# PG&E Comments

# CAISO Draft Final Proposal for the Design of Proxy Demand Resource

| Submitted by | Company | Date Submitted |
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Pacific Gas and Electric Company (PG&E) appreciates the work of the CAISO to develop the Draft Final Proposal for the Design of Proxy Demand Resource (PDR). The draft final proposal is much improved and that, with certain changes as noted below, it is ready to be submitted to the CAISO Board of Governors.

# KEY ISSUES

- **General Support of PDR proposal**: PG&E supports the general PDR approach that the CAISO has adopted a mechanism to implement the "net DR" approach advocated at the earliest instance by PG&E as a workable alternative to Participating Load (PL). PG&E also supports the further inclusion of Residual Unit Commitment (RUC) and Ancillary Service (A/S) participation subject to additional disclosure as to how this would be implemented.

- **Primary Concern, Load Serving Entity (LSE) – Curtailment Service Provider (CSP) Relationship**: PG&E's primary concern is that the final PDR proposal be very clear that the LSE can reject a customer from being included in a PDR if the appropriate commercial relationship with the CSP, customer, and LSE has not been instituted. PG&E defines a "commercial relationship" in this context as a signed and binding agreement or a tariff between the LSE and CSP or customer on the cost-recovery mechanism for the over-payment by the LSE of energy purchased in the Day-Ahead markets. PG&E believes that it was the implicit understanding of all the stakeholders in the PDR process to require that these parties would have to develop and formalize this financial arrangement outside of the CAISO. Since PDR requires the LSE to change the normal settlement so that LSE will pay the CAISO for power the LSE's customer does not consume, there needs to be an explicit mechanism to assure that the LSE can recover this over-payment through an arrangement with the CSP or customer. The language the CAISO distributed to the stakeholders on August 12 may be one way to meet this requirement, however; PG&E suggests some minor additions as noted below.

  On page 10;

  After additional discussions with stakeholders, the majority of stakeholders as well as the CAISO agreed that the settlement between the LSE and the CSP should remain outside of the CAISO's settlement process. Since there will be a need for commercial agreements/tariffs outside of the CAISO between the relevant parties to address the settlement, these agreements/tariffs must be in place prior to registering a PDR resource with the CAISO unless the parties agree otherwise.

On page 21:

2. In general, the LSE or UDC may reject a Registration request on the ground that it is inaccurate or forbidden by regulation. Some examples[8] of possible rejection reasons include:

   - Incorrect information listed in the application
   - Resource(s) not associated with the LSE and/or UDC
   - Resource(s) registered with another CSP for the same product/time
   - Conformance with local regulatory agency requirements
   - Lack of necessary commercial agreement/tariffs between parties

Footnote 8: These are guidelines as to why a registration could be rejected and is not meant to be an exhaustive list. The LSE can reject a registration for any reason.

- **Primary Concern, Allowance for Sufficient Implementation Time**: The CAISO's timetable for the design, testing, and implementation of PDR is ambitious. PG&E is concerned that the CAISO's schedule has not allowed adequate time to ensure that all of these steps receive the attention needed to be done in a manner consistent with the Investor Owned Utilities (IOUs) and the CAISO's high standards. PG&E recommends a thorough analysis of the time given and adjustments as needed to maintain quality standards at the IOUs and the CAISO. PG&E notes that in Section 2, the CAISO states that "*an implementation plan will be shared … following the September Board meeting*". It will be critical that this implementation plan provide a thorough and complete process for PDR.

  It is more important that the CAISO develop and test PDR to ensure the highest quality of reliability and operation, rather than focus on PDR being ready for summer of 2010. As PG&E has previously indicated, it is unlikely that there is sufficient time for PG&E to implement significant amounts of PDR for summer 2010.

  PG&E believes that it is important to note that this proposal is a transitional document and that significant time and resources will need to be devoted to allow the CAISO and the IOUs the capability to design, test, and implement PDR.

- **Dispute Resolution**: On page 20, in section 6.3, the graphic shows a CAISO arbitration/dispute resolution mechanism. There is no accompanying discussion in the document regarding the process and criteria by which the CAISO will settle potential disputes. PG&E requests that this process and the criteria on which these decisions are made be explicitly outlined.

  It needs to be clearly stated that the CAISO will have circumscribed authority in resolving registration disputes. The CAISO may resolve disputes between a CSP and a CAISO rejection of a registration. However, the CAISO cannot resolve a dispute between a LSE and a CSP on registration. PG&E notes that the LSE/CSP agreement would be a very onerous task for the CAISO to police and given the bilateral nature of the proposed LSE and CSP relationship, PG&E believes that dispute resolution should be between the LSE and CSP alone.

- **PDR Effect on Load Distribution Factors**: PG&E requests clarification on how CAISO will adjust the load distribution factors (LDFs) and the State Estimator based on the PDR bids into the CAISO markets. An illustrative example of how the LDFs and the State

Estimator will change based on the accepted PDR bids would be extremely useful to allow analysis of the impact that PDR will have on the markets. The proposal should indicate that this information will be presented as part of the implementation plan for PDR.

Also, the proposal does not provide sufficient detail with respect to treatment of LDFs to determine if the CAISO approach will create undue problems. LDFs used on a Custom Load Aggregation Point (CLAP) for PDR scheduling and settlements should be on same basis (same dynamic selection/iteration) as the LDFs used for load in the Integrated Forward Market (IFM), Hour Ahead Scheduling Process (HASP), and Real-Time Market (RTM); it is not clear what the CAISO approach will be. Further, Sub-LAP (SLAP) PDRs may introduce software solution problems (e.g. adverse congestion and pricing) unless the CAISO models or treats the PDR scheduled/settled at SLAPs at their appropriate nodes; the CAISO approach to handle these issues has not been provided.

- **Anti-Gaming Safeguards**: PG&E believes that significantly more detail is needed in order to fully understand how the CAISO intends to prevent gaming. The proposal identified several gaming opportunities but only provides conceptual solutions. This makes it very difficult for PG&E to assess whether adequate measures will be in place once PDR is implemented. For example, the "Good Faith" language is likely to be inadequate if well defined metrics to identify gaming are not established. The CAISO has deferred to a later date to determine the thresholds associated with those metrics.

  One measure that PG&E recommends is that the minimum bid floor be included amongst the measures to deter gaming. The bid floor reduces the risk of the "price taker" gaming as the CAISO noted. PG&E recommends that a reasonable bid floor is a combination of a heat rate and the average weekly price of natural gas. This aligns well with the existing demand response programs that the IOUs operate, some of which are based on a heat rate. PG&E believes that a bid floor heat rate of a 14,000 MMBTU per GWh is reasonable, as this is roughly the heat rate of the generation equipment that demand response was designed to replace.

  PG&E views a weather-sensitive adjustment instead of a morning-of load multiplier as an important future enhancement to the PDR product. The morning-of adjustment is primarily intended to capture changes in weather that would affect the amount of load. The proposed 20% bi-directional cap in the morning-of adjustment limits the size of the gaming possible, but it does not prevent a CSP from increasing its revenues 20% through morning-of baseline manipulation.

- **Local Market Power Mitigation**: The proposal needs to specify whether Local Market Power Mitigation (LMPM) provisions will exist for PDR or not. It is reasonable to treat PDR as equivalent to other generation resources and apply LMPM. To further limit the possibility of unrestricted implicit virtual bidding, PDR should fall under the Uninstructed Deviation Penalty (UDP), similar to the generation resource provisions. This will likely require a re-examination of the applicability of the 5 MW exemption for PDR. PG&E is concerned about UDP due to the fact that they can set Locational Marginal Prices (LMPs); thus one marginal MW of $500 PDR could be disruptive to the markets.

- **Resource Adequacy**: The proposal should provide some framework or outline for the counting Resource Adequacy (RA) and other associated provisions and requirements as they relate to PDR. For example, will PDR resources be tracked as RA or non-RA resources? How will PDR bids be handled in the Residual Unit Commitment (RUC)? How will the RA "$0 bid" requirement be enforced if PDR is bid into RUC?

  Currently, most DR programs are counted for RA and it would be inappropriate to allow PDR to collect RUC payments for capacity that has already been paid for by the LSE.

Further, the proposal's statement that PDR cannot be bid at a zero price may result in this being unworkable with respect to the RUC issue outlined above.

- **PDR Participation in Hour Ahead Scheduling Process (HASP)**: PG&E requests clarification as to why PDR is permitted to participate in the HASP when generation resources are not. This is asymmetric and should be addressed in the implementation plan.

  In PG&E's interpretation of the proposal, it appears that hourly metered PDR would settle on HASP prices. This should not be the case as this would create distinct differences and inequities for various PDR participants based solely on the type of meter rather than more fundamental reasons. This may inadvertently provide incentives for metering choices in one fashion or the other. PDR resources should be treated in a manner consistent with in-area resources and settle on the 5-minute Real-Time price; those PDRs with hourly meters that wish to participate in HASP/RTM would be required to upgrade to sub-hourly metering.

- **Switching Rules**: Provisions should be included with respect to switching rules. The conversion from a Participating Load (PL) to PDR and back again could occur in an attempt to game the system and take advantage of the difference in the Default LAP (DLAP) and CLAP prices if these DLAP and CLAP prices switch relative positions periodically. An additional concern is the possibility to switch from a CLAP to SLAP and attempting to game of predictable periodic price differences.

- **Sunset Date**: Given the fact that PDR is a new type of product, the CAISO should consider a sunset date of December 31, 2011 for the product's potential removal as a part of the CAISO markets. This matches well with the full deployment of the IOUs smart meters and would be a natural point to allow load to participate in the market via other means. If PDR is being used effectively in the market, it would be relatively simple to extend the tariff and if there were significant concerns about PDR in the market, a sunset date will allow the stakeholders a simple option to handle these issues.

  The inclusion of a sunset date recognizes that PDR is a transitional product on the path towards the fully symmetrical market that the Market Steering Committee has advocated for.

# ADDITIONAL CONCERNS AND COMMENTS

- **New CAISO Fees**: The proposal is silent on any new fees that apply specifically to PDRs. PG&E requests that the CAISO indicate the expected size of the new fees to cover the implementation and operation of PDR. PG&E also requests that the CAISO indicate how it plans to collect those fees from participants. In particular, will the fees be allocated to the overall rate base, or if it is to be paid by each CSP, or to be paid per PDR.

- **Market Simulation**: PG&E also believes that the market simulation should be done with a large amount of PDR, not just the small pilot programs currently available, so that the system is tested to handle the anticipated large amounts of PDR in the market.

  PG&E believes that the PDR A/S functionality should be implemented for the market simulation and that the market simulation should be combined with scarcity pricing in the same timeframe. This will allow tests of using PDR in the A/S markets as a hedge.

- **Timeline for Different Markets**: PG&E requests clarification from the CAISO on its timeline to release all PDR market products. The proposal includes Functionality for the

Day Ahead Market: Energy, RUC, A/S Non-Spin Reserve, and the Real Time Market: Energy, A/S Non-Spin Reserve.

- **Ten Day Acceptance Limit**: On page 21, in section 6.3, point 5, the 10 day time limit could be artificially constraining at certain times when a large amount of approval requests are in the queue. Instead of a hard limit, PG&E proposes an adjustable limit based on the number of approval requests in the queue, i.e. a 10 day time limit plus an additional day for every 100 approval requests in the queue. The exact adjustment value would depend on the specific processes set up to handle approvals and would be adjusted based on actual testing.

  On page 21, in section 6.3, point 9, the 10 day time limit could be artificially constraining at certain times when a large amount of defense requests are in the queue. Instead of a hard limit, PG&E proposes an adjustable limit based on the number of requests in the queue, the same as for approvals, i.e. a 10 day time limit plus an additional day for every 100 requests in the queue. The exact adjustment value would depend on the specific processes set up to handle defenses and would be adjusted based on actual testing.

- **Sub-Hourly Metering Clarification**: On page 23, in section 8, in footnote 9, the proposal states that "*only customers with sub-hourly metering intervals are eligible for 5 minute dispatch*". PG&E requests that the CAISO specify what type of sub-hourly metering is acceptable. PG&E proposes that 15 minute interval meter data is required to participate in the 5 minute dispatch, in the same way that PDR resources are required to have 15 minute interval meter data to participate in the Non-Spinning Ancillary Service market.

- **Operational Anomalies Language**: On page 36, the proposal states that a Previous Event Day can include any day on which there is "any operational anomalies, such as an outage." PG&E would recommend deletion of this as it is vague, could be gamed and is not consistent with how current retail baselines are calculated.

- **Baseline Selection Rules**: The draft final proposal indicated a need for a qualification requirement to measure the predictive quality of the baseline calculation. The 10-in-10 baseline is likely to be a poor predictor for customers who have highly variable loads. The CAISO should define the quality of fit desired to participate in a PDR to ensure that CSPs cannot deliberately choose highly variable loads in an attempt to game the market.