



# 2023 LONG-TERM LOAD FORECASTING WORKSHOP

**June 13-15, 2023**

Embassy Suites Denver Downtown Convention Center – Denver, CO

## PROGRAM AGENDA

The goal of this workshop is to discuss what is known and what is state-of-the-art in forecasting loads for system resource, transmission and distribution planners for the next 1-20 years.

### **Tuesday, June 13, 2023**

7:00 a.m. – 8:00 a.m.

#### **Registration & Breakfast**

Location: Crestone Foyer

8:00 a.m. – 8:10 a.m.

#### **Welcome**

Location: Crestone Ballroom

**Debra Lew**, Associate Director, ESIG

8:10 a.m. – 8:45 a.m.

#### **Keynote: Implications of the IRA on Evolution of Load and Future Grid Needs**

Location: Crestone Ballroom

Moderator: **Debra Lew**, Associate Director, ESIG

**Jesse Jenkins**, Assistant Professor of Mechanical and Aerospace Engineering and the Andlinger Center for Energy and the Environment, Princeton University

8:45 a.m. – 9:30 a.m.

#### **Introduction to Load Forecasting**

Location: Crestone Ballroom

**Jon Black**, Manager of Load Forecasting, ISO-NE

9:30 a.m. – 10:00 a.m.

#### **Break**

Location: Crestone Foyer

10:00 a.m. – 12:00 p.m.

#### **Session 1: Weather and Climate Session**

Location: Crestone Ballroom

Chair: **Justin Sharp**, Principal & Owner, Sharply Focused LLC

10:00 a.m. - 10:25 am  
RTE's Approach to Forward-looking Weather Data  
**Laurent DuBus**, Senior Scientist, RTE (France) (virtual)

10:25 a.m. - 10:50 a.m.  
EPRI's Climate READi Approach to Forward-looking Weather Datasets  
**Erik Smith**, Climate Resilience Analyst, EPRI (virtual)

10:50 a.m. - 11:15 a.m.  
Super-Resolution for Renewable Energy Resource data with Climate Change Impacts using Generative Machine Learning  
**Grant Buster**, Data Scientist, NREL

11:15 a.m. - 11:40 a.m.  
VCE's Approach to Forward-looking Forecasting of Load and Renewable Generation  
**Chris Clack**, Vice President, Integrated Energy Systems Planning, Pattern Energy Group (virtual)

Discussion

12:00 p.m. – 1:30 p.m.  
**Lunch**  
Location: Crestone Foyer

1:30 p.m. – 3:15 p.m.  
**Session 2: Transportation Electrification**  
Location: Crestone Ballroom  
Chair: **Sean Morash**, Principal, Telos Energy

Distribution Planning for EV Fleets  
**Jeremiah Deboever**, Technical Leader, EPRI

An Open Source Tool for Agent-based Model of Forecasted Electric Vehicle Growth  
**Timothy Pennington**, Sr. Research Engineer, Idaho National Laboratory

Incorporating Transportation Data into System Planning  
**Gerhard Walker**, Manager – Advanced Forecasting and Modelling, Eversource (virtual)

Bottom-Up Load Forecasting and System-Level Electrification Impacts  
**Troy Hodges**, Manager, Data Science, Kevala

3:15 p.m. – 3:45 p.m.  
**Break**  
Location: Crestone Foyer

3:45 p.m. – 5:30 p.m.  
**Session 3: Flexibility in Future Load**  
Location: Crestone Ballroom  
Chair: **Steven Dahlke**, Energy Economist, EPRI

Flexibility Needs Identified in Clean Energy Studies  
**Derek Stenlik**, Founding Partner, Telos Energy

APS Experience With Customer Response to Programs and Pricing  
**Tom Hines**, Consultant, APS

ERCOT Experience With Flexibility in Large Loads  
**Agee Springer**, Large Flexible Load Interconnection Manager, ERCOT

The Value of Flexible Loads With Increasing Electrification  
**Caitlin Murphy**, Group Manager, NREL

6:30 p.m. – 8:00 p.m.

**Networking Reception**

Location: TBD

**Wednesday, June 14, 2023**

7:00 a.m. – 8:00 a.m.

**Breakfast**

Location: Crestone Foyer

8:00 a.m. – 9:45 a.m.

**Session 4: Industrial Loads and Hydrogen**

Location: Crestone Ballroom

Chair: **James Okullo**, Director of System Planning, ESIG

Future Growth and Flexibility from Datacenters

**Carsten Baumann**, Director Strategic Initiatives & Solution Architect, Schneider Electric

How the Clean Hydrogen Production Tax Credit Will Affect Electrolyzer Growth and Flexibility

**Dan Esposito**, Senior Policy Analyst, Energy Innovation

Integrating Large Flexible Loads while Maintaining Grid Reliability

**Agee Springer**, Large Flexible Load Interconnection Manager, ERCOT

Heat Batteries for Industrial Electrification

**Patrick Leslie**, Director of Energy Markets, Rondo

9:45 a.m. – 10:15 a.m.

**Break**

Location: Crestone Foyer

10:15 a.m. – 11:45 a.m.

**Session 5: Building Electrification**

Location: Crestone Ballroom

Chair: **Jeff Deason**, Program Manager, LBNL

Building Electrification and Flexibility of Building Loads

**Ryan Jones**, Co-founder, Evolved Energy Research

ISO-NE Forecasts of Building Electrification

**Jon Black**, Manager of Load Forecasting, ISO-NE

## NYISO Forecasts of Building Electrification

**Arthur Maniaci**, Principal Forecaster, Demand Forecasting & Analysis, NYISO

11:45 a.m. – 1:15 p.m.

### **Lunch**

Location: Crestone Foyer

1:15 p.m. – 2:45 p.m.

### **Session 6: Distributed Solar and Storage**

Location: Crestone Ballroom

Chair: **Priya Sreedharan**, Program Director, GridLab

Behind-the-meter PV and Storage Adoption

**Brittany Farrell**, Energy Systems Researcher, Clean Power Research

NREL's DGEN Approach to Forecasting Solar and Storage

**Paritosh Das**, Energy Systems Analyst\Engineer, NREL

Locational DER adoption and load forecasting

**Fred Schaefer**, Principal, Cadeo

2:45 p.m. – 3:15 p.m.

### **Break**

Location: Crestone Foyer

3:15 p.m. – 5:15 p.m.

### **Session 7: Distribution Planning**

Location: Crestone Ballroom

Chair: **Jeff Smith**, Director, Grid Operations & Planning, EPRI

Advanced DER Forecast & Planning – An Evolving Discipline

**Darrin Kinney**, SVP - Head of Business Development, Integral Analytics

Premise-Level Load and DER Forecasts

**Julieta Giraldez**, Director, Grid Planning, Kevala

Integrating Top-level Corporate Forecasts with Distribution System Forecasts

**Andy Sukenik**, Principal Forecast Consultant, Itron

Distribution Planning with a Feeder-Level Forecast

**Ryan Hinkley**, Lead Engineer, Distribution Planning and Asset Management - NY,  
National Grid

## **Thursday, June 15, 2023**

7:00 a.m. – 8:00 a.m.

### **Breakfast**

Location: Crestone Foyer

8:00 a.m. – 11:45 a.m.

### **Session 8: Bringing it All Together**

Location: Crestone Ballroom

Chair: **Elaine Hale**, Senior Research Engineer, NREL

RTE's Long-term Load Forecasting for System Planning  
**Laurent DuBus**, Senior Scientist, RTE (France) (virtual)

Forecasts for National Grid's Future Energy Scenarios  
**Sagar Depala**, Energy Manager, National Grid ESO (virtual)

MISO's Electrification Futures  
**Anupam Thatte**, Senior Engineer, Research & Development, MISO

SCE's Forecasting for Distribution Planning  
**Mark Esguerra**, Director, Distribution System Planning and Strategy, Southern California Edison (virtual)

Discussion

10:00 a.m. – 10:30 a.m.

**Break**

Location: Crestone Foyer

Integrating Bottom-up Load Forecasts Into Planning Tools  
**Ryan Jones**, Co-founder, Evolved Energy Research

Itron's Integrated Load Forecasting System: Bridging the gap between Corporate Forecasting and Distribution Planning  
**Andy Sukenik**, Principal Forecast Consultant, Itron

Discussion

11:45 a.m. – 12:00 p.m.

**Discussion & Closing Comments**

**Josh Novacheck**, Transmission Planning Engineer, NextEra Energy Resources