



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA

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Order Instituting Rulemaking Regarding Policies
and Protocols for Demand Response Load Impact
Estimates, Cost-Effectiveness Methodologies,
Megawatt Goals and Alignment with California
Independent System Operator Market Design
Protocols

Rulemaking 07-01-041
(Filed January 25, 2007)

COMPLIANCE FILING OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E)
- REPORT ON DIRECT PARTICIPATION PHASE WORKSHOPS

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Dated: **January 8, 2010**

SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) WORKSHOP REPORT

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**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding Policies and Protocols for Demand Response Load Impact Estimates, Cost-Effectiveness Methodologies, Megawatt Goals and Alignment with California Independent System Operator Market Design Protocols

Rulemaking 07-01-041
(Filed January 25, 2007)

**COMPLIANCE FILING OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E)
- REPORT ON DIRECT PARTICIPATION PHASE WORKSHOPS**

Pursuant to the December 29, 2009 Administrative Law Judge's Ruling Memorializing Schedule Modifications in the Direct Participation Phase of Rulemaking 07-01-041, Southern California Edison Company (SCE), on behalf of itself, Pacific Gas and Electric Company (PG&E) and San Diego Gas & Electric Company (SDG&E), files this report (Report) on the workshops in the Direct Participation Phase of this proceeding held December 16 - 18, 2009.

The Report is attached hereto, and is organized by workshop days:

- Exhibit A: Day One report and attachments;
- Exhibit B: Day Two report and attachments; and
- Exhibit C: Day Three report and attachments.

The attachments consist of the workshop sign-in sheets, hand-outs and presentations prepared by the Energy Division and parties for the workshops.

Respectfully submitted,

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January 8, 2010

Exhibit A
Day One Report

**R07-01-041 Direct Participation Phase Workshop
Demand Response OIR Phase 4 Workshop
Day One Report – December 16, 2009**

All comments or statements made by CPUC staff are for discussion purposes only and should not be construed as findings of fact or law or attributed to the Commission itself.

Introduction

Karl Meeusen of CPUC Energy Division, reviewed the agenda and the four (4) categories of topics to be discussed throughout the three (3) days of the workshop based on feedback from the scoping memo dated November 9, 2009.

1. Jurisdictional and Tariff Restrictions
2. Dual Participation
3. IOU and DRP Communications and Settlement Issues
4. Implementation Plan

Mr. Meeusen indicated that dual participation issues will need to be focused on the items associated with the scoping memo. He acknowledged that there are a number of other dual participation issues resulting from another proceeding (i.e. resulting from D. 09-08-027 in A. 08-06-001 et al).

- The agenda was adjusted so that the discussion regarding dual participation would be addressed after the lunch break.

The goal for this workshop series is to reach a point by the third day where a realistic plan can be developed for what can be resolved in this proceeding and what will need to be addressed in other proceedings.

Due changes to the CAISO Proxy Demand Resource implementation, Mr. Meeusen proposed changes to the due dates for reports as follows:

- Consolidated workshop report will be due **January 8, 2010**
- Reply comments will be due **January 22, 2010**
- If there are any items that haven't been handled in the workshop to the parties' satisfaction then parties are suggested to incorporate in their reply comments.
- Due dates for subsequent items will be adjusted accordingly and a communication will be distributed shortly to clarify due dates.

Terminology Clarification:

The CAISO has decided to match the NAESB team and use the term DRP (Demand Response Provider) as opposed to CSP (Curtailement Service Provider). Note that a utility can act as a DRP however the roles differ.

Energy Divisions Stated Objectives for Each Agenda Item

- Determine where there is consensus and where there is disagreement (Comments to the scoping memo were difficult to aggregate and determine clearly where there was consensus).
- List of outstanding issues for resolution
- Estimate of timeline and method for resolution.

Jurisdictional and Tariff Restrictions

Staff Questions 1-5, 12-14, 18

Question #1

Do current IOU tariffs bar direct bidding of retail customer Demand Response resources into CAISO markets by an aggregator or customer? If so, what specific provisions bar such transactions?

- No party pointed to a specific law that prohibited direct participation by retail load to provide DR in CAISO markets (“direct participation”).
- PG&E pointed out that direct participation should not move forward until the CPUC gives its ok, and requested that the CPUC make clear that it is not allowing direct participation at this time.
- Parties indicated that there were tariff language barriers but no specific rules that prevented direct participation.

Question #2

Do current IOU tariffs have “one scheduling coordinator per meter” restrictions? If so, please identify them with specific citations. Is it necessary and/or appropriate to eliminate any existing “one Scheduling Coordinator” per meter” tariff language to allow direct bidding of Demand Response resources into CAISO markets?

Since parties are utilizing terminology differently John Goodin of the CAISO provided some clarification.

ISO Metered Entity: entity that is connected to the CAISO controlled grid. Some load customers (very few) may be connected but would be inter-connected at a very high transmission level. Unlike loads, a majority of generators are ISO metered entities as they are inter-connected to the CAISO Controlled Grid. The CAISO obtains the meter data from CAISO Metered Entities directly as allowed per CAISO tariff.

SC Metered Entity: the Scheduling Coordinator (SC) submits the meter data for the resource to the CAISO. The vehicle that enables this is a meter service agreement that SC’s must sign with the CAISO.

NOTE: Proxy Demand Resource (PDR) is SC metered.

Discussion

Mona Tierney-Lloyd of EnerNOC asked if a limitation existed in CAISO’s tariff for there to be one SC only per meter. Per John Goodin, the CAISO tariff is silent on this subject as it deals with SC Metered Entities.

However, a specific tariff provision exists that prohibits multi-SCs per meter for CAISO Metered Entities. A service account can have multiple meters but a meter can only have one service account.

- SCE indicated that it's usually a one to one relationship but there are a few cases where there are additional meters at one site and the service is totalized outside of the meter and that there is never a case where one meter supports more than one service account.
- CAISO indicated that they plan to amend the tariff to explicitly allow for one SC for scheduling and servicing load and one DRP for providing demand response service but to not allow multiple DRPs or multiple LSEs.
- SCE expressed concern if an LSE serves the service account load, suggesting that the text in the answer to question #2 on the slide needs to be updated as well as the tariff so that more than one LSE or more than one DRP is not allowed. The other utilities supported this position.
- Further discussion regarding allowing different service providers for the same meter in different programs was postponed.

Question #3

Are there other state laws; rules or procedural impediments to having multiple Scheduling Coordinators represent single retail customers or to direct bidding of retail customers into CAISO markets? Please specific citations to such rules, policies or procedures, and describe in detail the impediments they may create.

Rules 21 and 22 were identified for discussion.

- Rule 22 was determined to be a rule at a different level than this discussion issue.
- Rule 21 (Interconnection of Distributed Generation) was left open for further review with the caveat that Distributed Generation (DG) may be too big of an issue to take action on during this proceeding.
- AReM/DACC (Direct Access Customer Coalition) expressed concern regarding whether this impacts only Direct Access (DA) customers or both bundled and DA.

Question #4

How could the Commission modify the existing rules, procedures or impediments to facilitate direct participation? What specific modifications would be necessary to address each impediment identified in question three?

Discussion

Sue Mara of AReM/DACC requested some clarification regarding Rule 22 resulting in some discussion about the wording and interpretation of Rule 22.

- Discussion around Rule 22 resulted in consensus that it could be considered silent in regard to this issue. Although many parties did not interpret this as a prohibition, they felt that clarification was required as to whether Rule 22 addresses DRPs and considers Meter Data Management Agents (MDMA).
- DRA expressed a concern about double payments. There was discussion about the need to maintain the balance of the original intent of the rule and to avoid double payments when drafting any language updates.
- PG&E expressed 1) a desire to obtain a legal opinion as to whether the utility would be required to provide for all bundled customers and 2) consideration of the applicability of Rule 23 which addresses Customer Choice Aggregation (CCA).
- SCE suggested that Rule 18 should also be reviewed for additional clarification needed on the “resale” issue.

ACTION: SCE volunteered to draft proposed changes for Rule 22

SUMMARY: Parties seem to agree and believe that there is not a legal barrier but a process issue resulting from the fact that this type of market situation was not anticipated when the current rules were written. Parties feel the issue is writing or modifying the appropriate rules before direct participation is implemented.

The Utilities have indicated an expectation that meters associated with a customer contract with a utility to provide demand response, would not be available for bidding into the wholesale market by a non-utility DRP.

Concern was expressed by parties, such as CLECA, around the outstanding item of a customer being served by more than one DRP. This was deferred until a later agenda item.

Question #5

If such current tariffs, rules, or procedures are changed or eliminated, is there need for other rules to provide protections to Load Serving Entities, consumers, other market participants, or to otherwise maintain the integrity of CPUC programs? What type of concerns would new rules be intended to address? Please provide specific proposals for changes to address any concerns.

Specifics regarding implicit barriers to direct participation in current rules

- SCE indicated that there are several items in Rule 18 that should be addressed.
- The wording in Rule 22 was discussed and parties were unclear as to whether or not this rule applies to bundled service [as well as DA?]. It was indicated that there were a couple of programs [PG&E's DRP and SLRP tariffs] that do prohibit participation in Participating Load (PL) and that there are a significant number of customers in Demand Bidding although no customers in SLRP. PG&E was requested to propose changes to tariffs to address the problems identified above related to Rule 22. PG&E agreed to look into the tariff changes.
- North American Power Partners (NAPP) suggested that this issue should be addressed in all tariffs 'across the board' but it was pointed out by SCE that it may not be practical for this discrepancy to be eliminated entirely.

Question #12-13

Are tariff changes, rules or other state-level actions necessary to ensure that similar gaming activities do not occur in California markets when direct bidding becomes available? If so, please propose specific new rules, policies or strategies or modifications to the existing ones to ensure the following:

- a) that only Demand Response that actually performs is paid*
- b) that Demand Response that performs does not receive duplicative payments.*

How can the CPUC and/or CAISO otherwise minimize gaming opportunities?

Answering this question is challenging since the term gaming is not well defined.

- SCE identified an example where a valid strategy such as pre-cooling could be interpreted as gaming.
- Several non-utility parties, including DRA, expressed concerns that this is really a baseline issue as opposed to a gaming issue without an obvious answer.
- It was determined that gaming questions may be better suited for discussion regarding dual participation.
- NAPP expressed a concern about the magnitude of baseline issues. Mr. Meeusen reminded the participants that for the foreseeable future the focus needed to be on the newly adopted 10 in 10 CPUC baseline.
- ARem/DACC expressed a need to clarify jurisdictional issues such as the extent to which the CPUC has any oversight of baselines used for PDRs and market monitoring of PDR gaming issues at the CAISO.

CPUC requested that parties address in reply comments tools to differentiate gaming/non-gaming baseline behaviors.

Question #14

What types of tariff changes, rules, or actions are being considered to address possible gaming in eastern markets, and are any similar strategies relevant to California markets?

- EnerNOC is concerned about making sure that there is consistency of treatment between IOU and third party DRP treatments.
- PJM's approach to addressing gaming concerns by adjusting baselines was discussed with issues raised regarding jurisdictional lines.
- CLECA suggested that the discussion today be limited and have parties meet separately to review and address. No specific action was taken for a followup meeting.

Question #18

Public Utilities Code Sections 394.2 and 394.25 require the CPUC to attempt to resolve complaints by retail customers against electric service providers. Does the Commission have similar jurisdiction under these or Draft other code sections over retail customer complaints involving demand response service providers?

Discussion

- SCE views the Commission's jurisdiction over aggregators for marketing and consumer protection purposes as related to the CPUC's broad jurisdiction over utilities regarding consumer protection.
- Sue Mara of AReM/DACC indicated that the CPUC's jurisdiction of Electric Service Providers (ESPs) for consumer protection was based on a legislative act that addressed residential and small commercial customers. AReM does not believe that the CPUC has authority over DRPs, who represent a new concept.
- PG&E agrees that there was a legislative process for ESPs, but that fact does not change the fact that the CPUC has jurisdiction over DRPs.
- EnerNOC indicated that their perspective was consistent with the fact that DRPs as an entity were not contemplated when this language was written; the language was drafted specifically with regard to energy service providers. EnerNOC does not believe that the language applies to DRPs, who provide a significantly different service from ESPs. However, if the CPUC would want some oversight, with regard to consumer protection, EnerNOC is not implying that the Commission does not have a role, but that the specifics of that jurisdiction need to be clarified.
- AReM supported that point that jurisdictional clarity is needed, noting though that, while the CPUC could have some role, there are activities that the CPUC would not have the authority to regulate.
- SCE pointed to the section of the Public Utilities Code that refers to ESPs and suggested that the CPUC has jurisdiction over anyone offering services within an IOU territory.
- Parties determined that this issue needs to be reviewed further by CPUC legal staff and that there needs to be clarifying language 1) distinguishing between Energy Service Providers (ESPs) and DRPs and 2) whether DRPs are Electric Corporations.

Wrap Up

- 1) Parties indicted that the Commission needs to further address gaming definition and dual participation issues.

- 2) Parties agree that there is a need to update a couple of Rules (Rule 21, 22 and possibly 23) but that issues should be relatively easy to resolve.
- 3) SCE to draft proposed changes for Rule 22
- 4) All utilities should provide details regarding suggested tariff changes within their comments due on January 22.
- 5) Consensus amongst parties on jurisdictional issues is limited. All parties should draft extensive comments for their positions and pertinent information to be on the record.
- 6) There may be FERC issues
- 7) CPUC may ultimately have to rule outside of this proceeding
- 8) Attorneys will need to brief this issue.

ACTION: SCE volunteered to draft proposed changes for Rule 22

Dual Participation

Staff Questions 6, 8

CLECA expressed concern that there are a number of issues that are not being dealt with at this point, e.g. the relationship between dynamic pricing and DR.

ACTION: Response to the original comments as well as reply comments to workshop reports is due on **January 22**. *Additionally a legal brief regarding jurisdictional issues will be due on the 22nd*. There will be an opportunity to respond to reply comments and the legal brief on **January 29**. Please limit your submissions to **five (5) pages each** for comments and for the legal brief.

EnerNOC suggests a hierarchy may be one way to allow customers to participate in multiple programs, but determine a priority if coincident events are called and to eliminate double payments. EnerNOC further stated that Eastern markets have incorporated this concept where resources are committed to the ISO for a specific number of hours but can offer supplemental hours to the utility. The resource would receive an incremental capacity payment from the IOU since they are available for hours on top of what the ISO requires.

NOTE: This is an EnerNOC suggestion and not one from Joint Parties.

The CAISO stated that it would not accept another party having a higher priority over a demand response resource that is offering ancillary services to the CAISO.

PG&E indicated that allowing more than one DRP should be a low priority at this point.

Question #6

When an IOU or other demand response service provider is not using a particular retail demand response program resource for an event, are there existing restrictions that prevent the entity managing that retail demand response resource from bidding the demand response load from those same retail participants into the CAISO markets outside of the context of the retail program? If so,

what are these restrictions, and how if at all should they be modified? Please provide specific proposals for modifying these rules, if necessary.

- IOUs expressed a preference to discuss this at a later point in the process.
- CAISO also expressed concerns about multiple DRPs behind the meter and wished to defer this issue
- CLECA is concerned about ramifications from a decision with the issues not yet being fully vetted.
- SCE indicated that if the service accounts are in a portfolio dedicated to a utility program/contract, the utility would want to bid the load itself directly.
- General discussion among parties appeared to confirm that details around number of locations and baseline aggregation issues have settlement implications that need to be discussed. SCE indicated the impact of demand response participating in multiple PDRs would complicate the baseline calculations and settlements processes.
 - PDR resources must be defined locationally, within a subLAP.
 - Mr. Meeusen asked if a specific aggregator contract can become its own resource.
- SCE reminded everyone that there is only one Resource ID which is connected to one SC that interfaces with the CAISO. Mr. Goodin reiterated that bids can only be submitted to the CAISO through a SC.
- Mr. Meeusen asked if it was possible that the aggregator/DRP that signs the contract with IOU is an SC at the CAISO, this conforms to the rule of one SC at the CAISO level and the bid is made to the CAISO by the third party DRP. Mr. Meeusen suggested that the aggregator/DRP could be subject to dispatch instruction from the IOU as per the contract, but this might allow the DR resource to be dispatched through PDR when the IOU is not using the associated program.
 - PG&E reminded the group that under current Aggregator Managed Portfolio (AMP) contracts the utility has the right to bid that product into the CAISO wholesale market.
 - SCE commented that currently the LSE gets the Resource Adequacy (RA) credits associated with the DR resource. Parties wondered how/if RA benefit can be recognized for the incremental amount?
 - Generators can receive partial RA resource but cannot sell RA capacity twice. The resource owner owns the RA tags. The CAISO agrees that although the documentation on this is not perfectly clear, the principle exists.
 - SCE indicated that RA counting, ownership and transferability seem to relate well to the costs and benefits of implementation but there needs to be some effort figuring out if it's feasible from a higher level

Discussion

Can different time periods for participation in different DR programs alleviate some of the settlement concerns associated with dual participation expressed in response to Question #6? (E.g. a separate DRP for hours outside of program hours.)

- Would CAISO systems allow for this? The CAISO explained that resources are assigned to a SC; the ability to dynamically switch a resource between SCs does not exist.
 - Potentially if it's all delivered through one SC.
- Several unidentified parties raised concerns about insights into 'who is triggering what'.

- Since the CAISO is agnostic as to which program gets called could have same resource ID but multiple programs for differing time periods.
 - Use Limited Resources have to perform on a program first before they can sign up for the next program.
- SCE wanted to be clear that DR should be comparable to generator rights and processes.
- DRA indicated that this approach could work only under clearly defined program hours and procedures
- SDG&E used load obligated under BIP as an example of a situation whereby if the complication associated with the timing of the bidding were addressed and the other contract recognized priority value, then the available load reduction that was not required for BIP could be used elsewhere.

SUMMARY:

- There was general consensus amongst parties that there could potentially be one LSE and a separate DRP per meter but only a single SC per meter.
- There was little other consensus regarding issues with critical policy decisions required

Question #8

Should the same retail demand response resource be permitted to participate in an IOU program and the CAISO market if it is providing a different product (energy or capacity for the IOU than it is for the CAISO)? Why or why not?

As an example of the scenario being considered in this question, Mr. Meeusen suggested thinking about BIP and A/C Cycling (reliability based programs). The utilities have the ability to bid demand via the DBP (Demand Bidding Program) into the CAISO market without PDR as non-participating load, through a price-sensitive demand curve in the Day-ahead market.

PG&E pointed out that Program 1 and Program 2 do not necessarily have to have the same customer set as long as the utility manages the situation and there is a many to one relationship between customer service accounts to locations and a many to one relationship between locations to registrations and a many to one relationship between registrations and proxy demand resources.

Muir Davis of SCE expressed a potential desire to actively manage service accounts' participation in PDR and assumes that SCE has the ability to include any meters currently under contract with DR aggregators within their PDR bids.

Many parties argued that the key issue is who pays for capacity. Parties wanted to know:

- How will DR that participates directly in the wholesale market, outside of a retail DR program, qualify for RA?
- How does that fit into the standard capacity product?
- If it passes both those hurdles then there is a bilateral market.

Ms. Mara of AREM/DACC suggested that load impact protocols and Resource Adequacy issues are being handled in another proceeding.

- There did not seem to be a consensus amongst parties regarding dual participation although there seemed to be general agreement that there could be dual participation if there is one SC.
- DRA argued that since the ratepayers are making full capacity payments – based on avoided costs of a Combustion Turbine (CT) – for an existing IOU DR program, any additional revenues obtained from dual participation of customers already in that program should go to the ratepayers to reduce the cost of that program.
- PG&E agreed that dual participation was theoretically possible, but does not believe that dual participation should be a priority and that the costs of implementing dual participation would likely far outweigh the benefits.
- PG&E believes that before the Commission can adopt rules for dual participation there needs to be a standard contract. PG&E would like to see dual participation delayed until at least 2011 so that other issues required to implement any direct participation of demand response could be resolved first.
- CAISO believes that if only the rules and contractual relationships are completed in 2010 it would be a failure to launch and that some PDR bidding should be in place in 2010.
- PG&E has proposed that they bid only their own bundled customers in 2010 until the standard agreements are worked out.

SUMMARY: Parties believe there are lots of dual participation issues. There was no consensus as to whether these issues can or should be resolved in 2010 but could probably be resolved by 2011.

Wrap Up

Parties believe:

- That the relationship between a third party DRP and customer needs to be defined
- Eligibility requirements to determine which customers can participate need to be completed
- Standard language should be developed for a settlement contract.
- That the settlement process needs to be defined.

ATTACHMENTS FOR DAY ONE REPORT

- A.1. Workshop Agenda**
- A.2. Workshop Sign-In List – Day One**
- A.3. Energy Division Presentation**
- A.4. PG&E Presentation**
- A.5. EnerNOC Presentation**

Exhibit A-1
Workshop Agenda

**R07-01-041 Direct Participation Phase
Workshop Agenda
December 16-18, 2009**

[Staff Questions below refer to November 9, 2009 Scoping Memo](#)

Staff Questions are attached

December 16 – Hearing Room A

9:00 – 9:30 Sign in

9:30 – 9:45 Introduction
Discuss background, format, and ground rules

Discussion of Jurisdictional Issues

9:45 – 11:00 Staff Questions to be discussed: 1-5, 12-14, and 18

11:00 – 11:15 Break

11:15 – 11:45 Complete Staff Questions 1-5, 12-14, and 18

Discussion of Dual Participation Issues

**11:45 – 12:30 Presentations from CLECA, EnerNoc, and PG&E
(Maximum 15 minutes each)**
Staff Questions to be discussed: 6

12:30 – 1:30 Lunch

1:30 – 3:00 Staff Questions to be discussed: 6 and 8

3:00 – 3:15 Break

3:15 – 4:15 Staff Questions to be discussed: 8

Wrap-up

4:15 – 4:30 Recap, status check, next steps

December 17 – Hearing Room A

9:00-9:30 **Sign in**

9:30 – 9:45 **Introduction**
Questions from Day 1 and objectives for Day 2

Settlement Agreements and IOU/CSP Interaction

9:45 – 11:00 **Presentations from EnerNoc, SCE, and PG&E**
(Maximum 15 minutes each)
Staff Questions to be discussed: 7

11:00 – 11:15 **Break**

11:15 – 12:30 **Staff Questions to be discussed: 9**

12:30 – 1:30 **Lunch**

1:30 – 3:00 **Staff Questions to be discussed: 10 and 15**

3:00 – 3:15 **Break**

3:15 – 4:15 **Staff Questions to be discussed: 16 and 17**

Wrap-up

4:15 – 4:30 **Recap, next steps**

December 18 –Auditorium

9:00 – 9:30 **Sign in**

9:30 – 9:45 **Introduction and Determination of Overflow issues**
Questions from Day 1 and 2

Overflow Items

9:45 – 10:30 **TBD**

10:30 – 10:45 **Break**

Discussion of Implementation Timeline

10:45 – 12:45 **Given the discussion of the previous days, there will need to be a discussion of the planning horizon for when items must be implemented to achieve the objectives set forth**

Wrap-up

12:45 – 1:00 **Recap, next steps**

This workshop will discuss the direct-participation of Demand Response resources in the CAISO markets. As per the schedule set by the Scoping Memo, this is the only workshop scheduled in this phase of the proceeding. The workshop is scheduled for 3 days, December 16-18, 2009, however; if the workshops move quicker than expected, we will move items up on the agenda. This means we may cover items earlier than indicated on the agenda. This may eliminate the need for using all three days. We will not begin new agenda items after 3:45PM. If all items on the agenda are covered, but it is later than 3:45PM, we recess for the day. Given the number of topics to be covered, items cannot exceed the time posted in the agenda. If time permits, we may revisit items at the end of the day or in the Overflow section. If issues remain unaddressed, parties are encouraged to address these points in the reply comments to the Workshop Report. **There has been a room change for days 1 and 2. These days will now be held in Hearing Room A.**

The workshop will be structured as a discussion group and I will act the moderator. The [scoping memo](#) and parties' comments in this proceeding provide a starting point for this discussion. I will provide slides with the staff questions and a brief summary of parties' response. Parties wishing to make a comment should simply raise their hand. Once an individual has been recognized they will have the opportunity to comment without interruption. We ask that participants keep an open mind and a willingness to explore all options.

Workshop reports will be drafted by SDG&E, SCE, and PG&E and days 1 through 3 respectively.

I am sorry, but there will not be a call-in number available for these workshops.

If any party wishes to make a presentation, please let me know and we will try to accommodate.

Karl Meeusen
Energy Division
California Public Utilities Commission
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Staff Questions

Discussion of Jurisdictional Issues

- 1) Do current IOU tariffs bar direct bidding of retail customer Demand Response resources into CAISO markets by an aggregator or customer? If so, what specific provisions bar such transactions?
- 2) Do current IOU tariffs have “one scheduling coordinator per meter” restrictions? If so, please identify them with specific citations. Is it necessary and/or appropriate to eliminate any existing “one Scheduling Coordinator per meter” tariff language to allow direct bidding of Demand Response resources into CAISO markets?
- 3) Are there other state laws, rules or procedural impediments to having multiple Scheduling Coordinators represent single retail customers or to direct bidding of retail customers into CAISO markets? Please provide specific citations to such rules, policies or procedures, and describe in detail the impediments they may create.
- 4) How could the Commission modify the existing rules, procedures or impediments to facilitate direct participation? What specific modifications would be necessary to address each impediment identified in question three?
- 5) If such current tariffs, rules, or procedures are changed or eliminated, is there need for other rules to provide protections to Load Serving Entities, consumers, other market participants, or to otherwise maintain the integrity of CPUC programs? What type of concerns would new rules be intended to address? Please provide specific proposals for changes to address any concerns.
- 12) Are tariff changes, rules, or other state-level actions necessary to ensure that similar gaming activities do not occur in California markets when direct bidding becomes available? If so, please propose specific new rules, policies, or strategies or modifications to existing ones to ensure the following:
 - a. that only Demand Response that actually performs is paid.
 - b. that Demand Response that performs does not receive duplicative payments.
- 13) How can the CPUC and/or CAISO otherwise minimize gaming opportunities?
- 14) What types of tariff changes, rules, or actions are being considered to address possible gaming in eastern markets, and are any similar strategies relevant to California markets?
- 18) Public Utilities Code Sections 394.2 and 394.25 require the CPUC to attempt to resolve complaints by retail customers against electric service providers. Does the Commission have similar jurisdiction under these or other code sections over retail customer complaints involving demand response service providers?

Discussion of Dual Participation Issues

- 6) When an IOU or other demand response service provider is not using a particular retail demand response program resource for an event, are there existing restrictions that prevent the entity managing that retail demand response resource

- from bidding the demand response load from those same retail participants into the CAISO markets outside of the context of the retail program? If so, what are these restrictions, and how if at all should they be modified? Please provide specific proposals for modifying these rules, if necessary.
- 8) Should the same retail demand response resource be permitted to participate in an IOU program and the CAISO market if it is providing a different product (energy or capacity) for the IOU than it is for the CAISO? Why or why not? Please explain your answer.

Settlement Agreements and IOU/CSP Interaction

- 7) If an IOU or other demand response provider is allowed to bid demand response load that is also part of a retail demand response program into the CAISO markets outside the context of the existing retail program on non-event days, what information flow is necessary between the IOU, the demand response service providers (if any) and the customer providing the load drop to ensure transparency in the process? Please provide specific information-flow proposals that include the information each party would need to make such transactions possible, and methods for ensuring that those communications are successful.
- 9) What types of settlement and communication problems may arise in California due to the implementation of direct participation?
- 10) How might such problems be avoided/resolved? Please provide specific proposals for each problem identified.
- 15) Given the CPUC's adopted baseline, does the CAISO proposed baseline directly or indirectly affect the efficacy of the CPUC's retail programs, for example, by creating gaming or double payment opportunities? Please describe any gaming or double payment opportunities in detail.
- 16) If the difference between the two baselines creates opportunities for gaming or double payment, should the CPUC adopt rules to address or minimize such opportunities? If so, please propose specific rules or actions that would address these concerns.
- 17) What process should the CPUC use to determine the reasonableness of the bilateral contracts and agreements reached between CPUC jurisdictional Load Serving Entities and wholesale Demand Response providers? Should the current application process for approval of contracts apply to settlement agreements, or is a streamlined process appropriate?

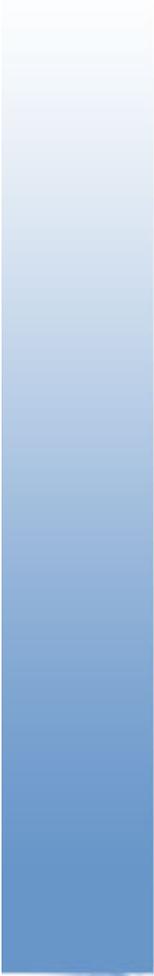
Exhibit A-2

Workshop Sign-In List

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Exhibit A-3

Energy Division Presentation



R.07-01-041: Direct Participation Phase

Karl Meeusen
Energy Division

December 16-18, 2009





Overview

- Introduction to issues in the November 9, 2009 Scoping Memo
- Schedule
- Topics
 - Jurisdictional and tariff restrictions
 - Dual Participation
 - IOU and DRP Communications and Settlement Issues
 - Implementation Plan





Introduction to issues in the November 9, 2009 Scoping Memo

- [T]his Ruling identifies issues the Commission should address given a Federal Energy Regulatory Commission (FERC) order that requires CAISO to allow retail electric customers to bid Demand Response resources directly in the CAISO's wholesale electricity markets if state laws and rules do not prohibit such bidding, and subsequent CAISO efforts to allow such direct participation. (Scoping Memo at p.2)





Introduction to issues in the November 9, 2009 Scoping Memo

- The comment process initiated in this Ruling:
 - Aims to identify whether there are state laws and/or rules that either directly or indirectly prohibit retail customers from bidding into CAISO wholesale markets.
 - Seeks input on whether any such prohibitory laws and/or rules warrant modification in light of the potential benefits arising from additional Demand Response options in California,
 - and if so, what modifications to state laws and/or rules are necessary to support the CAISO's efforts to allow direct participation.
 - Requests comment on technical and/or policy issues or challenges that the Commission should address that may arise from CAISO's compliance with this FERC order, with specific proposals for how those challenges may be addressed.





Introduction to issues in the November 9, 2009 Scoping Memo

- It is possible that not all issues identified here will be resolved within the scope of the instant rulemaking; rather some issues may call for consideration within the scope of new or other existing proceedings. (Scoping Memo at p.2)





Schedule

- DATE ACTION**
- November 9, 2009 Ruling issued
 - December 4, 2009 Comments from parties responding to questions and proposing specific solutions; may also identify potential issues and venues for addressing those issues.
 - December 16-18, 2009 Workshop on proposals for facilitating direct bidding
 - December 29, 2009 Parties file a workshop report.
 - January 6, 2009 Reply comments and comments on the workshop report due. Where feasible, parties shall work together to prepare and jointly file their comments.
 - Mid-February 2009 Proposed Decision
 - Mid-March 2009 Estimated date for Commission vote





Agenda

- Day 1
 - Jurisdictional and Tariff Restrictions
 - Staff Questions: 1-5, 12-14, and 18
 - Dual Participation
 - Staff Questions: 6 and 8
- Day 2
 - IOU and DRP Communications and Settlement Issues
 - Staff Questions: 7, 9, 10, 15, 16, and 17
- Day 3
 - Overflow Issues
 - Staff Questions: 11 and 19
 - Implementation Plan

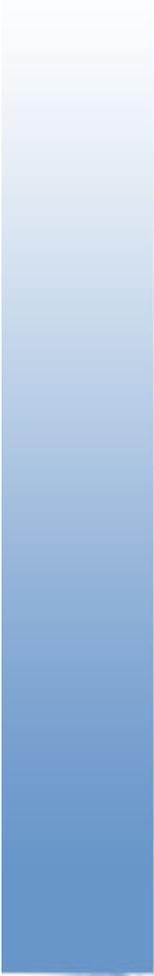




Workshop Objectives

- At the end of each agenda topic, we should be able to:
 - 1) Identify questions where consensus was reached and the agreed upon solutions.
 - 2) Determine what questions remain unanswered.
 - 3) Be prepared to assess the amount of time it will take to resolve these issues or if the issue can be resolved through CPUC order in this proceeding or another proceeding.





Issues Regarding Jurisdictional and Tariff Restrictions/Questions





Staff Question #1

- Question: Do current IOU tariffs bar direct bidding of retail customer Demand Response resources into CAISO markets by an aggregator or customer? If so, what specific provisions bar such transactions?
- Answer: Parties seem to agree that IOU tariffs do not explicitly prohibit direct participation, but that there is tariff language that could create barriers.





Staff Question #2

- Question: Do current IOU tariffs have “one scheduling coordinator per meter” restrictions? If so, please identify them with specific citations. Is it necessary and/or appropriate to eliminate any existing “one Scheduling Coordinator per meter” tariff language to allow direct bidding of Demand Response resources into CAISO markets?

- Answer: The limitation is on multiple scheduling coordinators by CAISO metered entity. The CAISO will amend its tariff to specify that PDR resources are SC metered entities. The IOUs do not support more than one SC per service account. However, Joint Parties believe that rules such as PG&E’s Rule 22 will act as barriers and the language should be removed.





Staff Question #3

- Question: Are there other state laws, rules or procedural impediments to having multiple Scheduling Coordinators represent single retail customers or to direct bidding of retail customers into CAISO markets? Please provide specific citations to such rules, policies or procedures, and describe in detail the impediments they may create.
- Answer: Parties seem to agree that there are no state laws, rules, or procedural impediments, but SCE and PG&E refer to tariff language or contracts that limit multiple SC per customer account.





Staff Question #4

- Question: How could the Commission modify the existing rules, procedures or impediments to facilitate direct participation? What specific modifications would be necessary to address each impediment identified in question three?
- Answer: PG&E states that the CPUC must first approve participation in PDR, develop rules to address separate LSEs and DRP SCs, and address the RA issues. SDG&E states that they will need to ensure the proper tools are in place to prevent double bidding and double payments. SCE states that there should be rules in place so that IOUs will receive the benefit of capacity programs they pay for, this includes prohibiting DR resources from dual participation in ISO markets with other DRPs. Thus, SCE seeks a limit to one DRP per customer service account. Lastly SCE asserts a need for cost recovery for DRP participation in the CAISO market.





Staff Question #5

- Question: If such current tariffs, rules, or procedures are changed or eliminated, is there need for other rules to provide protections to Load Serving Entities, consumers, other market participants, or to otherwise maintain the integrity of CPUC programs? What type of concerns would new rules be intended to address? Please provide specific proposals for changes to address any concerns.
- Answer: All parties seems to agree that additional rules and rule changes will be needed. The IOUs assert that there is a need for compensation from DRPs to the IOUs for energy purchased, but not used. PG&E advocates for a standard contract to resolve this issue. SCE and SDG&E recommend a registration process for DRPs. Joint parties suggests that there may need to be a hierarchy between utility and ISO participation.





Staff Question #12

- Question: Are tariff changes, rules, or other state-level actions necessary to ensure that similar gaming activities do not occur in California markets when direct bidding becomes available? If so, please propose specific new rules, policies, or strategies or modifications to existing ones to ensure the following:
 - a) that only Demand Response that actually performs is paid.
 - b) that Demand Response that performs does not receive duplicative payments

- Answer: Most part parties agree that the opportunities for gaming are small, already addressed, or currently being addressed by the CAISO. PG&E also states that limiting customer participation to one DRP will limit gaming opportunities.





Staff Question #13

- Question: How can the CPUC and/or CAISO otherwise minimize gaming opportunities?
- Answer: Most part parties agree that the opportunities for gaming are small, already addressed, or currently being addressed by the CAISO. SCE expresses concerns that “gaming” is not well defined, and, if improperly defined, could preclude legitimate DR practices such as pre-cooling. PG&E recommends that the CAISO utilize a minimum bid price.





Staff Question #14

- Question: What types of tariff changes, rules, or actions are being considered to address possible gaming in eastern markets, and are any similar strategies relevant to California markets?
- Answer: PG&E suggests that the CPUC should have the authority to suspend the registration of DRPs. SCE and Joint Parties suggest referring to eastern ISOs for market monitoring lessons.





Staff Question #18

- Question: Public Utilities Code Sections 394.2 and 394.25 require the CPUC to attempt to resolve complaints by retail customers against electric service providers. Does the Commission have similar jurisdiction under these or Draft other code sections over retail customer complaints involving demand response service providers?
- Answer: Joint parties state that aggregators are not ESPs, and therefore not subject to CPUC oversight as defined in 394.2 and 394.25. The IOUs assert that the CPUC does have broad authority over DRPs because DRPs fall under the definition of an ESP.





Wrap up of Jurisdictional and Tariff Restrictions/Questions

Issues Resolved	Resolution

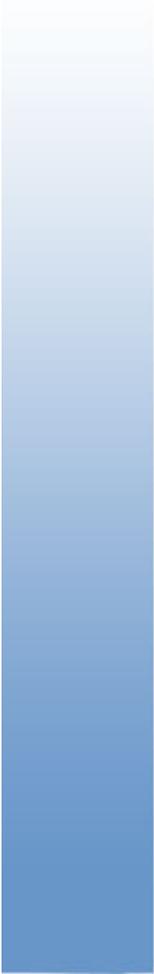
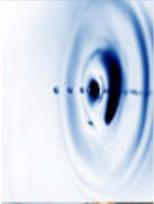




Wrap up of Jurisdictional and Tariff Restrictions/Questions

Remaining Issues	Time to Resolve	Method to Resolve





Issues Regarding Dual Participation





Staff Question #6

- Question: When an IOU or other demand response service provider is not using a particular retail demand response program resource for an event, are there existing restrictions that prevent the entity managing that retail demand response resource from bidding the demand response load from those same retail participants into the CAISO markets outside of the context of the retail program? If so, what are these restrictions, and how if at all should they be modified? Please provide specific proposals for modifying these rules, if necessary.





Staff Question #6 (cont.)

- Answer:
 - The IOUs argue that DR resources should be limited to one SC per customer. Attempts to have more than one SC per customer account would create insurmountable communications and measurement issues. SDG&E notes that tariff changes would be needed if this is to be attempted, while SCE asserts that there should be rules in place so that IOUs will receive the benefit of capacity programs, this includes prohibiting them from dual participation in ISO markets when not in use by SCE.
 - The CAISO states that dual participation in programs triggered by the CAISO and IOU programs presents numerous issues. The CAISO also states that dual participation is inconsistent with CAISO's PDR product. The CAISO anticipates retail programs conforming with PDR.





Staff Question #6 (cont.)

- Answer (cont.):
 - Joint Parties are unaware of restrictions that would prevent the use of IOU program resources in the CAISO market when not in use by the IOUs (though specific contracts may differ)
 - CLECA is concerned that the Dual Participation policy adopted in D.09-08-027 creates problems for accounting for DR resources on CPP and enrolled in IOUs programs that bid into the CAISO market. CLECA is also concerned about over-procurement of energy.





Staff Question #8

- Question: Should the same retail demand response resource be permitted to participate in an IOU program and the CAISO market if it is providing a different product (energy or capacity) for the IOU than it is for the CAISO? Why or why not? Please explain your answer.





Staff Question #8 (cont)

- Answer
 - The CAISO is concerned about the type of dual participation that is being considered. Resources should not be trying to participate in CPUC retail programs and CAISO energy or AS markets. Bids into the CAISO AS market must be supported by a supporting energy bid.
 - CLECA states that the same load cannot provide both energy and AS in the CAISO market.





Staff Question #8 (cont)

- Answer (cont.):
 - SDG&E is concerned about the level of communications that would need to occur for a resource to participate in and IOU program and ISO market. While SCE believes that the IOUs should have the priority to receive that benefits of their capacity programs and it should not be possible to submit multiple bids from the same resource into the CAISO market. PG&E states that DR resources should not be able to participate in the ISO through another DRP.
 - Joint Parties believe that dual participation in IOU programs and then the CAISO market through multiple DRPs would be appropriate under certain conditions. Joint Parties recommend establishing a matrix of compatible programs and an appropriate hierarchy of programs.





Wrap up of Dual Participation

Issues Resolved	Resolution





Wrap up of Dual Participation

Remaining Issues	Time to Resolve	Method to Resolve





Issues Regarding IOU and DRP Communications and Settlement Issues





Staff Question #7

- Question: If an IOU or other demand response provider is allowed to bid demand response load that is also part of a retail demand response program into the CAISO markets outside the context of the existing retail program on non-event days, what information flow is necessary between the IOU, the demand response service providers (if any) and the customer providing the load drop to ensure transparency in the process? Please provide specific information-flow proposals that include the information each party would need to make such transactions possible, and methods for ensuring that those communications are successful.





Staff Question #7 (cont.)

- Answer:
 - SDG&E also expresses concerns regarding the necessary communications infrastructure and the roles of each party. SCE states that dual participation would require the CAISO to measure which program has provided the DR during concurrent hours and asserts that this type of dual participation is not feasible. PG&E states that dual participation utilizing multiple DRPs, then there would need to be information exchange between both DRPs regarding bidding behavior and the IOUs would need historical data for regulatory requirements.
 - Joint Parties are concerned that IOU approval could act as a barrier to CAISO market participation by other DRPs. They recommend that IOUs be informed, but not have approval authority. Joint parties support the information flow model proposed by the CAISO, except for the IOU approval requirement.





Staff Question #9

- Question: What types of settlements and communication problems may arise in California due to the implementation of direct participation?





Staff Question #9 (cont.)

- Answer:
 - SCE is concerned that there may be issues with inaccurate baselines and the potential confusion regarding whether a resource will participate in wholesale market or retail program, leading to double payment. While SDG&E is concerned that poor communications will lead to increased forecasting error. PG&E advocates for a standardized contract that DRPs and IOUs sign to account for energy purchased but not used. PG&E also asserts that limiting DR resources to one DRP would reduce issues.
 - Joint Parties assert that the CAISO will readjust the IOUs schedule, and this eliminates any compensation from the CAISO to the IOUs. Joint Parties are concerned that secondary settlement agreements may act as a barrier to DRPs (costly negotiations and compensation).





Staff Question #9 (cont.)

- Answers (cont.):
 - AREM states that there will need to be an exchange of information between DRPs, IOUs, and ESPs in order to complete settlements and performance assessment and believes the CPUC should require IOUs to provide this information to ESPs.
 - The CAISO also believes that the CPUC must address the principle of a DR resource “cannot sell what it does not own,” resolving issues of compensation between IOUs and DRPs. This will prevent IOUs from attempting to alter schedules to account for DRPs.
 - CLECA is concerned about a single DR resources attempting to provide more than one DR service, stating there will be difficulty parsing out performance, potentially using different baselines.





Staff Question #15

- Question: Given the CPUC's adopted baseline, does the CAISO proposed baseline directly or indirectly affect the efficacy of the CPUC's retail programs, for example, by creating gaming or double payment opportunities? Please describe any gaming or double payment opportunities in detail.





Staff Question #15 (cont.)

- Answer:
 - The CAISO believes that event day information coordination information is necessary, but extremely challenging.
 - All parties seem to agree that the opportunity for gaming the difference between the CAISO baseline and the CPUC baseline is negligible. Also, all parties seem to agree that the difference is unlikely to negatively impact CPUC retail programs

DRAFT





Staff Question #16

- Question: If the difference between the two baselines creates opportunities for gaming or double payment, should the CPUC adopt rules to address or minimize such opportunities? If so, please propose specific rules or actions that would address these concerns.
- Answer: DRA suggests the CPUC adopt the same baseline as the CAISO. All other parties seem to agree that CPUC need not take additional action on this point.





Staff Question #17

- Question: What process should the CPUC use to determine the reasonableness of the bilateral contracts and agreements reached between CPUC jurisdictional Load Serving Entities and wholesale Demand Response providers? Should the current application process for approval of contracts apply to settlement agreements, or is a streamlined process appropriate?
- Answer: PG&E supports a standard tariff and contract and submit to the CPUC as a Tier 1 Advice Letter. SDG&E concurs that the current process is too lengthy and could be streamlined. SCE is content with the current process. SCE does not envision entering into other contracts with DRPs, instead, suggesting the CPUC adopt tariff language to manage this relationship. Joint Parties also support the use of a standardized contract.





Wrap up of IOU and DRP Communications and Settlement Issues

Issues Resolved	Resolution

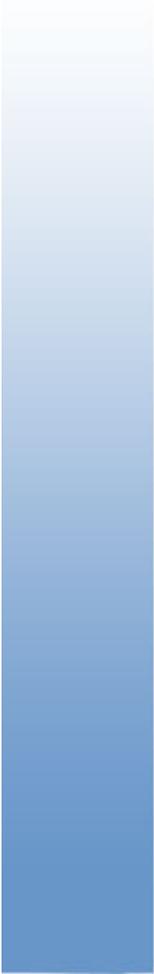
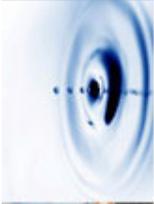




Wrap up of IOU and DRP Communications and Settlement Issues

Remaining Issues	Time to Resolve	Method to Resolve





Overflow Questions

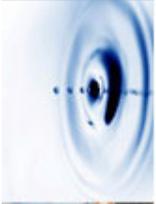




Overflow Questions

□ ????





Discussion of Implementation Plan





Implementation Timeline

- Two approaches
 - Counting out
 - Sum the time frame by which each objective can be achieved. For example, we can achieve Goal A in 3 months and Goal B in 2 months, therefore we can be ready in 5 months
 - Counting back
 - Set the time by which end goal must be achieved, and count back. For example, we need to be ready in 5 months, therefore we budget ^{DRAFT}2 months to Goal B leaving 3 months for Goal A.





Objectives to Achieve: Counting Forward

- Address jurisdictional issues
- Dual Participation issues
- Communications and settlements
- Others
- Final project completion





Objectives to Achieve: Counting Backwards

- Final project completion: ???
- Address jurisdictional issues
- Dual Participation issues
- Communications and settlements
- Others



Exhibit A-4
PG&E Presentation

PG&E Opening Comments
DR OIR R.07-01-041
Direct Participation in CAISO
Market

Ken Abreu
Principal Regulatory Analyst
Demand Response
December 16, 2009

PG&E Main Points

1. CPUC needs to be clear that no direct participation, until CPUC rules in place.
 2. One DRP per service account
 3. Have a standard contract between LSE and DRP
 4. Need a plan going forward to accommodate the significant transition time and effort needed
-

One DRP per Service Account

- ❑ Not complete agreement on this point
 - ❑ Costs and risks of dual participation are the issues
 - ❑ Some day, one DRP rule may be revisited
 - ❑ But this should not be a priority for the initial roll out of PDR
-

Money to LSE from DRP or retail customer

- ❑ PG&E's initial analysis is to have the LSE obtain \$'s from the DRP
 - ❑ This would seem the least complex and costly way to go
 - ❑ But we are open to looking at other options
 - ❑ Tariff changes will be needed in either case
-

Possible Next steps

- ❑ Lots of complexities that will take time to work out
 - ❑ Need a separate process to address the LSE repayment issue (standard contract and/or tariff changes)
 - ❑ RA issues need to be addressed in RA process
 - ❑ It is important to take the time to do this right.
-

Exhibit A-5
EnerNOC Presentation



Get More From Energy

**Multiple Participation of DR Resources
Wholesale Markets & Retail Programs
CPUC Workshop R,07-01-041**

Mona Tierney-Lloyd

December 16, 2009

Agenda

- CPUC Decision Re: Dual Participation
- Overview of Current Retail Programs
- Wholesale Market
 - FERC Order 719
 - CAISO PDR
- Examples of Wholesale/Retail Participation
- Proposal for Discussion

CPUC Policy Regarding Dual Participation D.09-08-027

- Participation in more than one demand response program may provide flexibility to customers and expand their ability to respond to the varying conditions that trigger demand response.
- However, guidelines must be adopted that prevent double payment for a single load drop, even when that load drop is made by a customer enrolled in two programs with simultaneously called events.
- Allow for participation in one energy and one capacity program, so long as if an event is called simultaneously in both programs, the customer will only receive a payment under the capacity program.
- CPP is considered an energy program.

Current Status of DR

- Plethora of utility programs
 - Emergency-triggered (BIP, A/C Cycling, Ag Pumping)
 - Energy Program (Price triggered)
 - Voluntary
 - Day-Ahead, Day-Of
 - Temperature, Price Volatility
 - CPP
 - DBP
 - RTP
 - Capacity Programs (with energy payment)
 - Day-Ahead, Day-Of
 - Triggers vary
 - CBP
 - AMP (limited number of hours)
- Currently, no 10 minute response programs, no ancillary service value

FERC Order 719

- Absent an order from the relevant electric retail regulatory authority prohibiting it, RTOs/ISOs shall develop rules to permit aggregation of retail customers (ARCs), representing demand response resources, to participate directly in wholesale electricity markets en par with generation.
- CAISO has submitted a compliance filing and is working toward a mid-January 2010 filing of the Proxy Demand Resource (PDR) proposal

Proxy Demand Resource (PDR)

- Pending Approval by FERC in 2010 Demand Resources Can Submit Bids To Provide Energy to CAISO in DA and RT Markets
- Discussed Expansion to Include Ancillary Services
 - CAISO files at FERC in March 2010
- Currently, no definition around qualifying DR as a RA-eligible resource in CAISO that can be transacted bilaterally.
 - Absent the ability to receive capacity value recognition in wholesale transactions, retail programs that have a capacity component will be preferred by DR aggregators
 - However, customers that participate in retail programs may be able to participate in PDR, if not otherwise committed to the retail program.

Examples of Wholesale & Retail Program Overlap

- Burlington Electric
 - DR resources which participate in ISO-NE programs (receive a capacity payment for a certain number of hours of reservation per year plus energy payments) receive an incremental capacity payment from Burlington Electric for additional hours of availability beyond the hours committed to ISO-NE.
- Consolidated Edison
 - ConEd pays for an additional reservation of capacity for hours beyond hours committed to NYISO. In both programs, the DR resource receives a capacity payment and an energy payment, when an event is called.
- PA, NJ, MD all have supplemental DR programs to PJM programs

Proposals for Discussion Re: Dual/Multiple Participation

- Customers May Participate in One Retail Capacity and One Energy or A/S Program (Retail or Wholesale):
 - Capacity Programs
 - CBP/AMP
 - Energy Programs
 - CPP/DBP/RTP/CAISO PDR
 - If CBP/AMP event is called simultaneous with an energy program (or the acceptance of an energy bid in CAISO), payment will come from capacity program and the customer must withdraw its bid from CAISO.
 - May have separate DRPs for energy/capacity programs
- Customer May Participate in Two Capacity Programs:
 - If the resource has the ability to offer additional hours beyond the current commitment:
 - If a resource is already committed to an IOU program, IOU events must take precedence. A DR resource could offer resource availability hours in excess of those committed to the IOU program OR:
 - If the resource is committed during summer-only, may offer winter availability

Proposals for Discussion of Dual/Multiple Participation

- Customers may participate in two energy programs
 - CPP/PDP/DBP
 - PDR
- Customers may participate in retail energy program and provide ancillary services through (PDR)
 - Not simultaneously

Considerations

- Preserve value of existing programs
- No double payments
- DR is real
- Determination on how supplemental programs interact with existing programs
 - Develop rules for simultaneous events in multiple programs
 - ISO reliability programs vs. IOU reliability programs
 - Reliability programs vs. economic
 - Day-Ahead vs. Day-Of
 - Mandatory vs. Voluntary
 - Adjust baseline calculation for multiple events within an event window
 - Communication of event participation
- Who gets the credit for RA associated with DR



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Exhibit B
Day Two Report

**R07-01-041 Direct Participation Phase Workshop
Demand Response OIR Phase 4 Workshop
Day Two Report**

Introduction

Karl Meeusen - Energy Division

Welcome – Today will be a deeper dive into direct participation and the technical issues associated with it.

Objectives:

- Pin down feasibility timeframe what can we realistic accomplish
- Try to workable solution that allow parties to work out issues to assist the CPUC decision making process

Any Questions from yesterday? None

**Settlement Agreements and IOU/CSP Interaction
Presentations from EnerNOC, SCE, and PG&E on Question of Compensation between
Demand Response Provider and Load Serving Entities**

EnerNOC Presentation

Acknowledged that some presentation content is not new but wants to make sure that it is on the record

Introduction

- Missing Money or Double Payment
 - If the CAISO pays LSE for uninstructed energy and the DRP for demand reduction, it pays for same MW twice
- PDR solves Double Payment problem for CAISO but creates a need for settlement between LSE and DRP
- Solution could be a negotiated settlement between the LSE and DRP or a standardized contract approved by the CPUC

Solutions in other markets:

Uplifts to benefiting customers when the LMP is less than what it would have been without the DR (System wide for ISO NE, Local NYISO)

Net economic benefit – since the LSE loses the revenue associated with retail sale they receive the retail rate and the DRP receives the LMP less the reimbursement paid to the LSE (PJM model)

EnerNOC presentation included an example to show how the LSE ends up over procuring energy when the CAISO applies the DRP performance adjustment to the meter read.

EnerNOC is concerned that without a standard agreement, DRPs would have to negotiate separate settlement agreements with each LSE prior to offering DR services and depending on the position of the LSE regarding compensation when negotiating separate agreements the expected compensation may render direct participation uneconomic and discourage demand response participation.

Discussion

EnerNOC was pressed to confirm if they thought the LSE was entitled to a payment by the DRP. EnerNOC responded that in general yes, but an equitable level of compensation should be determined. In other markets, before the DR is paid full LMP, the DR is expected to provide a “net benefit” to the system by its participation. This would result in a lower market clearing price than if DR had not participated. Therefore, while looking at cost recovery it is important to examine benefits as well.

Since the payback method between the DRP and LSE could be contentious, several parties advocated that the CPUC approve a standard contract rather than bilaterally negotiate compensation. For IOU bundled customers, the question was raised whether reimbursement should be tied to retail rate? EnerNOC is looking for some direction/endorsement/guideline from PUC as to what would be appropriate.

Question regarding the interaction between DRP and Direct Access LSE. Since there already might be a contract between ESP and customer, AReM/DACC doesn't want the CPUC to dictate what they have in their contract with customer, stating that it should be up to the ESP and the customer. An unidentified party stated that “If the utility is the DRP and it is a utility program there might be a reason for the PUC to be involved

PG&E Presentation

PG&E performed an initial comparison of a LSE –customer tariff versus a standard contract and advocates for the standard contract. The standard contract would pay back what was “lost” by the LSE in the CAISO market at CAISO market prices. PG&E asserts that benefits of a standard contract are:

- Lower overhead costs for all parties
- Transparent settlement
- Efficient for third party DRPs to sign up customers

PG&E believes that key issues for a standard contract are the settlement calculation, repayment method and credit requirements

LSE –DRP settlement formula: PG&E proposes that the DRP repays the LSE at the Hourly DA DLAP price for energy not used due to DR. Due to differences between CLAP and DLAP prices, the DRP could end up with more or less money from the CAISO than it repays to the LSE

PG&E states that a standard inter-Scheduling Coordinator trade mechanism could reduce DRP credit requirements. Another possibility for DRP-LSE settlement suggested by PG&E is a mechanism for the DRP to instruct the CAISO to redirect funds from the DRP to the LSE.

PG&E states that a credit requirement for DRP should cover the DRP to LSE obligation to assure performance in case of a default.

Discussion

Energy Division questioned if a one size fits all contract would be appropriate due to the different types of DR. PG&E responded that the repayment amount proposed is what the LSE is charged by the CAISO and the repayment amount is independent of the DR type or program. PG&E explained that monies paid to a customer service account that participates in a DR program are independent of the monies paid from the CAISO to the DRP for the performance of the customer service account in the PDR product.

Sue Mara of AReM/DACC asked if the standard contract would apply to the case where the DRP is the Utility and the customer is Direct Access. She pointed out that there is already a contract between the ESP and Utility that governs ESP operations in the Utility service area. Also, the ESP will settle directly with the direct access customer and therefore has no need for a standard contract. She also stated that a lot of concerns about the Utility being the DRP come down to information needed from the Utility so that the ESP can settle with its customer

EnerNOC asked how the standard contract would be determined. Would the CPUC adopt a standard contract?

EnerNOC commented that just reimbursing the LSE at the DA price doesn't necessary complete the picture and that other jurisdictions look at lost revenue from customers. EnerNOC asserted that if you pay LMP the customer double benefits because they didn't pay retail plus they would get the ISO price and that repayment price could be based on the Utility lost revenue similar to the PJM method which looks at both the retail and wholesale prices.

PG&E made the point that the CPUC has jurisdiction over the retail sale of DR into the CAISO market. EnerNOC indicated that compensation such as whether or not a DR resource is paid LMP or LMP minus retail could be an issue with FERC.

Slide 4 of PG&E's presentation - Credit issues could be managed through the use the CAISO Inter-Scheduling Coordinator Trade. Day Ahead DR results for the DRP wouldn't be known until after the Day Ahead trade deadline.

Slide 5 of PG&E's presentation: Issues regarding contract terms

Energy Division asked if the same issues present themselves outside of PDR, e.g. Participating Load. PG&E indicates that the contract would only be for PDR as PL does not now allow for the DRP to be separate from the LSE.

SCE – Participation Load doesn't have the issue since there is no direct participation under the current rules so the DRP and the LSE are the same entity.

PG&E – Standard contract is better than the LSE trying to get money back from the customer since they don't know what the arrangements between the customer and the DRP are.

An identified audience member asked if the parties could agree on the settlement/payment method, could the administration be migrated to the CAISO to be included in settlement statements. CAISO responded that it is okay to use an existing mechanism such as the Inter-Scheduling Coordinator Trade which is included in settlement statements but it won't build additional settlement processes to facilitate payment mechanism between LSE and DRP.

SCE Presentation

Overview of SCE Opening Comments:

- CPUC has a role in ensuring protections for consumers from DRPs operating in the IOUs' service areas
- CPUC should allow for sufficient time for a thorough vetting of the issues and more time should be devoted to it, to ensure we get it right
- Processes and rules will be needed to govern the relationships and financial transactions among the market participants as well as access to customer information
- IOUs need a means of recovering from customer or its DRP the cost of energy procured to serve load of customer that is subsequently bid into CAISO market.
- SCE DR Contracts prohibit the aggregators from selling the DR Resources under the contracts to any third parties
- Per CAISO requirements, a service account can participate in only one PDR, and the CAISO needs to enforce this mechanism
- SCE not opposed to dual participation but this involves many administrative complexities that should be addressed only after parties have the rules and experience in direct bidding in the CAISO markets without dual participation
- The different baselines adopted for CPUC and PDR do not pose any additional gaming opportunities

SCE advocates taking sufficient time to resolve the following issues before direct bidding can begin:

- Rules governing the IOUs' relationship with customer and third-party DRPs bidding load into the CAISO markets
- The CPUC's role in supervising the conduct of DRPs bidding DR into the CAISO markets
- Services needed/desired from IOUs to facilitate DRP bidding into CAISO markets
- Recovery by IOUs (and other LSEs) of costs of energy procured to serve customer load subsequently bid into the CAISO market by another DRP
- IOU tariff changes needed to support direct bidding into the CAISO markets
- Consumer protection requirements for DRPs operating in IOU service areas

- Dual participation rules for customer service accounts to participate in retail IOU DR programs and CAISO markets can be implemented after the parties have had experience with direct bidding in absence of any dual participation

SCE is likely the biggest initial DRP. Some DRP customers are bundled (SCE served), and some are Direct Access. The question for SCE as the LSE is, “What is SCE’s purpose for participating in the wholesale market as an LSE in the wholesale market? SCE states “to serve the retail customer”. Therefore, SCE asserts it is a risk management issue of how serve load at wholesale costs and collect retail revenue for its LSE retail customers. SCE doesn’t necessarily consider compensation at the wholesale rate, to satisfy the compensation requirement of the retail rate. Can SCE collect retail energy based on the metered load and the measured DR in wholesale?

So using the CAISO PDR example (LSE forecasts and schedules 100 MW of demand and the DRP bids in 10 MW in Day Ahead, 5 MW in Real time and the CAISO calculates that 14 MW performed), SCE states if they can recover the 86MW on the meter and the 14 MW based on the CAISO DR participation then it would be whole for the 100 MW it procured on behalf of its customer(s).

Discussion

PG&E indicated that they see this as the customer paying for something that it didn’t use and wondered if the customer would be billed directly for the DR amount in addition to the meter quantity?

SCE responded affirmatively, that since the customer decided to be a part of the demand response product, they should bear some of the risk.

PG&E was concerned that the administrative cost would be high for directly billing each customer.

Energy Division sought clarification that the DRP would be pay the customer for the 14MW of DR participation. SCE confirmed that this was the case.

PG&E expressed concerned that the “pay for what you didn’t consume” concept is a ‘tough sell’.

Energy Division noted that when the DRP is different than the LSE, it might not be clear to the customer what is happening.

CPUC Policy and Planning Division Question: Would you propose to use the same mechanism for Critical Peak Pricing? SCE responded “no”, because the LSE doesn’t know not to procure the MW that will be curtailed in PDR. And it doesn’t matter if the PDR is bid in by a third party DRP or by the SC representing the LSE since you don’t know what the DR award is until the CAISO publishes market results.

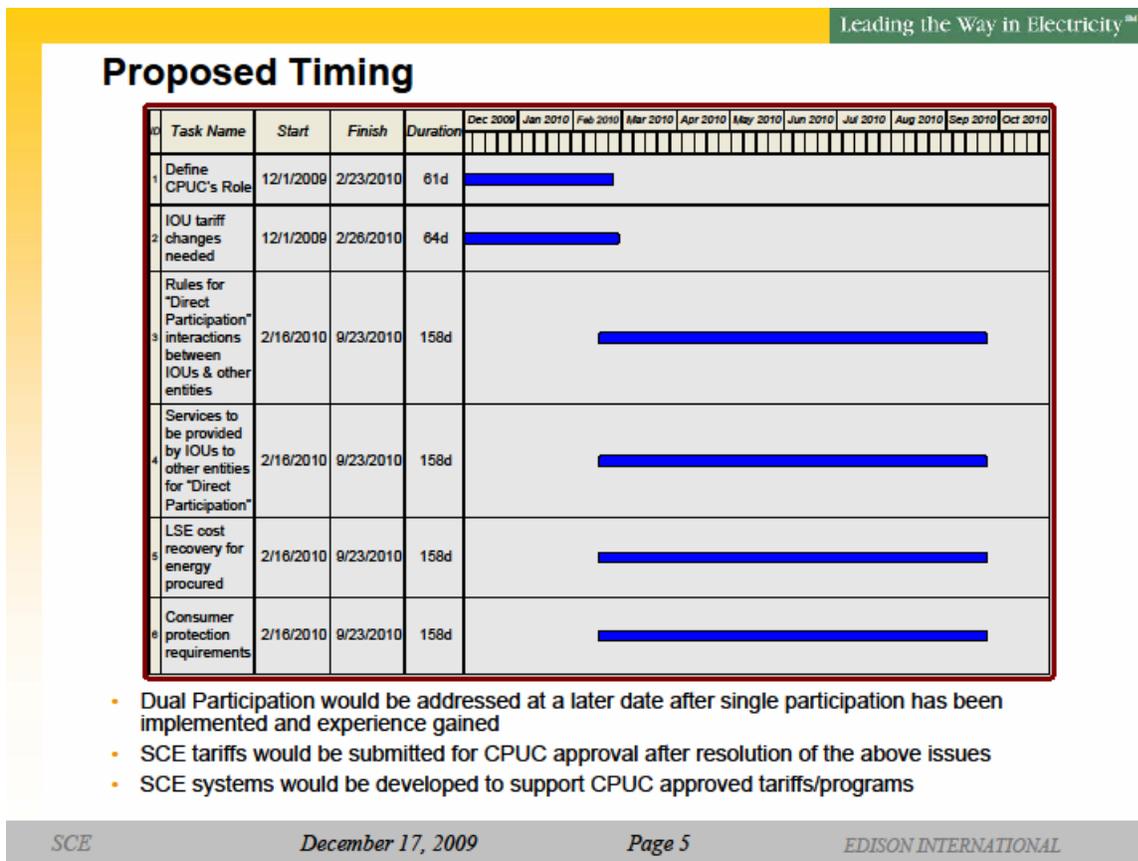
CPUC Policy and Planning Division asked in follow-up regarding CPP, “What does the customer see on the bill?”

SCE indicated that for CPP they don't procure the full 100 MW in Day Ahead market so there isn't the issue of buying the extra 14 MW that is curtailed in DR. Energy charge is separate on the bill.

EnerNOC asked SCE what rate would be charged to the customer since SCE seeks to recover the cost for what they procured on behalf of the customer. SCE indicated that –the customer would be charged at their retail rate

Energy Division asked for an elaboration on the second bullet of the third slide “CPUC should allow for sufficient time for a thorough vetting of the issues and more time should be devoted to it, to ensure we get it right.”

SCE responded with an identified timeline:



SCE's proposed timeline would push direct participation issue resolution to fall 2010 and the point being that you don't have to do a flash cut for direct participation like the cutover to MRTU where everyone had to go at once.

Energy Division Question: Is SCE suggesting that nobody uses PDR until all things are settled out per the proposed timeframe? SCE responded “Yes, don’t let the IOUs in first w/o others direct participation, and everyone gets in at once”.

CAISO asked if SCE envisioned that the CPUC would bar retail from participation until the issues are fully vetted and resolved on the proposed timeline.

PG&E asked why the commission won’t say clearly that nobody can go until the rules are made.

CAISO: Addressing issues in FERC Order 719-A, for larger load serving entities the presumption in the FERC Order is that direct participation of DR resources is eligible unless an explicit directive from the local regulatory authority bars participation in the wholesale market.

SCE’s conclusion was that once the retail infrastructure is in place all parties could begin participation at the same time. PG&E seems to support SCE’s proposed timeline. This delay would avoid the perception of a competitive advantage for the IOUs.

CAISO clarified that in this scenario, participation in spring 2010 would only be for Direct Access and ESPs.

DRA stated that lost revenues are accounted for in balancing account treatment.

Staff Question #9

What types of settlement and communication problems may arise in California due to the implementation of direct participation?

Energy Division Opening Observations

SCE seems to have concerns regarding baseline inaccuracies, settlement issues and the need to negotiate contracts. There are concerns that there is not enough information flow and eliminating the perceived withholding of critical information is needed for a fair settlement

Discussion

CAISO received information from the vendor regarding how much information would come be available to the LSE. The new Demand Response System will have report/query features to allow an LSE to see which customers are in what PDRs

AReM/DACC asked if that was the enough information and that the group needs to identify what information is needed by the LSE to effect settlement

Energy Division suggested that the discussion focus on settlement agreement at this time.

PG&E noted that they have identified some of the key elements of a standardized contract in their attachment to their opening comments.

Ms. Mara of AReM/DACC reiterated that the ESPs don't need a contract with the IOUs and wouldn't necessarily be bound by standardized contract

Energy Division asked what might be objectionable in the proposed agreement. SCE responded that the notion of what is fair and reasonable for a standard contract might not apply to all participants equally, e.g. concerned that different customers pay different rates. The standard contract would provide compensation that does not reflect the obligation from each customer to their LSE.

CAISO asked if there could be a charge on the bill (based on retail rate) or a line item that would show on a customer bill that might show DR activity as proposed by SCE (charging the customer for their Demand Response activity. AReM/DACC pointed out that this could work for bundled but not for DA. EnerNOC asked if this would be a tariff item as proposed or just a line item. SCE said it would have to be tariff jurisdictional since they currently don't have the authority to charge for any unmetered service. EnerNOC asked and received clarification that the SCE proposal discussed in their presentation for was only for the energy component and didn't include T&D charges.

Discussion turned to what would happen when the LSE is the DRP. Would the LSE reduce their demand forecast for PDR? SCE indicated that the outcome of the market results of the PDR is not known so the demand forecast cannot be adjusted. What does clear in PDR will be credited to the customer and which is an offset the procured amount (metered plus DR performance). Energy Division asked how the value of the DR is determined for the customer and SCE points out that a contract can't have a set rate if it is tied to a wholesale price.

EnerNOC asked with tiered rates, how does the LSE and DRP know what block is being curtailed and therefore what the compensation should be (the charge back rate)? Energy Division pointed out that one could argue that the PG&E proposal presents a reasonable representation of the service cost due to the CAISO market price. EnerNOC suggested that determining lost revenue is the better mechanism, but acknowledges it can get complex

PG&E questioned who bears the burden of the cost? PG&E proposal utilizes a representative supply cost; SCE uses rates Energy Division asked which method provides the incentive to bid in demand. EnerNOC responded that the CLAP price sends the signal and motivation but would need to know what the take away payment is going to be, e.g. the difference between the DLAP and the CLAP, at least with the retail rate you know what the deduction is. PG&E pointed out that with their proposal that uses the DLAP hourly price there is a time sensitive component built in and the CLAP minus DLAP concept would always encourage the correct market behavior of DRPs bidding in DR at high priced Pnodes, something that the use of a retail rate would inherently not have.

DRA asked when the Utility is the DRP it does not have to over procure for its customers participating in PDR, but if a third party is the DRP it has to absorb the cost of Utility over procurement,- how it wouldn't disincent participation by third party DRPs?.

Laurie Wiegand Jackson of NAPP asked who gets the value of the DR performance. e.g. ultimately the price at the DLAP might be lessened or the utility net gen cost due to contracting offsets could be lower.

Next Steps

Energy Division: Could the parties get into a room and work out what method would work to reimburse the LSE? SCE suggested that the parties are quite a ways apart on the issues while EnerNOC and others felt that there is agreement in principle and parties were not too far apart.

Energy Division: Asked if the issues are narrowed down to a small enough set of options or even if it is not, are there positions that parties won't move off of it? PG&E indicates that first they need direction from the Commission as to which method should be used to cement an agreement. Parties need to figure out the method, A (DA price), B (charge for procured amount) or C (NY model). Energy Division - it looks like parties see 3 options from which they could work. SCE asked what the expected methodology by the Commission; settlement? workshop? or bilaterally between the parties own?

ACTION: Energy Division will seek input from ALJ.

Energy Division: How long might it take to work through the options? SCE responded that it depends on what the rules are and how the information will flow and need to know those first.

Energy Division's summary indicated that there appears to be three options for reimbursement for compensation for power purchased and not used. Parties were again asked how long they would need to resolve this matter. Several parties thought it would be approximately nine months absent an edict from commission. Energy Division responded that the Commission doesn't want to dictate something infeasible or be put in that position. Parties asked for clarification as to whether the Energy Division is asking for a working group to further explore what method would work best? Energy Division committed to asking for direction from ALJ(s) regarding what type of forum is appropriate.

Answers to Procedural Questions

ALJ Hecht joined the workshop.

Discussion of Formal –v- Informal Settlement.

ALJ Hecht indicated that informal settlement moves to a joint filing by the parties.

Formal settlement requires conference and full notice to service list

In the alternative the PUC could assign a mediator to the parties from the ALJ branch

The Parties asked what would happen if they don't do anything, what would the commission do? ALJ Hecht indicated that the Commission needs to review the record, e.g, reports prior to making a ruling.

AReM/DACC : Is there a difference between a joint filing out of an informal process and using the formal process? ALJ Hecht indicated that a formal process does have the mechanisms to get the item on the record. Certain things need to be done to assure that it is in the record via the informal process. Both are necessary for the ALJ/and the commission to consider the result.

The Parties asked who decides what method we choose to vet the issue and when?
ALJ Hecht responded that this is the Parties decision but they need to decide soon.

SCE: We aren't that far apart on the options but seek to better understand the alternatives and it is very technical so a mediator may not be necessary or appropriate

ALJ Hecht offered that the Commission could provide guided facilitation services if that is a better fit.

Internal and External Deadlines

ALJ Hecht: Development of good information via settlement is reasonable for delaying other parts of the proceeding. The decisions might be separable so until the comments are absorbed, hard to say if it is doable. We will stick with current schedule in the absence of a compelling reason to delay/extend. It is up to the parties to ask for additional time.

EnerNoc asked if the facilitator added value when there is a complex technical issue.

ALJ Hecht response was that as much as anything they can move the process along and keep it on track

Continuation of Question 9 Discussion

Energy Division: What types of settlement and communication problems may arise in California due to the implementation of direct participation?

What does the LSE/ESP need from the DRP?

AReM/DACC– for each *customer* in a PDR and received timely:

- what interval the bid cleared
- the amount and quantity of the cleared bid
- the performance amount
- the performance amount

CAISO stated that it can't provide at the customer level only at the PDR level

SCE:

- Need to know what the PDR performance was
- Need a recalculation of the baseline (third party verification)
- No need for bid amount, After the Fact information should be sufficient.

AReM/DACC : Timing of receiving the information is critical. Might be ok to do it within the CAISO settlement timeframe under the payment acceleration, but it can't drag on for months

PG&E:

- When the customer is enrolled
- When an event was called – a function of receiving the CAISO performance information

SCE suggested that a matrix of the timing and the flow of the information need to be developed

SDGE: Less information is needed assuming that dual participation doesn't factor in.

Energy Division sought clarification regarding which form of dual participation; Aggregators continuing to bid demand that they already have contracts for or multiple DRPs representing a single customer? A general response from the participants indicated that both although there are varying levels of complexity which can be exponentially different. Energy Division asked if we identify the point at which managing the information becomes impractical?

AReM/DACC: From the LSE/ESP perspective a single customer can be bidding multiple products (DA, HA, AS) which adds the number of intervals and makes it difficult to figure out what settlement goes to each product

SCE: Assumption was that the information would flow from the CAISO and it was sorting it out and SCE could pass it through (at least the settlement requirement). Confusion reigns if a single Service Account is associated with more than one PDR causing the settlement adjusted to exceed that associated with the response. Assume that the data has been validated, e.g. if a resource shows up in more than on PDR the CAISO registration process would have prevented that. Clarification is needed as to how the CAISO DR system notifies LSE/UDC when customer location is switching from one DRP to another, i.e. "prevent" may not be the appropriate term.

SDGE felt that the next set of comments should seek to be more concise in what data requirements there are for specific issues, e.g. multiple products versus multiple participation. The timing of information and requirements in the registration process is key.

NAPP stated that there is a need for better definition of dual/multiple participation. I.e. multiple utility programs, multiple products and multiple representations. PG&E indicated that a single entity is managing the multiple programs within the utility. When you introduce the third party, the LSE loses control over the management.

Energy Division: Does anyone really have a handle on it? PG&E - It is transparent to wholesale operations, the different programs look like separate resources, and in some cases PG&E pushes the button or lets the aggregator know to curtail. SCE – We have a method to establish priorities for DR programs/products; capacity first, energy second. At the CAISO level, they are aggregated and the CAISO triggers and decisions are not necessarily aligned with the retail program

NAPP asked that if SCE isn't using it, can they let the aggregator know when a customer is available for their use. SCE indicated that this is challenging to do since all the bids are due to the market at the same time. When interfacing with the CAISO market you can put in merit

order bids, but can't tell the CAISO to pick Program A over Program B. Other limitation is CAISO "one customer one meter" paradigm

PG&E: Not only is there the need to coordinate daily use, need to note number of times that a customer is called in a season. Also need to know when a program is called for the purposes of adjusting baseline for their settlement.

SDGE: Need to educate within the utility between the retail and wholesale departments. We have some educational material. Energy Division asked that it could be provided. There were no objections from SDG&E who will distribute.

What does the DRP need from the LSE/ESP?

EnerNOC: Who's actually eligible?

- Registration process allows the LSE to confirm participation
- Accepted bids confirm eligibility
- Settlement requirements

Need to confirm or reconcile the performance number

AReM: CAISO cannot provide customer-specific information on bids to the LSE – confirmed by CAISO. CAISO receives information aggregated at the PDR level. The CAISO indicated that individual customer locations/service accounts are registered in the CAISO's DR System, but the "performance" of underlying customers that make up a Proxy Demand Resource are not explicitly tracked, i.e. meter data is aggregated up to, what the CAISO terms, the "registration" level.

CAISO pointed to the PDR Implementation Plan for elements required in the regulatory process, SCE purports that at this point it is only a policy regarding what the actual requirements might eventually be. They could change with the development of implementation details or Business Process Manuals

AReM/DACC: If a DRP bids both DA and RT at the same PDR does the ISO separate it out deviations in the UIE? CAISO response: No UIE is UIE; scheduled compared to metered

Staff Questions 15 and 16 – Baselines

Given the CPUC's adopted baseline, does the CAISO proposed baseline directly or indirectly affect the efficacy of the CPUC's retail programs, for example, by creating gaming or double payment opportunities? Please describe any gaming or double payment opportunities in detail.

If the difference between the two baselines creates opportunities for gaming or double payment, should the CPUC adopt rules to address or minimize such opportunities? If so, please propose specific rules or actions that would address these concerns.

Discussion

CAISO - The CAISO eliminates PDR events in its baseline calculation. SLIC allows for some other information to be considered for tossing out. Energy Division – Could SLIC be used for recording non PDR events? The CAISO responded by stating that in part it could, but it would be limited to conforming to standard reasons. CAISO will enforce text fields in SLIC to assure adequate information and no non-legitimate reasons would be included to inflate baselines.

There has to be significant information coordination between the LSE and DRPs who own the PDR so that a non PDR event day can be removed from the 45 day baseline calc.

Energy Division: What if there are non PDR event days? If half of the customers are in one program and half on another, do you have to look a coincidental non PDR days to establish the baseline?

CAISO: The CAISO baseline calculation is coincidental; any registration that has an event during the 45 day period will be removed from the baseline calculation.

Energy Division: Other dual participation issues that could affect baselines:

How does the LSE adjust the baseline with customers who might have been curtailed on another program? At the retail level, the LSE can pull out other program event days when calculating baselines. But they may not have the information from the DRPs when there is a PDR event.

What about PDR events impacting LSE program baselines? It seems that as long as one customer can only be associated with one DRP and as long as the information comes back from the CAISO, LSEs should be able to make the adjustments or eliminate days in their baseline calc.

PG&E: Is it important if the baselines between the retail programs and the wholesale programs are the same? The different baselines are used for different purposes. Energy Division responded that they would seem to affect the determination of the value of the DR.

PG&E: The monies paid to customer service accounts that participate in a retail DR program do not have to be related at all to the monies paid to the DRP from the CAISO for participating with those customer service accounts in the CAISO wholesale markets. Both of these could also be unrelated to the value of that DR program. EnerNOC expressed concerns that there could be a difference between how the customer is treated by any agreement between the LSE and the DRP on how to true up. Which settlement methodology will be used, it has to be clear.

Parties discussed how baselines are used and what the make up is. Utility programs are at an aggregator or participant level, rather than at a program level.

Energy Division: When should/can data be made available? EnerNOC indicated that they can pass data in 5 to 10 days. LSEs say they can do it on the CAISO timeline (7 business days under

payment acceleration). Energy Division: It appears there is a reasonable consensus on the timeframe and the parties are reasonably close to agreement.

Data Exchange Implementation Timelines/Timeframes?

Discussion

Energy Division: How long does it take to implement the processes?

SDGE indicated that for internal and independent systems it can be fairly involved and is not a quick two week process. At least a couple of months to define requirements and the actual development can take a number of months. The timeframe is impacted by other IT priorities, MRTU, metering. SCE indicated that it takes one year after the requirements are defined to put into production (so six to nine months for the Commission to approve and then a year from then). Also, with external interfaces (exchanges between DRPs and LSEs) it could even be longer. PG&E plans to utilize some of its own bundled customers to participate in the CAISO markets for summer of 2010. PG&E stated that a potential, but aggressive, timeframe for third party DRPs utilizing PG&E's bundled customers in the CAISO markets would be to have the requirements by next fall with implementation completion by the summer of 2011.

AReM/DACC: If there are Direct Access (DA) non-utility program customers, can those customers participate directly or do the utilities have any requirements that would prevent their participation in summer 2010? SCE indicated probably not, unless the UDC is required to keep track of who the Direct Access DRP is. NAPP - UDC approval for PDR seems to be limited to assuring that the customer isn't enrolled in utility program and it seems like that process is already in place (DASR). Consensus by the parties that the PDR registration process should be sufficient to allow participation by DA customers in PDR for summer 2010

SCE asked for clarification for the summer of 2010; what is the process for the non participating LSE to approve or determine that a DRP isn't enrolling a Direct Access customer who is already in a Utility program?

EnerNOC asked why a DRP can't register a Bundled customer who is not on a utility program summer of 2010. SCE indicated that this was because we haven't figured out how to compensate the LSE yet.

Parties indicated that it isn't clear how the CAISO process will work and that there is some lag in the CAISO processing and approval process making it difficult to understand how the UDC will approve the registration in the summer of 2010.

NAPP: Can we come up with an interim process since it is now becoming clear that the IOUs won't be ready for 2010? PUC is there a DRP problem to enroll customers in a one year program knowing that it won't be the same when 2011 rolls around?

Overflow Items

Interim solutions
Role descriptions of parties
The implementation timeframe

ATTACHMENTS FOR DAY TWO REPORT

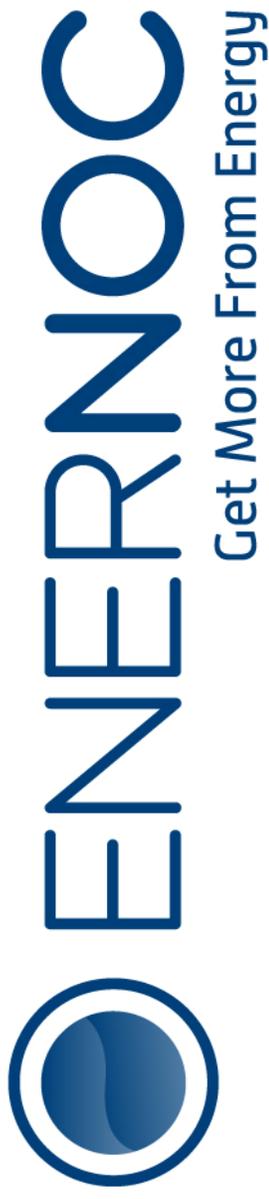
- B.1. Workshop Sign-In List – Day Two**
- B.2. EnerNOC Presentation**
- B.3. PG&E Presentation**
- B.4. SCE Presentation**

Exhibit B-1

Workshop Sign-In List

John Goodin	CAISO	jgoodin@caiso.com
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Exhibit B-2
EnerNOC Presentation



CPUC Direct Participation Workshop Compensation Issues

Melanie Gillette
Sr. Manager, Regulatory Affairs

December 17, 2009

Introduction

- “Missing Money” or “Double Payment”
 - Problem: If ISO pays for both uninstructed deviation (LSE) and demand reduction (CSP), the ISO is paying twice for the same MWs
 - Solutions in Eastern markets
- PDR solves “missing money” problem but creates the need for a settlement between LSEs and CSPs
- Potential solutions to PDR settlement issue
 - PDR Settlement Proposal – As Is
 - Net Economic Benefit Approach
 - Modifications to Net Economic Benefit Approach

“Missing Money” or “Double Payment” Problem (PJM, ISO-NE, NYISO)

LSE

- LSE submits a load bid for 100 MWs in DAM
- LSE’s metered load in RT is 80 MW
- LSE purchased 100 MWs, RT load is 80 MWs
- 20 MWs uninstructed deviation
- RTM clears at \$200/MW

CSP

- CSP submits a demand reduction bid for 20 MWs in DAM at \$150/MW
- DAM clears at \$200/MW
- Therefore, CSP bid is accepted

ISO

- ISO pays LSE for 20 MWs at \$200/MW
- ISO pays LSE \$4000 (uninstructed deviation)

ISO

- ISO pays CSP for 20 MWs at \$200/MW
- ISO pays CSP \$4000 (demand reduction)

“Missing Money” or “Double Payment” Solutions

Solutions:

- Uplift: To the extent that the demand response was economic (offsetting higher cost resources), then the LMP is less than it otherwise would have been and “benefitting” customers pay.
 - A System Benefit (ISO-NE)
 - A Local Benefit (NYISO)
- Net Economic Benefit: LSE lost the retail revenues associated with the demand response; therefore, the LSE receives the equivalent of the wholesale generation costs in retail rates (“G”) and the CSP receives LMP minus “G”
- Add info on PJM proposal Dynamic pricing tariff = \$75/Mwh

PDR Example

LSE

- Schedules 100 MWs to meet customer demand in day-ahead market

CSP

- Submits bid in DAM for 20 MWs of demand reduction
- ISO adjusts LSE's DA schedule by CSP cleared demand reduction bid (20 MWs)
- DAM clears at \$200/MW
- CSP is paid \$4000 by ISO
- LSE net DA load bid is 80 MWs
- Metered load is 80 MWs in real-time
- Real-time demand response reduction is 20 MWs
- No unobstructed deviation
- No unobstructed deviation
- No additional settlement with ISO
- No additional settlement with ISO

PDR Solves “Missing Money” Problem but Creates Settlement Issue

Settlement Issue:

- LSE schedules 100 MWs in DA for expected customer demand
- ISO adjusts LSE’s DA schedule to reflect cleared demand reduction bid from CSP
- LSE expects remuneration for 20 MWs of scheduled load for which no retail revenues will be received from either the customer or the CSP
- Without consistent agreement regarding reasonable compensation for LSE, CSPs would have to negotiate a separate settlement with each LSE prior to offering DR services
- Direct participation of CSPs in CAISO markets could be rendered uneconomic if LSEs wished to discourage such demand response participation

Potential Solutions to PDR Settlement Issue

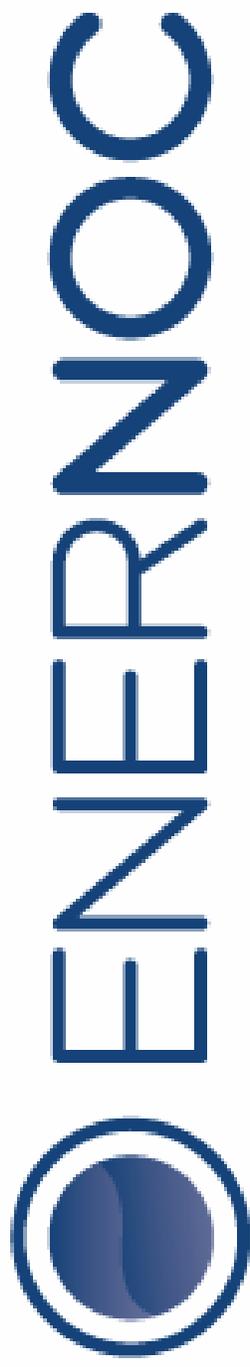
- **Negotiated Settlement**
 - Compensation is whatever CSPs and LSEs negotiate, assuming they can reach agreement
 - Advantage: Simplifies CAISO settlement process
 - Disadvantages:
 - No visibility into the appropriate settlement price
 - Requires separate, potentially dissimilar contracts with each LSE
 - Results in lack of conformity
 - Burdensome administrative process for CSPs
 - May be untenable for CSPs who are not LSEs
- **Compensation determined by CPUC under standard contract**
 - Recognition that ESPs may resolve this issue directly with customers
 - PUC determines what if any compensation is due the LSE by virtue of DR participation
 - Costs and benefits
 - Advantage: Uniform treatment for compensation
 - Disadvantage: Requires CPUC determination of compensation

Standard Contract Preferred to Negotiated Settlement

- Maintain existing framework of PDR where CSPs and LSEs settle outside CAISO settlement process, but on a standardized contract basis with known compensation to the LSE.
- DA customers have a contractual commitment to the ESPs. Some customers have an obligation to pay the ESP for energy scheduled on the customer's behalf. Therefore, the ESP would receive payment for difference between scheduled and metered energy from DA customer.
 - CSPs would have to work with DA customers for equivalent value proposition relative to bundled service customers
- IOUs do not currently have tariff language to recover lost revenues, if any, from DR customers who participate through CSPs.

DELETE SLIDE BUT USE INFO ON PREVIOUS SLIDE

- **Advantages:**
 - CAISO settles directly with CSP
 - Transparent standardized compensation mechanism approved by FERC/CPUC
 - Eliminates need to negotiate compensation with each LSE
 - Actual settlement outside CAISO process so no programming changes
 - No need for CAISO to know retail rates
- **Disadvantages**
 - May need separate mechanism for IOUs and ESPs



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- To be precise, PJM now has proposed,
- during the year's highest-priced 9
- percent of hours, to pay the full spot
- market price without any setoff (*i.e.*, the
- full locational market price, or LMP) as a
- reward for voluntary curtailments by so-called
- fixed-rate customers—that is, the
- typical retail ratepayer, whose bill doesn't
- vary directly with the ups and downs of
- LMPs. For other retail customers—those
- high-demand industrial and commercial
- (C&I) customers whose retail rates track
- dynamic price changes in the day-ahead
- or real-time LMP—PJM would pay a
- flat DR incentive of \$75 per megawatt
- hour, a figure said to approximate the
- typical retail cost of energy paid by
- fixed-rate customers.

- The economists agree, but counter
- that a retail customer providing DR service
- also avoids the retail energy charge—
- G —the same as a direct payment equal
- to G .



Exhibit B-3
PG&E Presentation

**PG&E COMMENTS REGARDING LSE'S
METHOD TO RECOVER OVERPAYMENT
DR OIR R.07-01-041
DIRECT PARTICIPATION IN CAISO
MARKET**

Ulric Kwan
Senior Regulatory Policy Analyst
PG&E Demand Response
December 17, 2009

Standard Contract Benefits

PG&E has performed an initial comparison for recovering the overpayment through an LSE-DRP contract versus a LSE-customer tariff. A standard contract between the LSE and DRP provides many benefits to all parties.

1. Decreased overhead costs for all parties including the CPUC
2. Transparency for settlements for all parties
3. Quick for third party DRPs to access customers

PG&E is open to considering other options, but the standard contract seems best.

PG&E Standard Contract: Key Elements

PG&E believes that the settlement calculation, the repayment method, and the credit requirements represent the most important issues for a standard contract.

1. LSE-DRP settlement formula
 - a. PG&E advocates for the repayment to the LSE from the DRP at the Day-Ahead DLAP energy price paid by the LSE for energy procured in the Day-Ahead for customers that was not used due to DR
 - b. The settlement formula would be for both the Day-Ahead and Real-Time Energy:
([PDR Baseline MW] minus [PDR Meter Reads MW]) times [Hourly Day-Ahead DLAP Price]
 - c. Due to the DRP payment that is based on the CLAP price, it is possible that the DRP energy payment from the CAISO will be less than the LSE-DRP settlement

PG&E Standard Contract: Key Elements, Cont'd

PG&E believes that the settlement calculation, the repayment method, and the credit requirements represent the most important issues for a standard contract.

1. Credit requirements and repayment methods
 - a. PG&E believes that third party DRPs could face significantly less credit requirements if a standard inter-SC trade mechanism was used
 - a. An alternative mechanism could be an instruction to the CAISO to direct funds from the DRP payment to the LSE
 - b. PG&E believes that the credit requirements / collateral / performance assurances of the DRP to the LSE should reasonably cover the DRP-LSE repayment in the case of default

PG&E Standard Contract: Other Elements / Concerns

PG&E believes that there are several other elements that are important to discuss and include in a standard contract.

- ❖ Contract length and Effective date
- ❖ Sunset date
- ❖ DRP access to confidential customer specific data
- ❖ Timeliness of payment
- ❖ Dispute resolution mechanisms

PG&E Standard Contract: Outline

1. GENERAL DEFINITIONS
2. GOVERNING TERMS AND CONDITIONS
 - a. Applicability and Eligibility
 - b. Effective Date and Contract Term
 - c. Regulatory Changes
 - d. Contractual Arrangement Between Customer and DRP
 - e. Contractual Arrangement Between Customer and LSE
 - f. Representation
 - g. Sunset Date
3. OBLIGATIONS AND DELIVERIES
 - a. DRP's and LSE's Obligations
 - b. The DRP's obligations are:
 - c. Resource Adequacy
 - d. Make-Whole Payment Calculation
 - e. DRP's Access to Customer Specific Use Data
 - f. Metering and Communications Equipment
4. EVENTS OF DEFAULT; PERFORMANCE REQUIREMENT; REMEDIES
 - a. Events of Default
 - b. Performance Versus Baseline
 - c. Penalties For Non-Performance
5. PAYMENT
 - a. Billing Period
 - b. Timeliness of Payment
 - c. Disputes and Adjustments of Invoices
 - d. Netting of Payments
 - e. Right to Offset
 - f. Payment Obligation Absent Netting
6. CREDIT REQUIREMENTS
 - a. Collateral
 - b. Performance Assurance
 - c. Return of Performance Assurance
 - d. Letters of Credit
 - e. Guaranty
7. LIMITATIONS OF LIABILITY; INDEMNIFICATION; REMEDIES
 - a. Limitation of Liability
 - b. Indemnification
 - c. Remedies
8. FORCE MAJEURE
9. REPRESENTATIONS AND WARRANTIES
10. CONFIDENTIALITY
11. MISCELLANEOUS
 - a. Choice of Law
 - b. Compliance with Law
 - c. Entire Agreement
 - d. Further Assurances
 - e. Publicity
 - f. No Dedication
 - g. Attorney's Fees
 - h. Severability
 - i. Alternative Dispute Resolution
 - j. Intent of the Parties
 - k. Management Negotiations
 - l. Mediation
 - m. Arbitration

Exhibit B-4
SCE Presentation

Direct Participation for Demand Response

By

Southern California Edison

G. Muir Davis

12/17/2009

Overview of SCE's Opening Comments

- CPUC has a role in ensuring protections for consumers from DRPs operating in the IOUs' service areas
- CPUC should allow for sufficient time for a thorough vetting of the issues and more time should be devoted to it, to ensure we get it right
- Processes and rules will be needed to govern the relationships and financial transactions among the market participants as well as access to customer information
- IOUs need a means of recovering from customer or its DRP the cost of energy procured to serve load of customer that is subsequently bid into CAISO market.
- SCE DR Contracts prohibit the aggregators from selling the DR Resources under the contracts to any third parties
- Per CAISO requirements, a service account can participate in only one PDR, and the CAISO needs to enforce this mechanism
- SCE not opposed to dual participation but this involves many administrative complexities that should be addressed only after parties have the rules and experience in direct bidding in the CAISO markets without dual participation
- The different baselines adopted for CPUC and PDR do not pose any additional gaming opportunities

Issues to be resolved before direct bidding can begin

- Rules governing the IOUs' relationship with customer and third-party DRPs bidding load into the CAISO markets
- The CPUC's role in supervising the conduct of DRPs bidding DR into the CAISO markets
- Services needed/desired from IOUs to facilitate DRP bidding into CAISO markets
- Recovery by IOUs (and other LSEs) of costs of energy procured to serve customer load subsequently bid into the CAISO market by another DRP
- IOU tariff changes needed to support direct bidding into the CAISO markets
- Consumer protection requirements for DRPs operating in IOU service areas
- Dual participation rules for customer service accounts to participate in retail IOU DR programs and CAISO markets can be implemented *after* the parties have had experience with direct bidding in absence of any dual participation

Proposed Timing

ID	Task Name	Start	Finish	Duration	Dec 2009	Jan 2010	Feb 2010	Mar 2010	Apr 2010	May 2010	Jun 2010	Jul 2010	Aug 2010	Sep 2010	Oct 2010	
1	Define CPUC's Role	12/1/2009	2/23/2010	61d												
2	IOU tariff changes needed	12/1/2009	2/26/2010	64d												
3	Rules for "Direct Participation" interactions between IOUs & other entities	2/16/2010	9/23/2010	158d												
4	Services to be provided by IOUs to other entities for "Direct Participation"	2/16/2010	9/23/2010	158d												
5	LSE cost recovery for energy procured	2/16/2010	9/23/2010	158d												
6	Consumer protection requirements	2/16/2010	9/23/2010	158d												

- Dual Participation would be addressed at a later date after single participation has been implemented and experience gained
- SCE tariffs would be submitted for CPUC approval after resolution of the above issues
- SCE systems would be developed to support CPUC approved tariffs/programs

Ready, Set, Go

Once the retail infrastructure is in place,
then DRPs are free to participate in the
CAISO's market...

Exhibit C

Day Three Report

R.07-01-041
Demand Response OIR Phase 4 Workshop
Day 3 (December 18, 2009)

On workshop's third and final day, Mr. Meeusen listed four issues/topics for discussion:

- What are the roles of parties in Proxy Demand Resource (PDR) from the California Public Utilities Commission's (CPUC) perspective?
- Are there interim solutions or actions that are possible or practical given that it might be unrealistic to expect a complete PDR implementation to occur in 2010?
- Will the need for Investor Owned Utility (IOU) approval/rejection of PDR create barriers for aggregators?
- What actions can be scheduled to implement PDR?

The primary topics discussed were 1) the role of parties and 2) 2010 and 2011 PDR implementation.

Roles of Parties in PDR as Proposed by SCE

SCE presented a matrix, attached hereto, which listed possible PDR business processes based on the current Direct Access business processes and assigned roles to IOUs, Demand Response Providers (DRPs), Energy Service Providers (ESPs), California Independent System Operator (CAISO), and customers for each process. This discussion focused on three processes: the Customer Information Service Request (CISR), Demand Response Service Request (DRSR), and DRP Registration.

Customer Information Service Request: A DRP would use this form to obtain the customer's written authorization to request an IOU (initially via hardcopy but eventually automated) to provide the DRP with customer-specific, historical energy use data for up to 3 years. A timeframe (possibly 10 days) for response by the IOU needs to be determined. Customers with multiple Service Agreements (SA) or Service Points (SP) could indicate which service agreement identification numbers (SAID number) should be included as part of the CISR. CAISO indicated that it would need the SAID numbers. It is possible that service fees might be incurred when a Meter Data Management Agent (MDMA) provides the data. SCE proposed Demand Response Service Request, Demand Response Provider Registration and other issues.

Demand Response Service Request (DRSR): This proposed process would require a DRP to request authorization to add a customer to the DRP's PDR from the Load Serving Entity (LSE) and Utility Distribution Company (UDC). The LSE would identify whether the customer is eligible to participate with the DRP and is not otherwise

participating in a demand response program with another DRP. Additionally, the CAISO would contact the LSE/UDC to check on current program participation. DRA suggested that LSE/UDC pre-screening the DRSR would avoid IOU rejection of such requests that would then re-start the DRSR process. Attendees noted that either a “front-end” DRSR review (by the UDC/LSE) or a “back-end” DRSR review (by CAISO) was practical, but both reviews would be redundant. There was an open question to CAISO as to how customers would change DRPs.

Demand Response Provider Registration: Parties noted that a registration process would be needed for DRPs (akin to the Energy Service Provider registration process). PG&E asked whether the CPUC would provide consumer protection for customers who choose a DRP. EnerNOC does not agree that a registration process would be needed, although it is possible that the Commission may determine such a process may be necessary. There is a pending issue that is subject to briefing as to the ability of the CPUC to use current Public Utility Code to extend its jurisdiction to DRPs for purposes of consumer protection.

Other issues: Parties agreed that the proposed matrix was a framework (it is neither a proposal nor an endorsement). Also, the process would need to assign Pnodes and APnodes to each customer load. Finally, parties felt that MDMA roles would need to be defined to provide metered energy data for settlement.

2010 and 2011 implementation

Mr. Meeusen (CPUC) suggested two possible options for PDR implementation given parties’ input: Option A would include interim activities in 2010 leading to full implementation in 2011, and Option B would take a slower approach with full implementation in 2011.

SDG&E suggested that Participating Load (PL) pilots (either existing or new pilots) be expanded / converted to include PDR for 2010. In addition, it might be possible to include aggregators in such pilots. PG&E replied that PG&E’s current Aggregator Managed Portfolio could not be a pilot, since the load is not location-specific. However, PG&E’s PeakChoice may be available in 2010 (as may Capacity Bidding Program under optimistic circumstances). SCE also offered that SCE’s PL pilot could be converted to a PDR pilot and made available for 2010 implementation.

EUF/CTMA asked whether Direct Access (DA) customers would be included/excluded/treated differently than bundled customers. Also, how would the Commission address customers that wanted to be their own DRP? PG&E explained that for 2010, only bundled load would be bid into the CAISO market but the entire load (bundled and DA) would be called during events. Also, DA customers not enrolled in IOU DR programs could be bid in by DRPs, once the CPUC establishes rules for their participation, and processes are in place to confirm and maintain eligible DA customers. EnerNoc asserted that not including DA customers in 2010 efforts would narrow PDR

opportunities for DA customers not currently enrolled in a DR program and defer progress on resolving settlement issues. DA customers, therefore, should be included in potential 2010 pilots to address both IT system and compensation issues.

Mr. Meeusen asked that if a 2010 pilot was realistic, what concurrent actions would take place to fully implement PDR in 2011. PG&E responded that concurrent 2010 activities are not viewed as a pilot but activities necessary to implement PDR in 2011. Additionally, PG&E asserted although Option A's timetable might be realistic for 2010 PDR implementation limited to a small customer subset (IOUs with their bundled customers, ESPs with their customers who were not in IOU DR programs, and 3rd party DRPs with an ESP's customers) and 2011 for all capabilities, participants seemed to agree that this was an aggressive schedule. PG&E believes that some timely CPUC actions would be required to provide sufficient implementation lead times, so participants can resolve constraints and develop processes that address issues related to direct participation.

SCE stated that it was possible to revise its existing PL pilot to accomplish a PDR pilot in 2010, but it would require a prompt proposed decision of the Commission authorizing SCE to modify the pilot, or a directive to file an advice letter.

Mr. Meeusen then turned to discussion of Option B, noted that there were benefits and drawbacks of this option when compared to Option A. Mr. Meeusen acknowledged that the benefits of this approach included a longer time horizon to resolve outstanding issues, while drawbacks included waiting another year to utilize PDR resources. SCE stated that it was possible to revise existing PL pilots to accomplish this. However, Option B will not provide any 2010 PDR that the CAISO is requesting. Mr. Meeusen asked if there seemed to be anything incompatible with conducting PDR pilots in summer 2010 while simultaneously resolving the large outstanding procedural and regulatory barriers that parties believe may not be resolved by summer 2010. There was general consensus from those in attendance that there did not seem to be any incompatibilities. Mr. Meeusen also stated that pilots should also consider allowing aggregator participation, so that all parties could learn about operating PDR resources. Mr. Meeusen referred back to SDG&E statement that integrating aggregators into a pilot could be feasible. Mr. Meeusen concluded by noting that the Commission would consider the use of PDR pilots in 2010, but requested additional input regarding how the pilots would be operated and the processes that would need to be resolved for full scale implementation (including DA customers) for summer 2011.

PG&E proposed that PDR working groups could meet in the coming months to develop a workplan for creating contracts, business requirements, and processes by the Fall of 2010. Moreover, a Spring 2010 decision in this rulemaking could provide a schedule to implement PDR by 2011. SCE supported the idea that the proposed decision in February 2010 should focus on the issues and a process for parties to undertake in 2010, to enable implementation of direct participation in PDR in 2011. To meet CAISO's objective of PDR in 2010, the pilots discussed by SDG&E and SCE should be considered.

ATTACHMENTS FOR DAY THREE REPORT

- C.1. Workshop Sign-In Sheet – Day Three**
- C.2. SCE Matrix**

Exhibit C-1

Workshop Sign-In Sheet

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Exhibit C-2

SCE Matrix

INFORMATION	FROM WHO	TO WHO	WHEN
PDR Agreement	DRP	CAISO	Registration
DRP Registration	DRP	CPUC	Registration
Verify DRP Registration	UDC, LSE	CPUC	Registration
Verify DRP Registration	UDC, LSE	CAISO	Registration
CISR for access to Customer Information	DRP	LSE(ESP/IOU)	TBD by Customer
Customer SA Number for enrollment	LSE	DRP	When enrolled
Demand Response Service Request (DRSR) to enroll customer	DRP	LSE, UDC (& old DRP if applicable)	When enrolled
Verify customer eligibility	UDC, LSE (& old DRP)	DRP, Customer	When enrolled
PNode assignment	CAISO, UDC	DRP	When enrolled
Register location (customer) with CAISO	DRP	CAISO	When enrolled
Inform LSE & UDC of customer enrollment	CAISO	LSE & UDC	When enrolled
Verify customer eligibility	UDC, LSE	CAISO	When enrolled
APNode assignment for Registration (Customer)	DRP	LSE & CAISO	When enrolled or updated
PDR CLAP Assignment for participating SAs	DRP	LSE & CAISO	When enrolled or updated
PDR being bid	DRP	CAISO	With Bid
DRP accepted bid amount and informs the LSE of the new forecast for Unscheduled Deviation purposes	CAISO	LSE & DRP	CMRI, After market close + Settlement
Provides meter data to calculate baseline	LSE's MDMA	DRP & CAISO	Following Day
Calculates Baseline	CAISO or DRP	CAISO or DRP AND LSE	Following Day
Provides meter data to calculate performance	LSE's MDMA	DRP & CAISO	Day After Event
Aggregates individual meter data into Registration into PDR	DRP	CAISO, (LSE?)	Day After Event
Calculates Performance	CAISO or DRP	CAISO or DRP AND LSE	5 days after event
Points for further discussion			
Additional steps TBD and will be added later			

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have this day served a true copy of COMPLIANCE FILING OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) – REPORT ON DIRECT PARTICIPATION PHASE WORKSHOPS (U 338-E) on all parties identified on the attached service list(s). Service was effected by one or more means indicated below:

Transmitting the copies via e-mail to all parties who have provided an e-mail address. First class mail will be used if electronic service cannot be effectuated.

Executed this **8th day of January, 2010**, at Rosemead, California.

/s/ Meraj Rizvi
Meraj Rizvi
Project Analyst
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