Joint IOU Presentation

prepared for

Demand Response Reliability Cap Management Workshop

February 14, 2018
Joint IOU Presentation Agenda

• Key Principles
• Current Cap Management Processes
• Emerging Cap Management Issues
• Joint IOU Proposals
Key Principles For Cap Management

Transparency and Consistency

• Transparency regarding how cap headroom is calculated and allocated
• Consistency regarding calculation and allocation of headroom

Preserve Customer Choice

• Direct enrollment and aggregator enrollment
• IOU programs and Third Party programs

Demand Response Programs Must Cost Effectively Meet Grid Needs

• Participating customers are fairly compensated for the value they provide
• All customers receive fair value for funding of DR programs
CPUC Decision 10-06-034 established the following requirement: *In their annual April 1st Load Impact Compliance Protocol reports, PG&E, SCE, and SDG&E each shall include a summary of its reliability-based DR program (generally referred to as BIP, A/C Cycling, and AP-I) capacity and will compare the reliability-based capacity to its share of the overall limit (plus tolerance), consistent with Section C.2 of the Settlement.*

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<tbody>
<tr>
<td>SCE</td>
<td>659</td>
<td>697</td>
<td>-38</td>
<td>SCE DR Executive Summary Amended report (released in May 2017); Table K-2.</td>
</tr>
<tr>
<td>PG&amp;E</td>
<td>330</td>
<td>312¹</td>
<td>18</td>
<td>Appendix RR, Executive Summary, Table RR.2 – (1) Includes estimated DRAM RDRR.</td>
</tr>
<tr>
<td>SDG&amp;E</td>
<td>16</td>
<td>1</td>
<td>15</td>
<td>Estimated reliability cap MW per 2017 April 1st BIP forecast</td>
</tr>
<tr>
<td>IOU Totals</td>
<td>1,005</td>
<td>1,010</td>
<td>-5</td>
<td>Estimated exceedance of 2% reliability cap if DRAM RDRR is included</td>
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Estimated headroom may change based on April 1, 2018 LIP Report update even if customers enrolled in RDRR programs remain constant.
# Current Cap Management Processes

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<th>PG&amp;E</th>
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<tbody>
<tr>
<td>Calculate remaining headroom based on April 1st Load Impact Filings for IOU RDRR Programs plus existing DRAM RDRR contracts</td>
<td>Utilize Load Impact filing for IOU RDRR RA headroom status</td>
<td>Determine the remaining available RDRR capacity based on the Load Impact filing on April 1st</td>
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<td><strong>2</strong> Estimate an “uncertainty band” within the 2% cap and accept new RDRR MW only up the level of the uncertainty band.</td>
<td>If cap status shows available headroom, enroll customers until cap is reached. New customer MW contribution towards the cap is calculated using SA(s) average summer on-peak demand minus FSL.</td>
<td>Projected reliability cap is a non-issue based on IOU’s existing RDRR resources, including DRAM contracts.</td>
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<td><strong>3</strong> During DRAM RFO solicitation period allocate all remaining headroom to DRAM (close RDRR enrollments in IOU programs)</td>
<td>If load impact shows no available headroom, implement a waitlist.</td>
<td>No immediate concern for reaching the reliability cap</td>
</tr>
<tr>
<td><strong>4</strong> During non-DRAM RFO solicitation period allocate all remaining headroom to IOU Programs (re-open RDRR enrollments in IOU programs)</td>
<td>Re-evaluate available headroom annually at the release of Load Impact study.</td>
<td>No immediate concern for reaching the reliability cap</td>
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**Primary difference is around allocation of headroom between DRAM and IOU Programs**
## Current Cap Management Processes (cont.)

<table>
<thead>
<tr>
<th>During DRAM RFO period</th>
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<th>SCE</th>
<th>SDG&amp;E</th>
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</table>
| • Close BIP from accepting new enrollments during DRAM RFO.  
• If DRAM RDRR bids exceed available headroom then accept bids in rank order by net market value up to the reliability cap limit then stop shortlisting DRAM RDRR offers. |      |     |       |
| • No RDRR MW have materialized through previous DRAM Pilot solicitations.  
• For the current solicitation, there is no available capacity for reliability only products. |      |     |       |

<table>
<thead>
<tr>
<th>During non-DRAM RFO period</th>
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<th>SDG&amp;E</th>
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<td>• A first-come/first-served waitlist is maintained to offer capacity when available.</td>
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<tr>
<td>• RDRR capacity is available for BIP program</td>
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Primary difference is around allocation of headroom between DRAM and IOU Programs
Emerging Cap Management Issues

Permanent DRAM

• **DRAM and RDRR:** Are there issues with current RDRR product design and operation that go beyond cap management? During the May 3, 2017 event the CAISO only called Participating Transmission Operators (PTOs) for their RDRR resources (i.e. DRAM RDRR was not called); The PTO’s RDRRs were called out-of-market.

• **Transparency:** 1.) IOUs may not have visibility into whether DRAM RDRR MW are bid economically into the day ahead market and, therefore, should be exempted from counting against the cap and 2) It may not be feasible to manage a joint DRAM/IOU Program waitlist for available RDRR headroom space because of timing and other operational constraints.

• **Consistency:** If DRAM MW are based on contract values rather than values estimated using the Load Impact Protocols (LIPs) IOUs may have limited visibility into whether the DRAM RDRR resources are providing capacity consistent with contractual obligations when called.

Without more insight into the construct of a permanent DRAM it is difficult to design a headroom management process.
IOU Cap Management Proposals

Cost Effectively Meeting Grid Needs

Establish a working group process or leverage an existing working group process to:

1. Assess the effectiveness of current RDRR product in meeting grid needs.

2. Recommend changes to RDRR product design and/or operation.

3. Develop a consensus proposal on cap management given 1 and 2

Issues surfaced via the headroom management discussion highlight potentially larger issues that may require working group discussion.
Enhance Transparency

• Continue to use the annual Load Impact Protocols report to determine available headroom for each IOU’s programs as ordered in D 10-06-034.

✓ Open to discussing how DRAM RDRR can enter into the LIP report analysis in a manner that is consistent and transparent.

✓ Need to discuss how to manage the uncertainty associated with using LIP to determine headroom.

✓ Open to discussing non LIP sources of determining RDRR MW if other stakeholders wish to propose them.

LIP is not perfect but it’s what is directed under D 10-06-034. Is there something better?
Enhance Consistency

Leverage the methodologies that have been developed/tested for Direct Access and SGIP

- Going forward all three IOUs will calculate the reliability cap headroom in a consistent fashion and will manage any remaining reliability cap headroom in a consistent way.

✓ Implement a cap management methodology consistent with the methodologies adopted for Direct Access/SGIP cap management:
  1. Annual window to accept requests for reliability headroom
  2. IOUs verify eligibility and value bucket for each request
  3. Waitlist requests randomized within value buckets. Each value bucket is exhausted before moving to the next value bucket.
     a) Requests for resources that would “de-island” existing resources
     b) Requests for resources that are in LCAs that have deficiencies per CAISO but do not result in additional islanded resources
     c) All other requests that do not result in additional islanded resources
     d) Requests that result in additional islanded resources

Open issue regarding how this method could be applied consistently across IOU programs and DRAM
Questions/Reactions