**DOCKETED**

<table>
<thead>
<tr>
<th><strong>Docket Number:</strong></th>
<th>17-IEPR-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Title:</strong></td>
<td>Distributed Energy Resources</td>
</tr>
<tr>
<td><strong>TN #:</strong></td>
<td>220510</td>
</tr>
<tr>
<td><strong>Document Title:</strong></td>
<td>CPUC Demand Response Accomplishments</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>8.8.17 Presentation by Bruce Kaneshiro of CPUC</td>
</tr>
<tr>
<td><strong>Filer:</strong></td>
<td>Raquel Kravitz</td>
</tr>
<tr>
<td><strong>Organization:</strong></td>
<td>California Energy Commission</td>
</tr>
<tr>
<td><strong>Submitter Role:</strong></td>
<td>Commission Staff</td>
</tr>
<tr>
<td><strong>Submission Date:</strong></td>
<td>8/2/2017 12:04:57 PM</td>
</tr>
<tr>
<td><strong>Docketed Date:</strong></td>
<td>8/2/2017</td>
</tr>
</tbody>
</table>
CPUC Demand Response Accomplishments

Bruce Kaneshiro, Energy Division
2017 CEC IEPR Workshop on Demand Response
August 8, 2017
SOME BASIC DR FACTS....

• Demand Response MWs over 5 years:

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>2,299 MWs</td>
<td>2,212 MWs</td>
<td>2,054 MWs</td>
<td>1,952 MWs</td>
<td>2,020 MWs</td>
</tr>
<tr>
<td>Portfolio*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Party</td>
<td>No DRAM</td>
<td>No DRAM</td>
<td>40.5 MWs</td>
<td>124.6 MWs</td>
<td>184 MWs</td>
</tr>
<tr>
<td>(DRAM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,299 MWs</td>
<td>2,212 MWs</td>
<td>2094.5 MWs</td>
<td>2,076.6 MWs</td>
<td>2,204 MWs</td>
</tr>
</tbody>
</table>

• Roughly half of DR MW capacity is for reliability situations

• IOU portfolio includes time-differentiated rates such as time-of-use and critical peak pricing

• Time-of-Use Rates: residential default TOU by 2019
  • TOU pilots in play to test customer responsiveness

* Ex ante forecasts used for RA purposes
• Authorized the Demand Response Potential Study

• Adopted bifurcation policy and set 2018 deadline for integration into CAISO markets.

• Authorized the Demand Response Auction Mechanism pilot – a capacity procurement mechanism for 3rd party supply DR

• Adopted new goal and principles for demand response

• Improving IOU delivery of customer data to 3rd party DR providers, while protecting customer privacy
Bifurcation: DR resources split into two categories:

- Supply resources (bid into CAISO wholesale markets and dispatched by the CAISO). Includes emergency DR programs and price-responsive programs.
- Load-modifying resources (not integrated into CAISO): primarily time-differentiated rates such as time-of-use and critical peak pricing tariffs.

2018 Deadline: IOUs must integrate all Supply DR resources into CAISO markets by Jan. 1, 2018. No Resource Adequacy value for resources that miss the deadline.

SCE began integration of its Supply DR resources in the summer of 2015. Currently has over 1,000 MWs integrated (>80% of its DR portfolio).
DEMAND RESPONSE AUCTION MECHANISM (DRAM)

- A capacity procurement mechanism pilot operated by the IOUs to attract 3rd party DR providers.

- 3rd party DRP contract winners provide supply DR resources (bid directly into CAISO markets and dispatched by CAISO).

- 2016 pilot (delivery year): 40.5 MWs under contract

- 2017 pilot (delivery year: 124.6 MWs under contract

- 2018-19 pilot (delivery years): 184 – 205 MWs under contract (pending approval)

- Evaluation of the pilots (auction results and performance of DRPs in CAISO markets) by June 2018.
Commission-regulated demand response programs shall assist the State in meeting its environmental objectives, cost-effectively meet the needs of the grid, and enable customers to meet their energy needs at a reduced cost.

*CPUC Decision 16-09-056*
• Be flexible and reliable to support renewable integration and emission reductions;

• Shall evolve to complement the continuous changing needs of the grid;

• Customer choice of DR service provider and Utilities shall support their choice by eliminating barriers to data access;

• Shall be implemented in coordination with rate design;

• Demand response processes shall be transparent;

• Shall be market-driven leading to a competitive, technology-neutral, open-market in California with a preference for services provided by third-parties through performance-based contracts at competitively determined prices, and dispatched pursuant to wholesale or distribution market instructions, superseded only for emergency grid conditions.
ACCESSING CUSTOMER DATA

• Customer usage data is key to 3rd party DR provider enrollment of customers and participation in CAISO wholesale markets

• State law and CPUC policy require the Utility to obtain customer authorization to release customer usage data to a 3rd party.

• Current process to authorize the release of data is time-consuming and difficult to complete

• “Click-through” is an automated, streamlined process by which the customer can authenticate his/her identity and authorize the release of his/her data with a couple of “clicks” on a 3rd party website.

• CPUC Draft Resolution E-4868 approves funding for the IOUs to build the necessary IT infrastructure to support the ‘click-through’ system to support 3rd party DR providers.
• Future of DRAM: If the pilots are a success, what changes, if any, are necessary for its expansion from pilot to program?

• New models of DR to help with renewable integration: How do we design DR that can incent customers to shift their electricity consumption to certain times of the day? What are the barriers to developing new models of DR?

• Default TOU rates for residential customers: how can we best leverage DR programs/technology to best equip customers for TOU?

• Targeting DR to local capacity areas and disadvantaged communities: what approaches should be taken to address this issue?