



California ISO
Your Link to Power

California Independent
System Operator Corporation

June 26, 2009

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Re: Participating Load Pilot Agreement between Southern California Edison Company and the California Independent System Operator Corporation; Request for Approval
Docket No. ER09-_____**

Dear Ms. Bose:

The California Independent System Operator Corporation ("ISO") submits for Commission filing an original and five copies of Service Agreement Number 1357, which is a "Participating Load Pilot Agreement" between Southern California Edison Company ("SCE") and the ISO. The basis for filing is Federal Power Act Section 205 and FERC regulations Section 35.13.

The pilot agreement contains the terms governing an arrangement between SCE and the ISO to conduct a pilot program to investigate the efficacy and technical feasibility of bidding certain demand response resources into the ISO's day-ahead and real-time markets for ancillary services. The information garnered from the pilot will provide critical contributions to the efforts to increase the integration of demand response resources into the ISO's markets.

The ISO is requesting a waiver of the 60-day prior notice requirement in order to allow the pilot agreement to be made effective as of June 29, 2009, the first business day following this filing, in order to allow implementation of SCE's pilot agreement to proceed immediately, so that valuable data can be gained concerning the deployment and integration of demand response resources in California.

I. BACKGROUND TO THE PARTICIPATING LOAD PILOT AGREEMENT

General background

Participating load pilot projects are being developed by each of the three California's investor owned utilities ("IOUs") through a process being conducted by the California Public Utilities Commission ("CPUC") as part of an overall effort to consider how to reshape utility demand response programs to best align with the ISO's new markets. Specifically, the PG&E pilot project is intended to explore the feasibility of aggregating end use customer loads so that they may provide ancillary services, specifically non spinning reserves, to the ISO in the form of economically bid demand response resources.

The pilot programs are an outgrowth of the ISO's collaborative activities with California stakeholders such as the CPUC, the IOUs, demand response providers, commercial aggregators, and large commercial end use customers (both bundled and direct access) to promote the development of demand response resources and their integration into the ISO's markets. This effort is consistent with the Commission's directive to regional transmission operators and independent system operators to undertake pilot programs promoting wider integration of demand response in its Order 719.¹ In addition, the Commission directed the ISO specifically to undertake such efforts in its September 2006 and July 2007 orders regarding the ISO's new markets, and the pilot program activities are part of the ISO's compliance efforts.²

As the ISO has previously reported to the Commission in status reports, the ISO's collaborative efforts with stakeholders on the issue of demand response have included participation in the CPUC's rulemaking on development of demand response methodologies and alignment of IOU programs with the ISO's new markets (CPUC Proceeding R.07-01-041)³ and, most recently, in the

¹ *Wholesale Competition in Regions with Organized Electric Markets*, Docket Nos. RM07-19-000, AD07-7-000, 125 FERC ¶ 61,071 (issued October 17, 2008), at Paragraph 97.

² *California Independent System Operator Corp.* 116 FERC ¶ 61,274 (issued September 21, 2006) and *California Independent System Operator Corp.* 119 FERC ¶ 61,313 (issued June 25, 2007).

³ Specifically, in guidance issued on February 27, 2008 to the IOUs by the administrative law judge in Rulemaking (R.) 07-01-041 filed on February 27, 2008, the CPUC provided guidance to the three IOUs to develop programs that would integrate with the ISO's markets. The CPUC expressed strong interest in requiring the IOUs to modify or create products that can operate as participating load under release 1 of the ISO's new markets. Such products would allow Demand Response to be bid-in and compete with other resources in the wholesale markets: ancillary services, day-ahead and day-of energy markets.

IOUs applications to the CPUC for approval of specific demand response programs and budgets for the IOU current demand response program cycle. (CPUC Proceedings A.08-06-001, A.08-06-002 and A.08-06-003.)

Pilot Agreements. The ISO has entered into a pilot agreement with each IOU, for the purpose of outlining and memorializing the terms under which the IOUs and ISO will implement the pilot programs.

Size of pilots. The SCE pilot is intended to be 5 MW. The PG&E pilot is anticipated to be 3 MW in size, and SDG&E's pilot is anticipated to be 3 to 5 MWs in size.

Adherence to Reliability and Ancillary Services Standards. The pilot programs do not provide for any departure from reliability standards. Each IOU pilot provides for the demand response resource to provide Ancillary Services in the form of non-spinning reserve services, and each resource will be certified to provide ancillary services pursuant to the ISO Tariff.

Duration. The pilots are intended to be of limited duration, of no more than two years in length. Should the ISO and SCE desire to extend the duration beyond this time period, the ISO will submit a further filing to the Commission. The pilot is intended to operate during the summer period, which is California's peak demand period. It will begin operation during the summer of 2009. A formal close-out date for the pilot projects was not designated in the agreement, as the parties may choose to extend the pilots beyond the summer of 2009, to cover the period of summer 2010.

Description of SCE's pilot program

SCE's pilot program will involve a subset of customers enrolled in its air conditioning cycling program, specifically 3,200 residential air conditioning units located at Fort Irwin, California. As part of the pilot, SCE will install communicating current transformers on a representative sample of residential housing air conditioners, and the collected telemetry data will be shaped and utilized as a proxy to estimate the amount of curtailable air conditioning load in the pilot population.

SCE's pilot is intended to investigate the following areas:

- Developing processes, procedures and systems both internal to SCE and interfacing with the ISO to prepare aggregated resources for bidding into

In addition, in the consolidated IOU applications proceedings, (A.08-06-001, A.08-06-002 and A.08-06-003), the administrative law judge issued an August 7, 2008 ruling that required the IOUs to resubmit their demand response plans to include a pilot program to explore integration of demand response programs with ISO markets.

ISO markets as participating load, dispatching the resource as a non-spinning reserve ancillary service and settlement of the resource after the conclusion of the pilot program.

- Developing methodologies and algorithms for estimating the amount of demand response load available utilizing proxy telemetry installed at a statistical sampling of the end loads and reconciling the estimated load drop with the performance observed at both an aggregation point interval meter and the appropriate circuit or feeder SCADA meter.
- Developing methodologies and algorithms for estimating load drop for small aggregated load demand response in the ISO markets for settlement purposes utilizing interval metering at an aggregation point instead of at individual end loads.
- Determining whether the developed methodologies for proxy telemetry and settlement are sufficient for ISO monitoring and settlement purposes. This will help determine both the economic and technical feasibility of small aggregated load demand response functioning as participating load in the ISO markets.

II. DESCRIPTION OF THE PARTICIPATING LOAD PILOT AGREEMENT

As stated above, the purpose of the pilot agreement between SCE and the ISO is to outline and memorialize the terms under which SCE and ISO will implement SCE's participating load pilot program. The pilot agreement is necessary in order to address certain challenges associated with the integration of small industrial and commercial aggregated demand resources into the ISO's markets, which in some cases require deviations from the current ISO standards for participating load.⁴

First, Section 1.1 of the PLP Agreement addresses one goal of the pilot, which is to develop acceptable proxies for the telemetry and settlement requirements relating to bidding in Participating Load for small aggregated demand response resources of the type that will participate in the SCE PLP. Section 1.1 provides that SCE will install communicating current transformers on a representative sample of the air conditioning units participating in the PLP, the data from which will be used as a sample proxy telemetry to estimate the amount of curtailable load in the pilot population. SCE will also use this data to develop telemetry proxy algorithms to forecast load reductions, which will be analyzed to

⁴ The primary repository of these standards is the draft participating load user guide for the ISO's new markets, which is available on the ISO's website at <http://www.caiso.com/233c/233cd878397d0.pdf>.

determine if they are consistent and accurate enough to be used as telemetry proxies for Participating Load on an ongoing basis in the ISO's markets.

Also, pursuant to Section 1.2 of the Agreement, SCE commits to make a reasonable effort to recruit a customer base of curtailable demand necessary to meet the ISO's 1 MW minimum load criteria for submitting Participating Load bids into the ISO's markets. However, because of the nature of air conditioning loads, the amount of load actually available will vary on a day-to-day basis, and therefore, the ISO has agreed that it will accept bids of less than 1 MW as part of SCE's PLP.

With respect to dispatch, Section 1.3 provides that the dispatch of the Participating Load under SCE's PLP will likely need to be dispatched manually. Nevertheless, the intention is that the manual processes used to dispatch this load will meet the ISO's 10-minute dispatch criterion for Non-Spinning Reserves.

With respect to metering requirements, because the loads that will participate in the SCE PLP program will be very small, SCE and ISO have acknowledged that it will not be practical or cost-effective, at least for the near future, to individually meter 100 percent of the endpoint loads for purposes of satisfying the CAISO's requirements currently in place for Participating Load. Therefore, the PLP Agreement provides that the ISO and SCE will develop a methodology for submitting proxy meter data for these loads for ISO settlement purposes. Also, in order to provide greater flexibility, the Agreement provides that the meter data from Participating Loads under the PLP will be submitted to the ISO pursuant to the requirements for a Scheduling Coordinator Metered Entity rather than a CAISO Metered Entity. The Participating Load bid under the PLP will be settled in accordance with the ISO Tariff.

The ISO believes that these deviations represent reasonable accommodations, given the nature and characteristics of the resources participating in this program, the exploratory and interim nature of the program, and the overriding goal of the pilot agreement to advance the knowledge of the ISO and market participants concerning the best strategies and practices for integrating demand response resources into the ISO's markets. Also, such deviations are not inconsistent with the provisions of the ISO tariff regarding the treatment of participating load. Section 4.7 of the ISO tariff provides for the submission of bids for energy and ancillary services from participating load pursuant to standards adopted by the ISO and published on the ISO website. Although the baseline set of such standards is provided in the draft participating load user guide for the ISO's new markets, there is no prohibition in the ISO tariff against promulgating alternative standards, or exemptions, through specific agreements, such as the pilot agreement. Indeed, the draft participating load user guide specifically recognizes that the ISO may grant exemptions to the

metering and telemetry requirements for participating load under certain circumstances.⁵

The SCE pilot agreement also provides for confidentiality protections to augment the protections already provided in section 20 of the ISO tariff. These protections are intended to allow the ISO and SCE to designate and treat as confidential information, data, analyses, documents and materials furnished by SCE to the ISO in connection with SCE's pilot program. These protections are necessary in order for the parties to be able to freely exchange sensitive information (such as customer-specific data) without concerns regarding disclosure, which will allow for a more thorough and complete analysis of the feasibility of demand response participation in the ISO markets. Moreover, given that the pilot will investigate technical challenges, it may not be clear at the outset just what data will become particularly meaningful later on. It is not inconceivable that pilot participants may discover that information that seemed unremarkable at first is later found to have critical relevance. The confidentiality provision of the pilot agreement is intended to encourage the free flow of all data, so that initial screening for confidentiality does not inadvertently exclude information before its full relevance is ascertained.

Finally, the ISO notes that section 4.7 of the ISO tariff requires that in order to participate in the ISO markets, participating load must be covered by a "Participating Load Agreement" with the ISO.⁶ In the case of the SCE participating load pilot, the loads that will participate in the ISO markets subject to the pilot will be governed by the terms of the pilot agreement rather than a Participating Load Agreement. This is the case because of the special characteristics of the loads that will participate in the pilot and the exploratory nature of the program. Because the pilot agreement serves essentially the same function as the Participating Load Agreement -- providing the terms under which SCE will submit, and the ISO will accept, bids for participating load -- the ISO believes that the pilot agreement serves as a reasonable proxy for the Participating Load Agreement for purposes of conducting the pilot program, and therefore, section 4.7 of the ISO tariff is satisfied. However, if the Commission does not agree that this arrangement meets the requirements of section 4.7, then the ISO respectfully requests that the Commission grant the ISO a limited waiver of section 4.7 and other provisions of the ISO tariff, to the extent that such provisions may conflict with the terms of the pilot, in order to allow the parties to carry out the terms of the pilot agreement and, in particular, to permit the ISO to

⁵ See draft participating load user guide for the ISO's new markets, section 2.4 ("The CAISO may allow some exemptions to these [telemetry] standards for Participating Loads with relatively small Loads where the CAISO deems this is acceptable. Such exemptions will be handled on a case-by-case basis.").

⁶ Terms used with initial capitalization and not otherwise defined herein have the meanings set forth in the master definitions supplement, appendix A of the ISO tariff.

accept bids for participating load under the pilot agreement, rather than a Participating Load Agreement with SCE. Such waiver meets the Commission's standards⁷ because: (1) good cause exists for the waiver due to the need to expeditiously implement SCE's participating load pilot program, for the reasons discussed above; (2) the waiver will not unfairly disadvantage any market participants, and, in fact, the availability of greater demand response resources will benefit the entire market; and (3) the waiver will be only for the limited duration of the pilot program, which the ISO expects to last, at the longest, until the end of the summer of 2010.

III. COMMUNICATIONS

Communications regarding this filing should be addressed to the following individuals, whose names should be placed on the official service list established by the Secretary with respect to this submittal:

Baldassaro "Bill" Di Capo Counsel California Independent System Operator Corporation 151 Blue Ravine Road Folsom, CA 95630 Telephone: (916) 608-7157 Email: bdicapo@caiso.com	Michael Kunselman ALSTON & BIRD LLP The Atlantic Building 950 F Street, NW Washington, DC 20004 Tel: (202) 756-3300 Fax: (202) 756-3333 E-mail: michael.kunselman@alston.com
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IV. EFFECTIVE DATE

The ISO respectfully requests waiver of the Commission's 60-day notice period, pursuant to Section 35.11 of the Commission's regulations, 18 C.F.R. § 35.11, to permit the pilot agreement provided in Attachments A to the present filing to become effective on June 29, 2009, the first business day after this filing. Good cause exists for this waiver because it will promote the successful implementation of SCE's participating load pilot program. Specifically, implementing this program during the summer peak-load months is important

⁷ See *Cal. Indep. Sys. Operator Corp.*, 118 FERC ¶ 61,226 at P 24 (2007) (granting waiver to generator interconnection procedures to facilitate efficient and cost-effective treatment of 4,350 MW of wind-related interconnection requests), *citing ISO New England*, 117 FERC ¶ 61,171 at P 21(2006) (allowing a limited and temporary change to tariff to correct an error); *Great Lakes Gas Transmission Ltd. Partnership*, 102 FERC ¶ 61,331 at P 16 (2003) (granting emergency waiver involving force majeure event granted for good cause shown); and *TransColorado Gas Transmission Co.*, 102 FERC ¶ 61,330 P 5 (2003) (granting waiver for good cause shown to address calculation in variance adjustment).

because the air conditioning resources that will participate in the pilot program primarily operate during the summer months. Finally, no market participants will be adversely impacted by permitting this program to go into effect prior to the expiration of the 60-day notice period. In fact, doing so will benefit the market by making more demand response resources available during peak periods for the California system, which will improve overall grid reliability.

V. SERVICE

The ISO has served copies of this transmittal letter, and all attachments, on the California Public Utilities Commission, the California Energy Commission, and all parties with effective scheduling coordinator agreements under the ISO tariff. In addition, the ISO is posting this transmittal letter and all attachments on the ISO's stakeholder initiative web page for demand response, which can be found at the following internet address:

<http://www.caiso.com/1893/1893e350393b0.html> .

VI. ATTACHMENTS

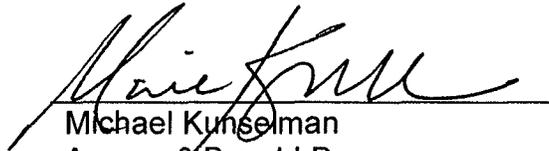
The following documents, in addition to this transmittal letter, support this filing:

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|--------------|---|
| Attachment A | Participating Load Pilot Agreement by and between Southern California Edison Company and the California Independent System Operator Corporation, designated as ISO Service Agreement No. 1357. ⁸ |
| Attachment B | Southern California Edison Company Detailed Implementation Plan for Participating Load Pilot |

⁸ This version of the agreement incorporates changes made after its execution pursuant to an amendment agreed to by the ISO and SCE. Also, the ISO had not yet received a Schedule 1 for this agreement, which will contain a complete list of the resources participating in SCE's pilot program. The ISO will file that Schedule with the Commission as soon as it receives it from SCE.

The Honorable Kimberly D. Bose
June 26, 2009
Page 9

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Michael Kunselman", written over a horizontal line.

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ATTACHMENT A

**Service Agreement 1357, Participating Load Pilot Agreement by and between
Southern California Edison Company and the California Independent System
Operator Corporation**

**PARTICIPATING LOAD PILOT AGREEMENT WITH
SOUTHERN CALIFORNIA EDISON COMPANY**

Issued by: Laura Manz, Vice President, Market and Infrastructure Development

Issued on: June 26, 2009

Effective: June 29, 2009

Participating Load Pilot Agreement between Southern California Edison Company and California Independent System Operator

To explore the technical and economic feasibility of small SCE-aggregated Demand Response (DR) as a potential participant in the Market Redesign and Technology Upgrade (MRTU) Measurement and Performance (MAP) markets for Participating Load (PL), including Dispatchable Demand Resource (DDR) and Proxy Demand Resource (PDR) products, Southern California Edison Company (SCE) and the California Independent System Operator Corporation (CAISO) have reached the following agreement regarding SCE's Participating Load Pilot (PLP):

RECITALS

- 1. Background of SCE PLP Proposal.** SCE included a description of its proposed PLP in Volume II of its Amended Application for Approval of Demand Response Programs, Goals, and Budgets for 2009-2011 (A.08-06-001) filed with the California Public Utilities Commission (CPUC) on September 19, 2008. SCE's intent with the PLP is to make small SCE-aggregated DR load available to bid and curtail demand in MRTU starting on or about June 2009. SCE and CAISO expect that many lessons will be learned throughout the PLP and that the results of the PLP will help inform whether small aggregated DR load is technically and economically capable of participating in the MRTU MAP PL market for DDR and PDR products. In addition, the PLP may result in recommended changes to CAISO PL requirements or technical specifications to make small aggregated DR load feasible in MRTU MAP.

There are significant challenges when considering small aggregated DR functioning as PL. For the PLP, SCE will use a small subset of the customers enrolled in its Air Conditioning Cycling Program known as the Summer Discount Plan (SDP). Because these loads are very small (on the order of 1-2 kW per customer), SCE and CAISO acknowledge that it will not be cost-effective (in the foreseeable future) to individually meter 100 percent of these endpoint loads for purposes of satisfying the CAISO's telemetry and settlement requirements currently in place for MRTU MAP. However, both SCE and CAISO seek to ensure that the estimate of load available for curtailment, as well as the measurement of load reductions after dispatch, are sufficiently accurate and timely to support the CAISO markets and grid reliability.

As described below, SCE's PLP may deviate from some of the current CAISO requirements for PL. The intent of the PLP will be to explore measurement and verification criteria for small SCE-aggregated DR load and to determine whether the proxies developed for telemetry and metering are acceptable to CAISO. Specific deviations for the PLP may be agreed upon and documented by SCE and CAISO in accordance with the provisions below. SCE's participation in this PLP will be entirely separate from its operations pursuant to its Participating Load Agreement (PLA) with CAISO.

OPERATIVE TERMS OF THE SCE PLP

1. Primary Parameters

1.1. Telemetry. SCE will work with CAISO to develop acceptable proxies for the telemetry and Settlement requirements. SCE's current plan for the telemetry proxy is as follows:

- SCE will install communicating Current Transformers (CT) on a representative sample of the PLP participants' air conditioners (A/C). The current data will be collected and used as a sample proxy telemetry to estimate the amount of curtailable A/C load in the pilot population.
- The frequency at which the communicating CTs send updates will be one of the variables explored, and signals may be sent upon CTs' detection of a change in current rather than at set intervals.
- SCE will work with its business partners to develop telemetry proxy algorithms to forecast load reductions based on sample CT data. If SCE's development yields algorithms that consistently and accurately predict the magnitude of load reductions available, CAISO will

examine whether the telemetry requirements can be updated to allow this telemetry proxy in MRTU MAP.

1.2. Bidding

- SCE will place bids for Non-Spinning Reserve Ancillary Service into CAISO's Day-Ahead Market.¹ Except as provided for in this PLP Agreement, SCE's PLP bids will be subject to the provisions of the CAISO Tariff applicable to bids from Participating Load, including the requirements regarding Energy bids associated with Non-Spinning Reserve bids. SCE will make reasonable efforts to recruit a customer base with the intent to approach the 1 MW minimum load bid criteria. However, because of the nature of A/C load, the amount of load will vary from day to day, based on many factors, including temperature. Therefore, to facilitate testing as part of the PLP, CAISO agrees to accept bids of less than 1 MW for the PLP, and, if the PLP results suggest that a 1 MW minimum bid criterion may be a barrier to the success of PL programs, CAISO will undertake modification of this criterion

1.3. Dispatch

- In 2009, PLP dispatch will likely remain a manual process. SCE will receive notification from CAISO whether the PLP bid was accepted and should be dispatched. The actual dispatch will involve a manual workaround solution, but should be able to meet the 10 minute dispatch criterion.

1.4. Metering & Settlement

- Meter data for the participating load which is the subject of this PLP shall be submitted pursuant to CAISO Tariff requirements for a Scheduling Coordinator Metered Entity rather than those requirements for a CAISO Metered Entity.
- For purposes of this PLP, SCE shall develop proxy data for Settlement under a methodology mutually agreed to by SCE and CAISO. SCE will explore correlation between observed load drop utilizing the communicating CTs and the observed load drop via SCADA systems at the circuit or feeder level, with the intent of using the circuit or feeder level data for PLP Settlement.
 - SCE's Edison SmartConnect™ advanced metering infrastructure, which will provide hourly interval usage data for residential customers, will not be available for the PLP. However, in anticipation of Edison SmartConnect™ deployment which will provide one hour interval usage data for residential customers, SCE and CAISO shall mutually investigate how one hour interval usage data from the Scheduling Coordinator Metered Entity can be correlated to correspond to 5-minute Settlement Interval periods required under the CAISO Tariff.
- Subject to agreement by SCE and CAISO regarding the foregoing, Settlement for the services provided by SCE pursuant to the PLP will be conducted in accordance with the provisions of the CAISO Tariff regarding Settlements for Participating Load.

1.5. Information and Technology

- SCE and CAISO will attempt to integrate the PLP processes into the systems supporting MRTU Release 1, to the extent possible. However, business process and systems development to support all aspects of PL bidding, telemetry, dispatch, metering and settlement will take time to implement and will require some manual work around solutions in the near term. Further integration will be pursued and coordinated for MRTU MAP, as mutually agreed upon by SCE and CAISO.

¹ Capitalized terms used in this Agreement shall have the meaning set forth in the CAISO Tariff, Appendix A, Master Definitions Supplement, unless otherwise defined in this Agreement.

2. **Constraints.** SCE will administer the PLP pursuant to that the Experimental Schedule UCLT "UTILITY-CONTROLLED LOAD TESTS" tariff, previously filed with, and approved by the California Public Utilities Commission.
3. **Funding and Authorization.** SCE has applied for PLP funding in its Application for Approval of Demand Response Programs, Goals and Budgets for 2009-11 (A.08-06-001), filed with the CPUC on June 1, 2008 and amended on September 19, 2008, and also requested and received funding for the PLP as part of the 2009 "bridge" period authorized by the CPUC in Decision 08-12-038. SCE's implementation of the PLP is subject to approval from the CPUC, and the scope and budget of the PLP is constrained by any CPUC decisions approving the PLP. SCE acknowledges and agrees that CAISO will not bear any responsibility for expenses or costs that SCE incurs in undertaking the PLP.
4. **Effective Date and Term.** This agreement shall be effective as of the date of (i) MRTU implementation; or (ii) a Federal Energy Regulatory Commission (FERC) order accepting this agreement, whichever is earlier. If this agreement is accepted by FERC, it shall remain effective until terminated pursuant to Section 5.
5. **Termination.** Either party may terminate this agreement upon thirty (30) days advance written notice to the other party. Any notice of termination given pursuant to this section must be filed at FERC and shall become effective when FERC accepts the termination for filing. If this agreement is terminated, such termination shall not affect rights or obligations for payment of money for services provided or obligations incurred prior to termination.
6. **Dispute Resolution.** The parties shall make reasonable efforts to settle all disputes arising out of or in connection with this agreement. In the event any dispute is not settled, the parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of CAISO Tariff, which is incorporated herein by this reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to SCE, and references in Section 13 of the CAISO Tariff to the CAISO Tariff shall be read as references to this agreement.
7. **Notices.** Any notice, demand or request which may be given to or made upon either party regarding this agreement shall be made in accordance with Section 22.4 of the CAISO Tariff and be provided to the representative of the other party identified in Schedule 3 of SCE's PLA.
8. **Confidentiality.** All documents, data, and information provided by the parties to one another pursuant to this agreement shall be treated in accordance with CAISO Tariff Section 20 governing the confidentiality of documents provided to CAISO by Market Participants, subject to the following:
 - 8.1. **Confidential Information.**
 - For purposes of this agreement, "Pilot Specific Confidential Information" means
 - certain written, orally conveyed or recorded information, data, analyses, documents, and materials furnished or made available by SCE or its representatives to CAISO or its representatives which, SCE has pre-designated as Pilot Specific Confidential Information and transmitted to the CAISO in connection with the PLP; and
 - certain analyses, compilations, studies, documents, or other material prepared by CAISO which contains or is based upon Pilot Specific Confidential Information provided by SCE or its representatives.
 - Prior to the implementation of the PLP under this Agreement, the parties shall conduct a meeting to identify and discuss what types or categories of Pilot Specific Confidential Information will likely to be transmitted to CAISO and used in connection with the PLP, and how such confidential data (and in particular, customer data) shall be aggregated or otherwise redacted to protect confidentiality while remaining useful as supporting data for reports, filings, or other appropriate disclosure in connection with FERC Order 719, CPUC Proceedings A.08-06-001 (SCE Application) and R-7-01-041 (demand response rulemaking), or other writings intended to communicate the results of the PLP.
 - Information which may have been designated as Pilot Specific Confidential Information shall nevertheless not be or no longer be considered confidential (i) when it is furnished or

becomes available to the public other than as a result of a disclosure by CAISO, or (ii) is already in the possession of or becomes available to CAISO on a non-confidential basis from a source other than SCE, provided that, to the best knowledge of CAISO, such source is not and was not bound by an obligation of confidentiality to SCE, or (iii) CAISO can demonstrate has been independently developed without a violation of this Agreement.

8.2. Use of Customer Data. Both parties agree that no SCE customer-specific confidential data shall be disclosed by either party at any time. All SCE customer data will be aggregated.

8.3. Restriction on Disclosure of Confidential Information.

- Neither CAISO nor its Representatives will disclose Pilot Specific Confidential Information obtained or reviewed in the course of participating in the PLP without express prior written authorization by SCE. CAISO agrees that only authorized Representatives of CAISO who need to know Pilot Specific Confidential Information for the purposes of conducting the PLP ("Authorized Representatives") will have access to Pilot Specific Confidential Information. Prior to receiving any Pilot Specific Confidential Information, CAISO shall advise such Authorized Representatives of the desire that SCE maintain confidentiality of Pilot Specific Confidential Information and shall direct such Authorized Representatives to comply with the confidentiality requirements of Section 8 of this Agreement.
- CAISO shall immediately notify counsel for SCE of the receipt of any discovery requests, orders or other legal process to produce Pilot Specific Confidential Information in connection with any judicial, regulatory or administrative proceeding.

8.4. Marking of Pilot Specific Confidential Information.

- All Pilot Specific Confidential Information shall be marked as "Pilot Specific Confidential Information", hard copy versions of Pilot Specific Confidential Information retained by CAISO shall be maintained and treated in such manner as CAISO treats confidential information under the CAISO Tariff.

9. Governing Law. This agreement is entered into and to be performed in the State of California and shall be construed and enforced in accordance with the laws of the State of California without regard to conflict of laws principles.

10. Entire Agreement and Amendments. This agreement constitutes the entire agreement between the parties and supersedes any and all written or oral agreements previously existing between the parties with respect to the subject matter hereof. Any amendments to this agreement shall be in writing and duly executed by both parties.

11. Other Obligations Unaffected. Nothing contained in this agreement shall alter SCE's obligations under the CAISO Tariff, the PLA, or any other agreement.

12. Liability. The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to "Market Participants" shall be read as references to "this Agreement."

13. Schedule of Load Subject to Agreement. The participating load subject to this PLP is identified in the attached Schedule 1 to this First Amendment.

14. Conflict. In the event of conflict between any provision of the CAISO Tariff and the terms of this Agreement, the terms of this Agreement shall govern.

15. Counterpart Execution. . This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which, together, shall constitute one and the same instrument.

16. Date of Agreement. This Agreement is dated as of June 17, 2009.

8.2. Use of Customer Data. Both parties agree that no SCE customer-specific confidential data shall be disclosed by either party at any time. All SCE customer data will be aggregated.

8.3. Restriction on Disclosure of Confidential Information.

- Neither CAISO nor its Representatives will disclose Pilot Specific Confidential Information obtained or reviewed in the course of participating in the PLP without express prior written authorization by SCE. CAISO agrees that only authorized Representatives of CAISO who need to know Confidential Information for the purposes of conducting the PLP ("Authorized Representatives") will have access to Pilot Specific Confidential Information. Prior to receiving any Pilot Specific Confidential Information, CAISO shall advise such Authorized Representatives of the desire that SCE maintain confidentiality of Pilot Specific Information shall direct such Authorized Representatives to comply with the confidentiality requirements of Section 8 of this Agreement.
- CAISO shall immediately notify counsel for SCE of the receipt of any discovery requests, orders or other legal process to produce Pilot Specific Confidential Information in connection with any judicial, regulatory or administrative proceeding.

8.4. Marking of Pilot Specific Confidential Information.

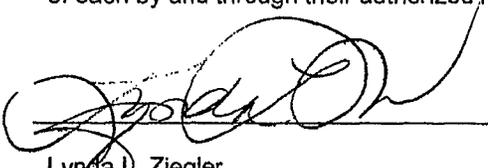
- All Pilot Specific Confidential Information shall be marked as "Pilot Specific Confidential Information", hard copy versions of Pilot Specific Confidential Information retained by CAISO shall be maintained and treated in such manner as CAISO treats confidential information under the CAISO Tariff.

9. Governing Law. This agreement is entered into and to be performed in the State of California and shall be construed and enforced in accordance with the laws of the State of California without regard to conflict of laws principles.

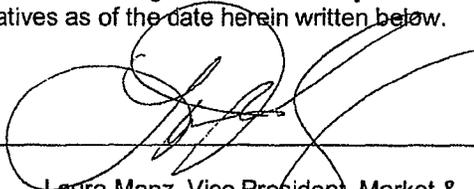
10. Entire Agreement and Amendments. This agreement constitutes the entire agreement between the parties and supersedes any and all written or oral agreements previously existing between the parties with respect to the subject matter hereof. Any amendments to this agreement shall be in writing and duly executed by both parties.

11. Other Obligations Unaffected. Nothing contained in this agreement shall alter SCE's obligations under the CAISO Tariff, the PLA, or any other agreement.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be duly executed on behalf of each by and through their authorized representatives as of the date herein written below.



Lynda L. Ziegler
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SCHEDULE 1

**Technical Characteristics of Individual or Aggregated Loads
per Participating Load Pilot Agreement**

SCHEDULE 1

Technical Characteristics of Individual or Aggregated Loads per Participating Load Pilot Agreement

Name of Participating Load Resource	ISO Assigned Resource ID (List Pseudo Gen Resource ID & CLAP Load ID)	Custom LAP CNodes (List CNode(s) that define the CLAP)	Custom LAP Max. Load (MW)	Pseudo-Generator Scheduling Point (List CNode for the Pseudo Generator)	Pseudo-Generator Max. Capacity ¹ (MW)	Pseudo-Generator Ramp Rate ^{1,2} (MW/min)	Ancillary Service Provider (Yes or No)	Limitations ² (Yes or No)
							Yes	

¹ Current effective values for purposes of scheduling Energy and bidding to provide Energy and/or Ancillary Services in ISO markets may differ from those set forth in this Schedule 1, depending on the results of ISO performance testing pursuant to Sections 8.9 and 8.10 of the ISO Tariff.
² If "Yes," limitations should be specified in the Participating Load's implementation plan.

ATTACHMENT B
SOUTHERN CALIFORNIA EDISON COMPANY
DETAILED IMPLEMENTATION PLAN
For
PARTICIPATING LOAD PILOT

Detailed Implementation Plan

Table of Contents

1. EXECUTIVE SUMMARY 3

2. PROJECT OBJECTIVES & PERFORMANCE MEASUREMENTS 4

 2.1 Project Objectives 4

 2.2 Project Deliverables 4

 2.3 Project Milestones 5

3. PLAN SCOPE , ASSUMPTIONS, DEPENDENCIES AND CONSTRAINTS 6

 3.1 Testing Scope 6

 3.1.1 Telemetry 6

 3.1.2 Bidding 6

 3.1.3 Dispatch 6

 3.1.4 Metering & Settlement 7

 3.1.5 Information and Technology 7

 3.1.6 Funding and Authorization 7

 3.2 Testing Assumptions And Dependencies 7

4. RISK FACTORS AND MITIGATION STRATEGY 8

5. TEST PROJECT PLAN FOR PHASE I 9

 5.1 High Level Plan Timeline 9

 5.2 High Level Testing Budget 10

 Detailed Plan 10

6. GLOSSARY 14

1. EXECUTIVE SUMMARY

In response to the California Independent System Operator's (CAISO) urging that some Participating Load (PL) be ready when Market Redesign and Technology Upgrade (MRTU) Release 1 is deployed, Southern California Edison Company (SCE) proposed to modify its current Demand Response Spinning Reserve Pilot (DRSRP) to evaluate its capability as PL. The objectives of the proposed SCE Participating Load Pilot (PLP) include facilitating the articulation of CAISO requirements and technical specifications for small aggregated load DR to act as PL, and to uncover and resolve policy, process, and system issues associated with using small aggregated load DR as PL.

The success criteria for SCE's PLP involves extending the existing DRSRP for consideration as a PL including:

- Developing processes, procedures and systems both internal to SCE and external interfacing with CAISO to ready this aggregated resource for bidding into CAISO wholesale markets as PL, dispatching the resource as a non-spinning reserve ancillary service and settlement of the resource after a PLP event.
- Developing methodologies and algorithms for estimating the amount of DR load available utilizing proxy telemetry installed at a statistical sampling of the end loads and reconciling the estimated load drop with the performance observed at both an aggregation point interval meter as well as the appropriate circuit or feeder SCADA meter.
- Proposing methodologies and algorithms for estimating load drop for small aggregated load DR in the MRTU market for settlement purposes utilizing interval metering at an aggregation point instead of at individual end loads.
- Determining whether the developed methodologies for proxy telemetry and settlement are sufficient for CAISO monitoring and settlement purposes. This will help determine both the economic and technical feasibility of small aggregated load DR functioning as PL in the MRTU market..

SCE expects to launch the PLP for use by Summer 2009, wherein SCE will offer this resource into CAISO's day-ahead non-spinning reserve ancillary services market beginning July 1, 2009. The scope of the project includes monitoring proxy telemetry information to determine available DR, bidding PL into the CAISO ancillary services market, dispatching PLP as scheduled by CAISO upon acceptance of SCE's bid and settlement based on observed load drop at a specific aggregation point.

2. PROJECT OBJECTIVES & PERFORMANCE MEASUREMENTS

2.1 Project Objectives

The objective of SCE's PLP is to explore the technical and economic feasibility of small SCE-aggregated Demand Response (DR) as a potential participant in the MRTU Measurement and Performance (MAP) markets for PL, including Dispatchable Demand Resource (DDR) and Proxy Demand Resource (PDR) products. SCE's intent with the PLP is to make small SCE-aggregated DR load available to begin Participating Load Acceptance testing with CAISO on, or about, June 2009. SCE and CAISO expect that many lessons will be learned throughout the PLP and that the results of the PLP will help inform whether small aggregated DR load is technically and economically capable of participating in the MRTU MAP PL market for DDR and PDR products. In addition, the PLP may result in recommended changes to CAISO PL requirements or technical specifications to make small aggregated DR load feasible in MRTU MAP.

It will be particularly challenging to determine how (and if) SCE's PLP will implement the CAISO's telemetry requirement for PL. At the present time, these customers do not have interval metering. The pilot will explore development of a "telemetry proxy" and even a metering proxy for settlement in lieu of actual metering at each customer site. SCE will work with CAISO early in the PLP development to come to a mutually acceptable metering solution which will likely include a combination of circuit metering and sample customer metering.

The following detailed implementation plan will outline the pilot plan for 2009. SCE will assess next steps based on results from the summer of 2009 and propose the best way to proceed. It is possible that SCE will recommend ending the PLP if it is apparent that small aggregated DR is not feasible for MRTU PL markets. It is also possible that the pilot findings will be very encouraging in which case SCE will propose a recommended way to move forward.

2.2 Project Deliverables

- Launching the PLP for use by Summer 2009.
- Development (and evaluation) of algorithms for converting a statistical sampling of the monitored current at customer sites into a forecast of available load for curtailment
- Development (and evaluation) of algorithms to estimate actual load drop after event dispatch based on available SCADA data and interval meter data with additional verification provided by telemetry information.
- Recommendations regarding whether small aggregated DR load is technically and economically capable of participating in the MRTU MAP PL market for DDR and PDR products.
- If small aggregated DR load is technically and economically capable of participating in the MRTU MAP PL market, recommend changes to CAISO PL requirements or technical specifications to make small aggregated DR load feasible in MRTU MAP.

2.3 Project Milestones

Milestone	Expected Date
Finalize Participating Load Pilot Agreement with CAISO	1/30/09
Complete agreement with customer for participation in Participating Load Pilot	1/28/09
Complete testing of candidate proxy telemetry devices	3/2/09
Purchase Order for proxy telemetry devices	3/6/09
Installation of proxy telemetry devices at customer site	6/2/09
Begin end-to-end Participating Load Acceptance Testing with CAISO	6/3/09
Begin development of algorithms to forecast available load for DR based on proxy telemetry	6/4/09
Begin development of algorithms for settlement based on SCADA data, interval meter data and verification of proxy telemetry information.	6/4/09
Complete end-to-end Participating Load Acceptance Testing with CAISO	6/24/09
Begin bidding Participating Load Pilot as non-spinning reserve into CAISO Day Ahead Market	7/1/09
Stop bidding Participating Load Pilot as non-spinning reserve into CAISO Day Ahead Market	10/14/09
Complete development of algorithms to forecast available load for DR based on proxy telemetry	2/24/10
Complete development of algorithms for settlement based on SCADA data, interval meter data and verification of proxy telemetry information.	2/24/10

3. PLAN SCOPE , ASSUMPTIONS, DEPENDENCIES AND CONSTRAINTS

3.1 Testing Scope

There are significant challenges when considering small aggregated DR functioning as PL. For the PLP, SCE will use a small subset of the customers enrolled in its Air Conditioning Cycling Program known as the Summer Discount Plan (SDP). Because these loads are very small (on the order of 1-2 kW per customer), SCE and CAISO acknowledge that it will not be cost-effective (in the foreseeable future) to provision 100 percent of these endpoint loads individually with real-time telemetry for purposes of satisfying CAISO's requirements currently in place for MRTU MAP. However, both SCE and CAISO seek to ensure that the estimate of load available for curtailment, as well as the measurement of load reductions after dispatch, is sufficiently accurate and timely to support the CAISO markets and grid reliability.

As described below, SCE's PLP may deviate from some of the current CAISO requirements for PL. The intent of the PLP will be to explore measurement and verification criteria for small SCE-aggregated DR load and to determine whether the proxies developed for telemetry and metering are acceptable to CAISO. Specific deviations for the PLP may be agreed upon and documented by SCE and CAISO.

3.1.1 Telemetry

SCE will work with CAISO to develop acceptable proxies for the telemetry and Settlement requirements. SCE's current plan for the telemetry proxy is as follows:

- SCE will install communicating Current Transformers (CT) on a representative sample of the PLP participants' air conditioners (A/C). The current data will be collected and used as a sample proxy telemetry to estimate the amount of curtailable A/C load in the pilot population.
- The frequency at which the communicating CTs send updates will be one of the variables explored, and signals may be sent upon CTs' detection of a change in current rather than at set intervals.
- SCE will work with its business partners to develop telemetry proxy algorithms to forecast load reductions based on sample CT data. If SCE's development yields algorithms that consistently and accurately predict the magnitude of load reductions available, CAISO will examine whether the telemetry requirements can be updated to allow this telemetry proxy in MRTU MAP.

3.1.2 Bidding

SCE will place bids for Non-Spinning Reserve Ancillary Service into CAISO's Day-Ahead Market. SCE will make reasonable efforts to recruit a customer base with the intent to approach the 1 MW minimum load bid criteria. However, because of the nature of A/C load, the amount of load will vary from day to day, based on many factors, including temperature.

3.1.3 Dispatch

In 2009, PLP dispatch will likely remain a manual process. SCE's will receive notification from CAISO whether the PLP bid was accepted and, if accepted, when and for how long it should be dispatched. The

actual dispatch will involve a manual workaround solution, but should be able to meet the 10 minute dispatch criterion.

3.1.4 Metering & Settlement

- In the near term, for the PLP, SCE will need to develop proxy data for Settlement. SCE will explore correlation between observed load drop utilizing the communicating CTs and the observed load drop via SCADA systems at the circuit or feeder level. The intent is to use the circuit or feeder level data for PLP Settlement.
- SCE's Edison SmartConnect™ advanced metering infrastructure, which will provide hourly interval usage data for residential customers, will not be available for the PLP. However, after Edison SmartConnect™ deployment, the one hour interval data for residential customers, SCE and CAISO will need to determine how to translate the data into the 5 minute intervals required.

3.1.5 Information and Technology

SCE and CAISO will attempt to integrate the PLP processes into the systems supporting MRTU Release 1, to the extent possible. However, business process and systems development to support all aspects of PL bidding, telemetry, dispatch, metering and settlement will take time to implement and will require some manual work around solutions in the near term. Further integration will be pursued and coordinated for MRTU MAP.

3.1.6 Funding and Authorization

SCE has applied for PLP funding in its Application for Approval of Demand Response Programs, Goals and Budgets for 2009-11 (A.08-06-001), filed with the CPUC on June 1, 2008 and amended on September 19, 2008, and also requested and received funding for the PLP as part of the 2009 "bridge" period authorized by the CPUC in Decision 08-12-038. SCE's implementation of the PLP is subject to approval from the CPUC, and the scope and budget of the PLP is constrained by any CPUC decisions approving the PLP. SCE acknowledges and agrees that CAISO will not bear any responsibility for expenses or costs that SCE incurs in undertaking the PLP.

3.1.7 Constraints

SCE will be administering the PLP utilizing the Experimental Schedule "UTILITY-CONTROLLED LOAD TESTS" (UCLT) tariff.

3.2 Testing Assumptions And Dependencies

- CAISO will launch MRTU Release 1 during the spring of 2009. It is possible that SCE can proceed with the PLP if CAISO does not launch MRTU Release 1. However, the scope of the 2009 pilot may need to be adjusted to adapt for the current market.
- SCE and CAISO agree to a PLP Agreement which outlines SCE's expected deviations from current CAISO requirements and technical specifications for DR to act as PL.

4. RISK FACTORS AND MITIGATION STRATEGY

Risk	Mitigation
CAISO MRTU Release 1 does not launch in Spring 2009	Continue PLP with adjustment for current CAISO PL market
Proxy Telemetry Devices do not arrive in time to install (or perform reliably in the field) for June 1 PL Acceptance Testing with CAISO	Partner with suppliers to ensure earliest possible delivery, installation, and commissioning
Preferred customer decides not to participate in PLP	Pursue alternative customers with possible delay to schedule
FERC Standards of Contact limit communication from Energy Procurement and Grid Control impacting ability to dispatch PL events	Early review of PLP business processes and data flow diagrams with FERC Standard of Conduct monitors
CAISO and SCE agreed to proceed with the current UCLT tariff testing availability limit of 400 minutes. There is risk of running out of testing time as a result	Utilize data collected during 400 minutes of events to develop the information needed

5. TEST PROJECT PLAN FOR PHASE I

5.1 High Level Plan Timeline

WBS ID	Task	Start	Finish
1	SCE Participating Load Pilot	10/1/08	2/24/10
1.1	CAISO	11/20/08	11/19/09
1.1.1	Develop Participating Load Pilot Agreement	11/20/08	1/30/09
1.1.2	Launch MRTU Release 1	3/31/09	4/1/09
1.1.3	Develop recommendation for 2010	11/5/09	11/19/09
1.2	Business Process Development	11/3/08	3/30/09
1.2.1	Telemetry & Bidding	11/3/08	2/2/09
1.2.2	Dispatch	11/3/08	2/20/09
1.2.3	Measurement & Verification + Settlement	11/3/08	3/11/09
1.2.4	Data Flow Diagram	11/10/08	3/30/09
1.3	Proxy Telemetry Device Procurement	10/1/08	5/1/09
1.3.1	Proxy Telemetry Device	10/1/08	5/1/09
1.3.1.1	Requirements Development	11/21/08	11/21/08
1.3.1.2	Vendor Identification	10/1/08	11/20/08
1.3.1.3	POs for Lab Testing	11/24/08	1/30/09
1.3.1.4	PO for Deployment	3/3/09	5/1/09
1.4	Customer Recruiting & Logistics	11/3/08	10/15/09
1.4.1	Customer Identification	11/3/08	12/24/08
1.4.2	Send Participation Agreement	12/24/08	12/24/08
1.4.3	Signed Participation Agreement	12/25/08	1/28/09
1.4.4	Logistics	1/29/09	3/26/09
1.4.5	Public Relations Event	10/15/09	10/15/09
1.5	Hosted Web Portal for Telemetry	1/5/09	11/6/09
1.5.1	Procurement	1/5/09	3/2/09
1.5.2	Implement Enhancements	3/3/09	4/27/09
1.5.3	Testing	6/3/09	6/24/09
1.5.4	Production	7/1/09	11/6/09
1.6	Testing	2/2/09	2/24/10
1.6.1	Lab Testing - Proxy Telemetry Device	2/2/09	3/2/09
1.6.1.1	MSO - Safety & Accuracy	2/2/09	3/2/09
1.6.1.2	IT – Telecommunications	2/2/09	3/2/09
1.6.2	Field Testing - Pilot Execution	5/4/09	10/14/09
1.6.2.1	Install Proxy Telemetry Units	5/4/09	6/2/09
1.6.2.2	End to end PL Acceptance Testing	6/3/09	6/24/09
1.6.2.3	Conduct PLP events - Bidding, Dispatch & Settlement	7/1/09	10/14/09
1.6.3	Measurement, Verification, Analytics & Settlement	6/4/09	2/24/10
1.6.3.1	Evaluation of PL Acceptance Tests	6/4/09	7/1/09
1.6.3.2	Evaluation of PL Pilot Events	7/2/09	2/24/10
1.6.3.3	Final Analysis for 2009 recommendation	10/22/09	11/4/09

5.2 High Level Testing Budget

Participating Load Pilot	Labor	Non-Labor				Sub Total
		Incentive	Devices & Installation	Sys. & Tech	Other	
Q1 2009	\$ 65,000		\$ 20,000	\$ 75,000	\$ 50,000	\$ 210,000
Q2 2009	\$ 65,000		\$355,000	\$125,000	\$100,000	\$ 645,000
Q3 2009	\$ 65,000			\$175,000	\$125,000	\$ 365,000
Q4 2009	\$ 65,000	\$350,000		\$140,000	\$ 77,000	\$ 632,000
2009 Total	\$260,000	\$350,000	\$375,000	\$515,000	\$352,000	\$1,852,000

Labor: Direct SCE labor for the Participating Load Pilot

Incentive: Payments to customers for participation in the PLP

Devices & Installation: Cost for procurement and installation of Proxy Telemetry and Metering equipment (hardware) necessary to conduct the PLP

Systems & Technology: Cost associated with the development of the proxy telemetry algorithms and settlement algorithms. This includes:

- The cost for contracting 3rd parties to develop the algorithms.
- The cost for establishing and hosting a 3rd party hosted web based database and system for communicating proxy telemetry information
- The cost for establishing and hosting 3rd party system for collecting and analyzing proxy telemetry information

Other: Non labor expenses associated with the PLP, including costs associated with engaging with the CAISO or other utilities and stakeholders for development of MRTU Participating Load markets and products. Other also includes consulting labor and fees associated with regulatory engagement and CAISO collaboration for purposes of the PLP and MRTU Participating Load market and product development.

Detailed Plan

1 Participating Load Pilot

1.1 CAISO

SCE has been having bi-weekly meetings with CAISO since early December 2008 to discuss issues related to launching the PLP. In combination with the monthly WG2 meetings, the discussions with CAISO have resulted in a better understanding of the future MRTU PL markets. The PLP will further inform how some SCE DR programs may be adapted for PL.

1.1.1 Develop Participating Load Pilot Agreement

SCE and CAISO have been working together to develop a PLP Agreement because SCE intends to deviate from the current CAISO requirements and technical specifications for DR to act as PL Participating Load.

1.1.2 Launch MRTU Release 1

CAISO is currently scheduling MRTU Release 1 Day-Ahead Market to be active on March 31, 2009 for the April 1, 2009 Real Time Market.

1.1.3 Develop recommendation for 2010

SCE and CAISO expect that many lessons will be learned throughout the PLP and that the results of the PLP will help inform whether small aggregated DR load is technically and economically capable of participating in the MRTU MAP PL market for DDR and PDR products. In addition, the PLP may result in recommended changes to CAISO PL requirements or technical specifications to make small aggregated DR load feasible in MRTU MAP.

1.2 Business Process Development

SCE has already completed three iterations of the different business and operating processes required to collect telemetry data, forecast the load available for DR curtailment, bidding load into the MRTU Day-Ahead Market, monitoring load during the real time market, receiving dispatch signals from CAISO, dispatching a PLP event, collecting SCADA and interval meter data for measurement and evaluation and submittal of estimated load drop into the CAISO settlement process. These processes and related data flow diagrams will be iterated with CAISO in order to meet the requirements for both parties. SCE will also review the processes and data flows with SCE's FERC Standard of Conduct market monitors in order to ensure compliance with FERC requirements.

1.3 Procurement

1.3.1 Proxy Telemetry Device

SCE will be installing devices to monitor current at a statistical sampling of air conditioners within the population of PLP participants.

1.3.1.1 Requirements Development

SCE utilized CAISO requirements and technical specifications to develop requirements for the communicating CTs that will be utilized to monitor current. This was completed in December 2008.

1.3.1.2 Vendor Identification

SCE has identified four vendors with Commercial off-the-shelf products that include communicating CTs to monitor current.

1.3.1.3 POs for Lab Testing

SCE has ordered small quantities from each vendor to conduct safety, accuracy and telecommunication testing.

1.3.1.4 PO for Deployment

The results of the Lab Testing in combination with other business considerations will determine which of the vendors will be awarded a contract for the purchase of communicating CTs to be deployed at a statistical sampling of air conditioners enrolled in the PLP.

1.4 Customer Recruiting

SCE's PLP will utilize customers currently enrolled in SDP and will compensate the customer an additional \$100 per air conditioner over and above their incentive for participating in the SDP program. SCE has identified a customer that offers a very promising environment for the initial year of testing for the PLP. The customer is a single large customer with over 2,500 A/C devices currently on SDP. SCE has engaged the customer who is currently reviewing the pilot agreement provided by SCE.

SCE will be operating the PLP utilizing the Experimental Schedule UCLT "Utility-Controlled Load Tests" tariff with certain constraints to Nature of Tests, Test Events, Types of Load, Period of Tests and Control Devices.

1.5 Hosted Web Portal for Telemetry

As noted previously, SCE will be implementing work around solutions for some of the business processes associated with bidding PL into the CAISO markets. One example of that is the gathering and distributing of telemetry information which indicates the amount of load available for DR. This information will not be initially integrated with SCE's system interfaces with CAISO or SCE's Power Procurement. In lieu of a

direct interface, SCE will contract a 3rd party to provide a database and web interface to gain visibility into the telemetry information. SCE will utilize the 2009 PLP to gather requirements for an integrated solution for communicating telemetry as described in the DR Portal section in Volume 2 of the Application for Approval of Demand Response Programs, Goals and Budgets for 2009-11 (A.08-06-001).

1.6 Testing

1.6.1 Lab Testing

As mentioned in 1.3.1.3, SCE will conduct lab testing on the proxy telemetry devices to gain information on safety, accuracy and telecommunication reliability. This information will support the procurement decision for the field deployment

1.6.2 Field Testing

1.6.2.1 Install Proxy Telemetry Devices

The receipt and installation of the proxy telemetry devices is the critical path that will determine whether the PLP can conduct PL Acceptance testing with CAISO in June as currently scheduled. SCE is exploring both a turn key solution with device manufacturers providing installation services or leveraging the vendors providing installation services for the SDP.

1.6.2.2 End-to-End PL Acceptance Testing

The CAISO has an established procedure for Acceptance Testing of PL. SCE will conduct end-to-end system testing of the PLP infrastructure in combination with CAISO PL Acceptance Testing in June.

1.6.2.3 Conduct PLP events – Bidding, Dispatch & Settlement

SCE will begin bidding PL into the MRTU Day-Ahead Market upon successful completion of PL Acceptance Testing. Events will include:

- Evaluation of telemetry information to inform bidding into the CAISO MRTU day ahead ancillary services market for non spinning reserves.
- Participating Load bid into CAISO MRTU day ahead ancillary services market for non spinning reserves.
- CAISO acceptance of SCE's bid.
- CAISO scheduling and SCE dispatch of SCE's PLP resource
- Measurement & Evaluation of PLP event results
- Settlement of the PLP DR in CAISO MRTU

1.6.3 Measurement, Verification, Analytics & Settlement

SCE and their business partners are already reviewing the DRSRP data to develop the algorithms for forecasting available load utilizing proxy telemetry information as well as the algorithms for calculating actual load curtailment for the purposes of settlement. These algorithms will be further refined with input from each of the PLP events.

1.6.3.1 Evaluation of PL Acceptance Tests

Once the communicating CTs are installed, SCE will initiate PL Acceptance Testing with CAISO. SCE and our business partners will examine the proxy telemetry data to develop estimates of available load. This information will inform the amount of load that will be bid into the CAISO MRTU day ahead ancillary services market for non spinning reserves.

Acceptance tests will also test the dispatch of curtailment events and the available interval metering data will be examined to correlate the PLP test event with a decrease to the observed usage at the meter(s). The estimated load drop will be further informed by examining the proxy telemetry data both before and after an event.

1.6.3.2 Evaluation of PL Pilot Events

The intent of the PLP will be to explore measurement and verification criteria for small SCE-aggregated DR load and to determine whether the proxies developed for telemetry and metering are acceptable to CAISO. Once the PL Acceptance Testing is complete, SCE will begin utilizing proxy telemetry as well as available weather forecast information and other data to estimate the amount of load available for bidding into the CAISO MRTU day ahead ancillary services market. Refining the algorithms for estimating available load based on proxy telemetry data as well as algorithms for correlating a decrease to the observed usage at the meter(s) will be a primary task of SCE's PLP. The goal is to determine whether the information provided by proxy telemetry and correlation with the observed usage at the meter(s) has enough fidelity to qualify as settlement quality for CAISO markets subject to WECC and FERC requirements.

1.6.3.3 Final Analysis for 2009 recommendation

Both SCE and CAISO seek to ensure that the estimate of load available for curtailment, as well as the measurement of load reductions after dispatch, are sufficiently accurate and timely to support the CAISO markets and grid reliability. Once testing is complete, SCE will collaborate with our business partners as well as CAISO to develop a report containing recommendations based on the 2009 PLP results. SCE and CAISO expect that many lessons will be learned throughout the PLP and that the results of the PLP will help inform whether small aggregated DR load is technically and economically capable of participating in the MRTU MAP PL market for DDR and PDR products. In addition, the PLP may result in recommended changes to CAISO PL requirements or technical specifications to make small aggregated DR load feasible in MRTU MAP.

6. GLOSSARY

Term or Acronym	Definition
A/C	Air Conditioner
CAISO	California Independent System Operator
CERTS	Consortium for Electric Reliability Technology Solutions
CT	Current Transformer
DDR	Dispatchable Demand Resource
DLC	direct load control
DR	Demand Response
DRSRP	Demand Response Spinning Reserves Pilot
FERC	Federal Energy Regulatory Commission
MAP	Markets & Performance (formerly MRTU Release 1A)
MRTU	Market Redesign & Technology Update
PDR	Proxy Demand Resource
PL	Participating Load
PLP	Participating Load Pilot
SCADA	Supervisory Control And Data Acquisition
SCE	Southern California Edison
SDP	Summer Discount Plan
WG2	Working Group 2

7. Proposed quarterly reports

CAISO Energy Division has requested IOUs to provide samples of the reports that the IOUs propose to use for the quarterly PLP reporting that Energy Division is considering as a method to fully monitor and evaluate the progress of these programs. The following section are examples of the project reporting that SCE can make available.

7.1 High Level Plan Timeline

WBS ID	Task	Baseline		Actual		% Complete
		Start	Finish	Start	Finish	
1	SCE Participating Load Pilot	10/1/08	2/24/10	10/1/08		12%
1.1	CAISO	11/20/08	11/19/09	11/20/08		61%
1.1.1	Develop Participating Load Pilot Agreement	11/20/08	1/30/09	11/20/08		75%
1.1.2	Launch MRTU Release 1	3/31/09	4/1/09			0%
1.1.3	Develop recommendation for 2010	11/5/09	11/19/09			0%
1.2	Business Process Development	11/3/08	3/30/09	11/3/08		80%
1.2.1	Telemetry & Bidding	11/3/08	2/2/09	11/3/08		80%
1.2.2	Dispatch	11/3/08	2/20/09	11/3/08		80%
1.2.3	Measurement & Verification + Settlement	11/3/08	3/11/09	11/3/08		80%
1.2.4	Data Flow Diagram	11/10/08	3/30/09	11/10/08		80%
1.3	Proxy Telemetry Device Procurement	10/1/08	5/1/09	10/1/08		45%
1.3.1	Proxy Telemetry Device	10/1/08	5/1/09	10/1/08		45%
1.3.1.1	Requirements Development	11/21/08	11/21/08	11/21/08	11/21/08	100%
1.3.1.2	Vendor Identification	10/1/08	11/20/08	10/1/08	11/20/08	100%
1.3.1.3	POs for Lab Testing	11/24/08	1/30/09	11/24/08		44%
1.3.1.4	PO for Deployment	3/3/09	5/1/09			0%
1.4	Customer Recruiting & Logistics	11/3/08	10/15/09	11/3/08		61%
1.4.1	Customer Identification	11/3/08	12/24/08	11/3/08	12/24/08	100%
1.4.2	Send Participation Agreement	12/24/08	12/24/08	12/24/08	12/24/08	100%
1.4.3	Signed Participation Agreement	12/25/08	1/28/09	12/25/08	1/28/09	100%
1.4.4	Logistics	1/29/09	3/26/09			0%
1.4.5	Public Relations Event	10/15/09	10/15/09			0%
1.5	Hosted Web Portal for Telemetry	1/5/09	11/6/09			0%
1.5.1	Procurement	1/5/09	3/2/09			0%



Participating Load Pilot

WBS ID	Task	Baseline		Actual		% Complete
		Start	Finish	Start	Finish	
1.5.2	Implement Enhancements	3/3/09	4/27/09			0%
1.5.3	Testing	6/3/09	6/24/09			0%
1.5.4	Production	7/1/09	11/6/09			0%
1.6	Testing	2/2/09	2/24/10			0%
1.6.1	Lab Testing - Proxy Telemetry Device	2/2/09	3/2/09			0%
1.6.1.1	MSO - Safety & Accuracy	2/2/09	3/2/09			0%
1.6.1.2	IT - Telecommunications	2/2/09	3/2/09			0%
1.6.2	Field Testing - Pilot Execution	5/4/09	10/14/09			0%
1.6.2.1	Install Proxy Telemetry Units	5/4/09	6/2/09			0%
1.6.2.2	End to end PL Acceptance Testing	6/3/09	6/24/09			0%
1.6.2.3	Conduct PLP events - Bidding, Dispatch & Settlement	7/1/09	10/14/09			0%
1.6.3	Measurement, Verification, Analytics & Settlement	6/4/09	2/24/10			0%
1.6.3.1	Evaluation of PL Acceptance Tests	6/4/09	7/1/09			0%
1.6.3.2	Evaluation of PL Pilot Events	7/2/09	2/24/10			0%
1.6.3.3	Final Analysis for 2009 recommendation	10/22/09	11/4/09			0%

7.2 High Level Testing Budget

	Participating Load Pilot	Labor		Non-Labor			Sub Total
		Incentive	Devices & Installation	Sys & Tech	Other		
Budget							
	Q1 2009	\$ 65,000	\$ 20,000	\$ 75,000	\$ 50,000	\$ 210,000	
	Q2 2009	\$ 65,000	\$ 355,000	\$ 125,000	\$ 100,000	\$ 645,000	
	Q3 2009	\$ 65,000		\$ 175,000	\$ 125,000	\$ 365,000	
	Q4 2009	\$ 65,000	\$ 350,000	\$ 140,000	\$ 77,000	\$ 632,000	
	2009 Total	\$260,000	\$375,000	\$515,000	\$352,000	\$1,852,000	
Actual	Q1 2009						
	Q2 2009						
	Q3 2009						
	Q4 2009						
	2009 Total						

Note that there is up to a one month delay between completion of the month and when financial results for that month are available.

7.3 Lessons Learned

Summary of findings to date