

Comments on Draft Final Proposal for Design of Proxy Demand Resource (PDR)
Department of Market Monitoring
August 14, 2009

Overview

The Department of Market Monitoring (DMM) appreciates the challenges involved in developing ways for increased participation by demand response (DR) directly in the ISO market, particularly within the constraints imposed by other aspects of California's current retail and wholesale market design. DMM also recognizes that the ISO's Proxy Demand Resource (PDR) proposal incorporates extensive stakeholder input and internal ISO consideration how to balance the goal of encouraging increased participation by DR with the need to provide a reasonable level of assurance that demand reductions being paid for are actually received.

As noted throughout the ISO's PDR proposal, the key challenge in meeting this second goal is accurately establishing the baseline upon which demand reductions from PDRs is measured. Establishing an accurate baseline is difficult due to inherent measurement and data accuracy problems, as well as the fact that PDR participants have an incentive to "game" the baseline methodology in order to increase the estimated demand reductions for which they are paid. As noted in the ISO's PDR proposal, while a number of steps may be taken to establish a more accurate baseline and deter "gaming", many of these steps can be administratively burdensome on the ISO and may require frequent updating market rules to respond to sources of inaccuracy or potential "loopholes" that may be only be specifically identified or quantified once the PDR is in effect.

While the ISO's PDR proposal outlines some general steps the ISO will take to ensure that the baseline used to determine PDR impacts is reasonably accurate, DMM believes that further details of this approach should be developed prior to PDR implementation. Specifically, DMM believes more emphasis should be placed on (a) defining the specific prospective measures and processes that will be employed by the ISO to ensure the baseline used to measure PDR impacts is reasonably accurate, (b) establishing more specific consequences for non-compliance with program requirements, and (c) ensuring that the ISO can quickly modify rules to address any "gaming" that may be suspected. Several examples of how this might be done are provided below. DMM recognizes that all of these additional details may not need to be specified in the ISO's PDR tariff filing, but believes that it is important to continue to develop and specify these details in order to ensure that the PDR proposal is ultimately successful and is continually improved once it is implemented.

Specific Comments

Baseline Calculations

The ISO's PDR proposal outlines a number of "proactive" techniques that might be employed to mitigate what the paper describes as "gaming" of PDR rules. (Section 4.5, p.14-15). However, the ISO's proposal does not seem to actually incorporate many of these key "proactive techniques (e.g. more advanced techniques for baseline

determination such as adjustments for weather and/or minimum requirements for the “quality of fit” of the baseline model, a revenue cap, a bid floor, etc). For instance, the proposal notes that “[b]y employing techniques to artificially inflate historical usage or bias the selection of which days are used in the calculations, it is possible for a CSP to be overcompensated ...[and that] baseline calculations are, by definition, controversial since they can only estimate demand, as there is no physical way to measure the demand.” However, while the proposal notes that some options could be implemented to reduce gaming associated with baseline qualifications, the proposal does not appear to adopt such options because “[t]he additional work in the qualification process would be onerous to ISO staff” (p.15). As discussed in more detail in the section on *Implementation Issues*, accurately determining the baseline upon which DR impacts are measured and paid is very labor intensive and will clearly require a significant commitment of ISO resources – either by a business unit within the ISO tasked to implement and monitor PDR, or an entity that might be hired by the ISO to perform critical monitoring and verification activities.

Good Faith Language

The only two “proactive” measures incorporated in the ISO’s recommended approach appear to be (1) the inclusion of “Good Faith Language” in the agreement under which PDRs participate in the ISO markets indicating that “gaming is not an acceptable practice in wholesale markets” and (2) a 20% cap on the morning adjustment on the participants baseline consumption level (p.16). The ISO’s proposal indicates that the “Good Faith” language may “not only dissuade potential offenders, but may also give market participants adversely affected by gaming practices grounds for financial recuperation.” (p.14). While including such “Good Faith” language may help deter gaming by some participants, DMM questions whether including such language would in practice be enforceable in any way by the ISO or other participants that might be adversely affected by the behavior. DMM has encouraged Market & Infrastructure Development (M&ID) to work with CAISO Legal staff on issues such as this in order to develop more specific rules and the associated consequences.

Registration Checks

With respect to the use of registration checks to prevent “double counting”, the proposal indicates that the ISO does not intend to validate registration of individual residential accounts (p.15), but later recommends that “the ISO will perform registration checks as part of the registration process” (p.17). DMM suggests that the ISO could be more specific as to how registration checks may be applied to prevent “double counting”, and that consequences of any “double counting” could be specified in advance in order to provide a clear deterrent to any double counting – either due to intentional gaming or unintentional data issues. By clearly specifying these rules and consequences in advance in its tariff, this would allow the ISO to directly administer this sanction under its tariff, rather than relying on some type of reactive mitigation.

CAISO Authority to Deny Payments or Participation

One approach that might be considered is to establish clear authority for the ISO to suspend market participation by a PDR resource and/or deny payments. The criteria for

such sanctions could include (a) double dipping in multiple DR programs (which should be expressly prohibited in the PLA), (b) failure to provide adequate data for determining baseline, and (c) failure to respond to tailored information requests to further validate baseline or historical curtailment performance against baseline. Under this approach, if an entity was providing dubious curtailment services, the ISO would have clear authority to investigate the situation and could ultimately suspend their participation in the market if they were uncooperative in providing the information or provided insufficient information to confirm their estimated baseline.

This approach would also enable the ISO to address suspected “gaming” on their own, rather than attempting to refer behavior to FERC’s Office of Enforcement as “gaming”. Under current FERC market rules, there is no prohibition on “gaming”. While FERC rules prohibit *market manipulation*, recent publicly released orders suggest that the Commission may require a very clear finding of intentional “false information” in order to conclude that a violation of rules prohibiting market manipulation has occurred. Thus, in practice, DMM cautions that it would be very difficult to rely on referrals to FERC’s Office of Enforcement (OE) as a way of dealing with suspected “gaming” of the baseline methodology. Absent clear evidence of fraudulent behavior, it is unlikely such behavior could be effectively mitigated with this type of approach. Instead, DMM recommends the ISO establish its own authority to take mitigating actions if “gaming” is suspected.

CLAP/DLAP Arbitrage

Another example of behavior that the proposal identifies as a potential form of “gaming” which should be more clearly defined and prohibited before-the-fact if deemed to be undesired by the ISO is the formation of CLAPS designed to arbitrage CLAP/DLAP prices (p.14). However, the PDR rules appear to be specifically designed to encourage PDRs to do focus on areas with high real time prices, so that CLAPs would tend to have higher prices than DLAPs. Thus, DMM notes that if the ISO believes that PDR entities should not have unfettered discretion on which nodes they use in establishing a Custom LAP, limitation of this should be established in advance.

PJM Experience

It is important to note that the concerns being raised here are not “hypothetical” but based on observed experiences from other ISOs that have implemented similar programs. For example, in its “2008 State of the Market Report for PJM”¹, the PJM market monitor cites a number of deficiencies with PJM’s economic demand response programs that are specifically related to determining Customer Base Lines (CBL):

Since the beginning of the program, there have been significant issues with the approach to measuring demand-side response MW. An inaccurate or unrepresentative CBL can lead to payments when the customer has taken no action to respond to market prices. Substantial improvement in measurement and verification methods

¹ The relevant section of the report (Part 1, Volume 2) can be found at http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2008/2008-som-pjm-volume2-sec2.pdf

must be implemented in order to ensure the credibility of PJM demand-side programs.
2

The report includes several recommendations from the PJM market monitor for improving the veracity of the Customer Base Lines and purported curtailments.³ We strongly recommend that the ISO closely review the experiences of PJM and other ISOs and consider incorporating some of the more recent changes made to these programs for improving measurement and verification of performance as well as recommendations for future changes.

Monitoring & Review Process

The ISO's proposal indicates that the ISO will employ "a battery of software tools and business processes to monitor and flag potential gaming incidents" (p.16). The proposal goes on to indicate that:

Should a PDR resource repeatedly fall outside of identified ranges or fail multiple metrics, a market monitoring study would be performed to determine if gaming has occurred. In the end if a study concludes that gaming has occurred, standard monitoring practices could be involved and/or the PDR resource may be removed from participation in the ISO markets. (p.17)

As noted above in the section on ***CAISO Authority to Deny Payments or Participation***, DMM recommends that the CAISO rely on actions that might be directly implemented by the ISO in response to "gaming" – such as modifying market rules or denying participation by PDR resources – rather than relying on any referrals of suspected "gaming" to FERC under Federal rules prohibiting *market manipulation*. Moreover, to the extent that the ISO plans to rely on its ability to respond to potential "gaming" by denying participation by PDR resources or modifying aspects of program design (e.g. such as settlement thresholds in the Business Process Manual), this authority may need to be included in the ISO's tariff filing on PDR. Thus, DMM has encouraged M&ID to work with CAISO Legal staff on issues such as this in order to develop more specific rules and the associated consequences as part of its PDR filing.

The general approach adopted by PJM under recent revisions to their Economic Demand Response Program appears to be described under a section entitled *Activity Review Process* in the PJM's *2008 State of the Market Report* (pp 110-111). Under PJM's Activity Review Process, the business unit within PJM responsible for this DR program employs a variety of screens to identify potential behavior inconsistent with specific rules for this program, and investigates such behavior by reviewing and requesting data such as (1) notifications and settlements (which would appear to be equivalent to bids and meter data under the PDR program, (2) the participant's registration contract, (3) requiring

² See Footnote 1, p 106

³ Additional analysis and recommendations from the PJM market monitor can be found in a separate report titled "Barriers to Demand Response in PJM", July 1, 2009 (http://www.monitoringanalytics.com/reports/Reports/2009/Barriers_to_Demand_Side_Response_in_PJM_20090701.pdf)

participants to submit a detailed description of load reduction activities, (4) written verification from end-use customers regarding DR activity on specific days, and (5) an optional on-site review. Based on this review, PJM may terminate the participant's registration and PJM may refer the participant directly to FERC's Office of Enforcement and/or to PJM's Market Monitor.

Implementation Issues

As reflected in the ISO's PDR proposal, administration of the PDR program will be extremely data intensive and involve substantial on-going activities relating to verification, monitoring, assessment and potential rule updates/modifications. DMM has noted that none of the existing business units in the ISO appear to currently have the staffing and expertise necessary to administer these PDR functions, but that there is an extensive existing industry specializing in the types of data analysis, verification and monitoring involved in PDR administration. M&ID staff have indicated that it has not identified which business unit in the ISO would be responsible for PDR monitoring and verification (M&V), but that it recognizes that significant resources need to be allocated to this function and that it may make sense to hire an external entity with expertise and experience in M&V to perform this function.

DMM believes that this approach is viable, but notes that it is important that the responsibility for PDR monitoring and verification (M&V) be clearly assigned – whether this is to a specific ISO business unit or an external entity with expertise and experience in M&V hired to perform this function. The business unit or outside entity charged with PDR M&V should also be tasked with playing a key role in helping to refine and modify program rules in response to any gaming concerns that are identified through these M&V activities, since this business unit or entity should have the expertise and data analysis capabilities to suggest specific changes or thresholds that could target the “gaming” being observed without having other undesirable consequences for other participants. In addition a firm commitment is needed from CAISO management to ensure that sufficient resources and priority is placed on PDR administration, M&V activities, and timely modification/enhancement of PDR market rules to address any problems or “gaming” that may be observed after program implementation.

Conclusions

In sum, DMM believes the PDR proposal represents a reasonable step towards increasing direct participant of demand response in the ISO markets. However, in order to provide a reasonable level of assurance that demand reductions being paid for are actually received, DMM notes that additional details of the program need to be developed prior to implementation, particularly in terms of specific rules (and consequences of non-compliance) to deter “gaming” or inaccurate measurement of PDR impacts. In addition, due to the very labor intensive and specialized expertise necessary to perform robust M&V of DR performance, a firm commitment is needed from CAISO management to ensure that sufficient resources and priority is placed on PDR administration, M&V activities, and timely modification/enhancement of PDR market rules to address any problems or “gaming” that may be observed after program implementation.