

U.S. Department of Energy
Microgrid Strategy

Research Support Facility (San Juan Conference Rooms, 3rd Floor)
National Renewable Energy Laboratory
Golden, CO 80401
July 27-28, 2022

Wednesday, July 27, 2022

DOE Microgrid Strategy

12:30 pm

Registration

Complimentary lunch beginning at 12:00 pm.

1:00 pm - 1:10 pm

Welcome

Dan Ton, *U.S. Department of Energy*

1:10 pm – 2:00 pm

Topic #1: Program Vision, Objectives, and R&D Targets in 5 and 10 years

White Paper Development Team Members:

Summer Ferreira, Sandia National Laboratories (Presenter)

Murali Baggu, National Renewable Energy Laboratory (Presenter)

Russell Bent, Los Alamos National Laboratory

Vaibhav Donde, Lawrence Livermore National Laboratory

Miguel Heleno, Lawrence Berkley National Laboratory

Tom King, Oak Ridge National Laboratory

Kevin Schneider, Pacific Northwest National Laboratory

Ravindra Singh, Argonne National Laboratory

Industry Advisory Panelists:

Tom Bialek, Toumetis

Alex Hoffman, American Public Power Association

Andrew Ingram, Southern Company

Scott Manson, Schweitzer Engineering Laboratories

Mohammad Shahidehpour, Illinois Institute of Technology

Emma Stewart, National Rural Electric Cooperative Association

2:00 pm - 2:20 pm

Topic #1: Open Discussion and Q&A

Facilitators:

Summer Ferreira, Sandia National Laboratories

Murali Baggu, National Renewable Energy Laboratory

2:20 pm - 3:10 pm

Topic #2: T&D Co-simulation of Microgrid Impacts and Benefits

White Paper Development Team Members:

Kevin Schneider, Pacific Northwest National Laboratory (Presenter)

Karthikeyan Balasubramaniam, Argonne National Laboratory (Presenter)

David Fobes, Los Alamos National Laboratory

Alexandre Moreira, Lawrence Berkeley National Laboratory

Vaibhav Donde, Lawrence Livermore National Laboratory

Bryan Palmintier, National Renewable Energy Laboratory

Teja Kuruganti, Oak Ridge National Laboratory

Michael Ropp, Sandia National Laboratories

Chen-Ching Liu, Virginia Tech

Industry Advisory Panelists:

Aftab Alam, California Independent System Operator

Anantha Narayanan, National Rural Electric Cooperative Association

Anjan Bose, Washington State University (ESI)

Frances Bell, Kevala Analytics

Song Zhang, Independent System Operator New England

3:10 pm - 3:30 pm

Topic #2: Open Discussion and Q&A

Facilitators:

Kevin Schneider, Pacific Northwest National Laboratory

Karthikeyan Balasubramaniam, Argonne National Laboratory

3:30 pm - 4:00 pm

Break

4:00 pm - 4:50 pm

Topic #3: Building Blocks for Microgrids

White Paper Development Team Members:

Chen-Ching Liu, Virginia Tech (Presenter)

Madhu Chinthavali, Oak Ridge National Laboratory (Presenter)

Rob Hovsopian, National Renewable Energy Laboratory (Presenter)

Hannah Burroughs, Lawrence Livermore National Laboratory

Sigifredo Gonzales, Sandia National Laboratories

Francis Tuffner, Pacific Northwest National Laboratory

Miguel Heleno, Lawrence Berkeley National Laboratory

Ravindra Singh, Argonne National Laboratory

Adam Mate, Los Alamos National Laboratory

Dushan Boroyevich, Virginia Tech
Herbert Ginn III, University of South Carolina

Industry Advisory Panelists:

Venkat Banunarayanan, National Rural Electric Cooperative Association
Rick Meeker, The Florida Alliance for Accelerating Solar and Storage Technology Readiness
John Wang, ABB
Amrit Khalsa, American Electric Power
Mike Gravely, California Energy Commission

4:50 pm - 5:10 pm

Topic #3: Open Discussion and Q&A

Facilitators:

Chen-Ching Liu, Virginia Tech
Madhu Chinthavali, Oak Ridge National Laboratory
Rob Hovsopian, National Renewable Energy Laboratory

5:10 pm

Adjourn

Thursday, July 28, 2022

DOE Microgrid Strategy (Continued)

7:30 am

Breakfast is provided.

8:00 am – 8:50 am

Topic #4: Microgrids as a Building Block for Future Grids

White Paper Development Team Members:

Vaibhav Donde, Lawrence Livermore National Laboratory (Presenter)
Annabelle Pratt, National Renewable Energy Laboratory (Presenter)
Andrey Bernstein, National Renewable Energy Laboratory
Jack Flicker, Sandia National Laboratories
Ben Ollis, Oak Ridge National Laboratory
Ciaran Roberts, Lawrence Berkeley National Laboratory
Ravindra Singh, Argonne National Laboratory
Jose Tabarez, Los Alamos National Laboratory
Frank Tuffner, Pacific Northwest National Laboratory

Industry Advisory Panelists:

Alex Portilla, Pacific Gas and Electric
Bryan Hannegan, Holy Cross Energy
Emma Stewart, National Rural Electric Cooperative Association

	<p>John O'Donnel, DTE Energy</p> <p>Steven Low, California Institute of Technology</p> <p>Ulrich Muenz, Siemens</p>
8:50 am – 9:10 am	<p>Topic #4: Open Discussion and Q&A</p> <p>Facilitators:</p> <p>Vaibhav Donde, Lawrence Livermore National Laboratory</p> <p>Annabelle Pratt, National Renewable Energy Laboratory</p>
9:10 am - 10:00 am	<p>Topic #5: Advanced Microgrid Control and Protection</p> <p>White Paper Development Team Members:</p> <p>Ben Ollis (Presenter) and Max Ferrari, Oak Ridge National Laboratory</p> <p>Matt Reno (Presenter), Mike Ropp, and Lee Rashkin, Sandia National Laboratories</p> <p>Wei Du and Frank Tuffner, Pacific Northwest National Laboratory</p> <p>Ravindra Singh, Argonne National Laboratory</p> <p>Art Barnes, Los Alamos National Laboratory</p> <p>Yashen Lin and Kumaraguru Prabakar, National Renewable Energy Laboratory</p> <p>Vaibhav Donde, Lawrence Livermore National Laboratory</p> <p>Ciaran Roberts, Lawrence Berkeley National Laboratory</p> <p>Industry Advisory Panelists:</p> <p>Wade Malcolm, Open Energy Solutions</p> <p>Scott Manson, Schweitzer Engineering Laboratories</p> <p>Jim Reilly, Reilly Associates</p> <p>Aleksandar Vukojevic, ComEd</p>
10:00 am - 10:20 am	<p>Topic #5: Open Discussion and Q&A</p> <p>Facilitators:</p> <p>Ben Ollis, Oak Ridge National Laboratory</p> <p>Matt Reno, Sandia National Laboratories</p>
10:20 am - 10:50 am	Break
10:50 am - 11:40 am	<p>Topic #6: Integrated Models and Tools for Microgrid Planning and Designs with Operations</p> <p>White Paper Development Team Members:</p> <p>Russell Bent, Los Alamos National Laboratory (Presenter)</p> <p>Parth Pradhan and Ravindra Singh (Presenter), Argonne National Laboratory</p> <p>Wei Du, Pacific Northwest National Laboratory</p> <p>Miguel Heleno, Lawrence Berkeley National Laboratory</p>

Robert Jeffers, Sandia National Laboratories
Mert Korkali, Lawrence Livermore National Laboratory
Guodong Liu, Oak Ridge National Laboratory
Dan Olis, National Renewable Energy Laboratory

Industry Advisory Panelists:

Jim Reilly, Reilly Associates
Adib Nasle, Xendee
David Pinney, National Rural Electric Cooperative Association
Amin Salmani, San Diego Gas & Electric
Muhidin Lelic, Commonwealth Edison

11:40 am - 12:00 pm **Topic #6: Open Discussion and Q&A**

Facilitators:

Russell Bent, Los Alamos National Laboratory
Ravindra Singh, Argonne National Laboratory

12:00 pm – 1:00 pm **Lunch is provided.**

1:00 pm - 1:50 pm **Topic #7: Enabling Regulatory and Business Models for Broad Microgrid Deployment**

White Paper Development Team Members:

Robert Jeffers, National Renewable Energy Laboratory (Presenter)
Joseph Eto, Lawrence Berkeley National Laboratory (Presenter)
Owen Zinaman, National Renewable Energy Laboratory
Brooke Garcia, Sandia National Laboratories
Jhi-Young Joo, Lawrence Livermore National Laboratory
Kevin Schneider, Pacific Northwest National Laboratory

Industry Advisory Panelists:

Sam Cramer, National Association of State Energy Officials
Larisa Dobriansky, General Microgrids
Forest Kaser, California Public Utilities Commission
Daniel Kushner, Commonwealth Edison
Robert Panora, Tecogen
Jennifer Potter, Hawaii Public Utilities Commission
Tom Stanton, National Regulatory Research Institute
Kirsten Verclas, National Association of State Energy Officials
Kiera Zitelman, National Association of Regulatory Utility Commissioners

1:50 pm - 2:10 pm **Topic #7: Open Discussion and Q&A**

Facilitators:

Bobby Jeffers, National Renewable Energy Laboratory

Joseph Eto, Lawrence Berkeley National Laboratory

2:10 pm

Adjourn