

## DOCKETED

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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

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Joint Staff Workshop  
California Public Utilities Commission  
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# 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
5. 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 THROUGH  
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