

## ZERO NET ENERGY AND RENEWABLES

*Moderator: Elizabeth Titus, Northeast Energy Efficiency Partnerships, Inc.*

### PAPERS:

#### **Counting on Solar: An Impact Evaluation of Solar PV Systems**

Sarah Castor, Energy Trust of Oregon

Danielle Côté-Schiff Kolp, Cadmus

#### **Through the Looking Glass and What the Analyst Found There: Energy Storage Behind the Meter**

Stephan Barsun, Itron

William Marin, Itron

#### **Driving ZNE to Scale in California State Buildings**

Ellen Steiner, Opinion Dynamics

Paul Wasmund, Opinion Dynamics

Rick Winch, Opinion Dynamics

Robert Hansen, California Public Utilities Commission

#### **Charting Unmapped Waters: Adapting Our Research Methods for the Fast-Evolving Energy Storage Market**

Kara Crohn, EMI Consulting

Michael Hamilton, EMI Consulting

Cindy Manson, Industrial Economics, Inc.

Vadim Spirt, Industrial Economics, Inc.

### SESSION SUMMARY:

In this session evaluators apply their expertise to a variety of emerging distributed energy resource (DER) situations, demonstrating that with respect to issues and approaches, there are similarities and differences between traditional energy efficiency program evaluation or market assessments and evaluation of programs involving other integrated resources, including solar PV, Zero Net Energy buildings and storage. In particular, the impact evaluation of a solar PV program demonstrates that as the PV market grows and matures, reliable ex ante estimates of solar generation can contribute to better integrated system planning. An assessment of battery performance suggests new evaluation approaches are needed for relevant metrics. Research in California finds that institutional barriers are the primary challenge to increasing penetration of Zero Net Energy buildings. Differences between evaluating the rapidly evolving multi-faceted market for storage and more traditional energy efficiency market transformation program evaluations are reviewed, drawing from experience with evaluation of a New York storage Consortium.