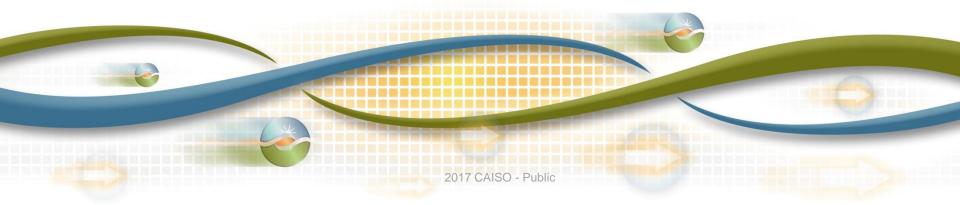
DOCKETED	
Docket Number:	17-IEPR-12
Project Title:	Distributed Energy Resources
TN #:	218220
Document Title:	Presentation - Demand Response and Energy Efficiency Roadmap
Description:	Joint Agency Staff Workshop on the Review of the Actions and Status of State-level Energy Roadmaps by Delphine Hou of California ISO and the California Energy Commission
Filer:	Doris Yamamoto
Organization:	California Energy Commission
Submitter Role:	Commission Staff
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Joint Agency Staff Workshop on the Review of the Actions and Status of State-level Energy Roadmaps: Demand Response and Energy Efficiency Roadmap

Delphine Hou Manager, State Regulatory Affairs, California ISO

Joint Staff Workshop California Public Utilities Commission June 13, 2017



Demand Response and Energy Efficiency Roadmap Goals

- 1. Ensure consistent assumptions in ISO, CEC, and CPUC planning and procurement processes
- 2. Modify load shape to reduce resource procurement requirements, mitigate over-generation, and moderate ramp
- 3. Clarify ISO needs for DR and EE to be most effective in planning and operations
- 4. Ensure resources are procured and developing to meet capability, timing, and location needs
- Increase DR program and pilot participation in ISO market developing operations experience and providing feedback for policy refinement





The Energy Commission's EE/DR Programs



Overview of GFO 15-311

ADVANCING SOLUTIONS THAT ALLOW CUSTOMERS TO MANAGE THEIR ENERGY DEMAND THOUGH THE USE OF TRANSACTIVE SIGNALS



Development and Use of Transactive Signals

- The focus of this solicitation was to first develop a transactive signal and then test how various DR projects respond
- Specifically,
 - the technical aspects of this communication and response
 - to identify, inform and develop strategies for overcoming technical, institutional and regulatory barriers to expanding DR participation in California
 - to fund applied research and development projects that test and assess how groups or aggregations of distributed resources respond to current, planned and potential price signals.
- Awards were made in Three Categories



Category 3: Development of Transactive Signal

- Electric Power Research Institute, Inc.
 - Transactive Incentive Signals to Manage Electricity
 Consumption (TIME): A System for Transactive Load
 Management \$499,997

Working with Group 1 and 2 awardees, EPRI is developing the actual signal to be sent, received and evaluated for customer response by the other grant recipients



Category 1: DR as a supply-side resource in CAISO Markets

- BMW of North America, LLC
 - Total Charge Management: Advanced Charge Management for Renewable Integration \$3,999,900
- Center for Sustainable Energy
 - Meeting Customer and Supply-side Market Needs with
 Electrical and Thermal Storage, Solar, Energy Efficiency and
 Integrated Load Management Systems \$3,960,805
- OhmConnect, Inc.
 - Empowering Prosumers to Access Wholesale Energy Products \$3,995,028



Category 2: DR as Demand Side Resources

- Electric Power Research Institute, Inc. (EPRI)
 - Customer-centric Demand Management using Load Aggregation and Data Analytics \$3,998,587
- Alternative Energy Systems Consulting, Inc. (AESC)
 - Residential Intelligent Energy Management Solution: Advanced Intelligence to Enable Integration of Distributed Energy Resources \$3,996,597
- The Regents of the University of California (Berkeley)
 - Customer-controlled, Price-mediated, Automated Demand Response for Commercial Buildings \$4,000,000
- Universal Devices, Inc.
 - Complete and Low Cost Retail Automated Transactive Energy System (RATES) \$3,187,370
- The Regents of the University of California (UCLA)
 - Identifying Effective Demand Response Program Designs for Small Customer Classes \$2,007,875



Energy Storage Roadmap Activity Update

Public Comment