Increasing Demand Response Capabilities in California

2013 Integrated Energy Policy Report Workshop

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Background: Demand Response and Load Management Policy in California

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A Brief History of California DR Policy

- Post-restructuring legislation (2001)
  - Peak reduction programs
  - $35M for ~25,000 meters for customers >200kW
  - TOU rates for all customers with interval meters
  - Crisis costs result in multi-tier residential rates
- CEC and CPUC work together on joint Demand Response Rulemaking R.02-06-001
  - Pursuit of AMI business cases for IOUs
  - Aggressive program/tariff development for large customers with state-funded meters
  - **Energy Action Plan** group convened

The Energy Action Plan (2003)

Updated 2005 and 2008

- Multi-Agency Plan
  - California Energy Commission
  - California Public Utilities Commission
  - Governor's Office
- Loading Order *(preferred resources for meeting demand growth)*
  - Energy efficiency and Demand Response
  - Renewable Generation, including renewable Distributed Generation
  - Increased development of affordable & reliable conventional generation
  - Transmission expansion to support all of California's energy goals.

Demand Response in the Energy Action Plan

- Obtain legislative authorization for time-varying pricing for residential customers
- Progress on dynamic pricing rate design reform for all customers
- Approve programs that utilize advanced metering, tariff, and other automated demand response infrastructure
- Modify retail programs so that they can more fully participate in the CAISO's wholesale market structure
- Develop a load impact and cost-effectiveness protocol for demand response
- Adopt Load Management Standards to establish a demand-response infrastructure

The Energy Commission's Load Management Authority

§ 25403.5. Electrical load management; adoption of standards; costs of compliance as rate base factor; exemptions or delays; findings

"The commission shall, by July 1, 1978, adopt standards by regulation for a program of electrical load management for each utility service area. "

"The standards shall be cost effective when compared with the costs for new electrical capacity, and the commission shall find them to be technologically feasible. Any expense or any capital investment required of a utility by the standards shall be an allowable expense or an allowable item in the utility rate base and shall be treated by the Public Utilities Commission as such in a rate proceeding."

The Energy Commission's Load Management Authority

"In adopting the standards, the commission shall consider, but need not be limited to, the following load management techniques:

(1) Adjustments in rate structure to encourage use of electrical energy at offpeak hours or to encourage control of daily electrical load. Compliance with such changes in rate structure shall be subject to the approval of the Public Utilities Commission in a proceeding to change rates or service.

(2) End use storage systems which store energy during off-peak periods for use during peak periods.

(3) Mechanical and automatic devices and systems for the control of daily and seasonal peakloads."

Objectives of Today's Workshop

- Gather input on public policies needed to expand the amount of automated demand response resources available to California system operators.
- Address key challenges facing California by:
  (1) aiding the response to the San Onofre Nuclear Generating Station outage by lowering critical load,
  (2) providing low-cost peak reduction services and
  (3) providing fast automated demand response as a "flexible generation- like product" to support renewable integration and contingency events like the sudden loss of a transmission line

Today's Agenda

- Panel 1: Providing Demand Response – the Customer Perspective
- Panel 2: Providing Demand Response – the Aggregator Perspective
- Panel 3: Market Structures to Enable and Expand Demand Response
- Panel 4: Enabling Technologies to Support Demand Response
- Panel 5: California's Regulatory and Utility Landscape for Demand Response