director of Market and Policy Design, Modern Energy

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Session 2: Government & Regulatory Perspectives on Decentralisation

This panel will provide regulatory and policy perspectives on the growing role of decentralized resources and their integration with the grid. Policymakers, regulators, and other thought leaders from various jurisdictions will discuss the projected growth of distributed resources in different regions and regulatory options to both manage that growth and facilitate new and innovative ways of maximizing the value of both the grid and decentralised resources. *Followed by roundtable discussion.*

- Moderator: **Laszlo Varro**, Chief Economist, IEA

California Perspective

- **Commissioner Andrew McAllister**, Commissioner, California Energy Commission

Rate and Tariff Design for Distributed Resources

- **Kjell Rune Verlo**, Advisor, Norwegian Regulatory Authority for Energy

New York Perspective

- **David Sandbank**, Vice President for Distributed Resources, NYSERDA

Distributed Flexibility and the TSO-DSO Interface

- **Victor Charbonnier**, Senior Specialist, ENTSO-e

U.S. Rulemaking for Distributed Energy Resources

- **Jignasa Gadani**, Director of the Office of Energy Policy & Innovation, U.S. Federal Energy Regulatory Commission

The Role of DSOs in a Decentralised Future

- **Randolph Brazier**, Head of Innovation and Development, Energy Networks Association

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Session 3: Reliability in a Decentralised System

The development of less centralized, more interconnected systems presents both new vulnerabilities as well as opportunities to improve reliability. What are these vulnerabilities and opportunities, and how can utilities, society, and governments best integrate central and distributed resources to create a more resilient system? In this session speakers will address implications to reliability of a future energy landscape split into central and decentral energy supply. *Followed by roundtable discussion.*

- Moderator: **César Alejandro Hernandez**, Head of Unit (Acting), Renewable Integration and Secure Electricity, IEA

Grid Reliability in a High Renewables World

- **Daniel Brooks**, Vice President, Integrated Grid and Energy Systems, EPRI

Using Distributed Resources to Keep Security of Supply

- **Róisín Quinn**, Head of National Control and Chief Engineer, National Grid ESO

Electric Vehicles and Grid Resiliency: Competing or Complementary?

- **Rob Chapman**, VP, Electrification & Sustainable Energy Strategy, EPRI

Australia Perspective

- **Barry O'Connell**, Principal Engineer Future Energy Systems, AEMO

Cybersecurity and Resilience

- **Amro Farid**, Associate Professor of Engineering, Dartmouth College

Closing Remarks

- **César Alejandro Hernandez**, Head of Unit (Acting), Renewable Integration and Secure Electricity, IEA
 - **David Hunter**, Senior Advisor, EPRI
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