

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

Order Instituting Rulemaking to Enhance the
Role of Demand Response in Meeting the
State's Resource Planning Needs and
Operational Requirements

Rulemaking 13-09-011
(Filed September 19, 2013)

**RESPONSE OF OLIVINE, INC TO RULING PROVIDING GUIDANCE FOR
SUBMITTING DEMAND REPOSE PROGRAM PROPOSALS**

Elizabeth Reid
CEO
Olivine, INC.
2010 CROW CANYON PLACE, STE. 100
SAN RAMON, CA 94583
Phone: (408) 759 – 0360
Email: breid@olivineinc.com

Monday, March 03, 2014

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

Order Instituting Rulemaking to Enhance the
Role of Demand Response in Meeting the
State's Resource Planning Needs and
Operational Requirements

Rulemaking 13-09-011
(Filed September 19, 2013)

RESPONSE OF OLIVINE, INC TO RULING PROVIDING GUIDANCE FOR
SUBMITTING DEMAND REPOSE PROGRAM PROPOSALS

1. Introduction

In accordance with the instructions in the Assigned Commissioner and Administrative Law Judge Ruling Ruling Providing Guidance for Submitting Demand Response Program Proposals issued by the Commission on January 31, 2014, Olivine, Inc. provides the following responses. As Olivine is committed to achieving a new vision for demand response and distributed energy resources, we welcome the opportunity to comment and appreciate the complexity of the issues surrounding this proceeding.

Parties have provided comments regarding bridge funding that have raised questions in this proceeding. Several questions are addressed to one or more of the utilities and the Commission has requested proposals for modifications to programs.

In anticipation of the utilities' filings for modifications to their programs for 2015-2016 pursuant to the guidance documents issued on January 31, 2014 under Rulemaking 13-09-011, Olivine would like to ensure that the Commission and other stakeholders have an understanding of some of the lesser discussed challenges involved in modifying programs to align with integration into the wholesale market.

2. Challenges and Barriers

As the only party other than the utilities who has operational experience with bidding Demand Response into the CAISO markets, Olivine has a unique perspective on the challenges associated with integrating Demand Response into the wholesale markets. Our direct experience with the utilities' demand response programs, including recent assessments of integration with the wholesale market and the DER Challenges and Barriers report provide additional perspective on the issues.

In the final Challenges and Barriers Report, published by the CAISO on January 4, 2014, several key issues were identified that have an impact on the ability to readily integrate the current demand response programs into the wholesale market. Due to the lack of experience with market integration there are numerous misconceptions and misunderstandings that will impact any transition process and associated modifications.

PDR Requirements

Each PDR must meet minimum requirements of 100 kW load drop, must be in a separate Sub-LAP and must be served by a single LSE. The combination of these latter two requirements limits the amount of Demand Response that can readily be integrated into the market. Primarily there are two reasons for this:

1. Portfolios in existing programs (including AMP) cross sub-LAP boundaries and consist of both direct access and bundled customers.
2. Splitting up such portfolios will in some cases make them drop below the 100 kW PDR requirement, but even if they retain this minimum size, they may also become too small for an aggregator to manage effectively.

Utilities typically organize their DR programs around local capacity areas while the ISO organizes resources into Sub Load Aggregation Points. Unfortunately, LCAs and SubLAPs are unrelated, with overlapping regions. The fact that these are different speaks to the different needs of these two entities (i.e., meeting distribution constraints versus transmission constraints). Changes to this approach would have impacts from the beginning of the marketing efforts. Demand Response Providers (DRPs) register demand response at the CAISO; however, before DRPs can register a Direct Access customer they need to have an agreement with those customers LSE . Having personal experience with this issue Olivine considers this a significant

issue for third party DRPs who effectively have to receive permission from an LSE, but it also creates additional effort for IOUs who will also need to have agreements in place with many LSEs to bid Direct Access customers as outlined in Rule 24. Given the significant proportion of current Demand Response programs that have significant amounts of Direct Access enrolled, this will be a limiting factor for the IOUs

Metering and Telemetry

The actual technical metering requirements of the ISO for PDR and RDRR are designed to leverage existing IOU metering. The key challenges are in processes such as submitting SQMD meter data submissions, proper loss factor application and aggregation since in these cases there is no additional requirement for ISO metering.

For programs such as AC Cycling the biggest challenge may be fluid participation. CAISO PDR registrations require all meters/accounts to be included in a registration and historical data aggregations provided in order to support baseline calculations. Every meter within a PDR registration is included in the baseline calculation. A change in registration can take up to 30 days and includes all meters associated with each PDR resource: the complexities of managing the registrations and corresponding data aggregations and submissions would be extremely complex.

ISO telemetry – the 4-second retrieval of current resource output – is not a requirement unless the resource is providing ancillary services or is sized over 10 MW, with the latter likely resulting in smaller PDR resources being developed, avoiding unnecessary telemetry costs. Alternatively, telemetry may be cost effective with CAISO changes proposed as a part of the Expanding Metering and Telemetry stakeholder process, primarily this includes software based telemetry solutions like the Olivine RIG coupled with “cloud”-friendly policies at the CAISO,

and in some cases, an allowance for statistically generated telemetry for mass market applications.

These metering and telemetry issues are sometimes confused with the more general ISO metering and telemetry requirements for other resource types, most notably, the Non-Generator Resource (NGR) type that directly supports storage and PEV technology. NGR in its current state is not suitable for DR program integration because it requires full interconnection and separate metering requirements.

Bidding Requirements

Bidding demand response into the wholesale market produces risk that current retail programs do not currently have. The primary issue here has to do with under performance of a PDR. In utility programs if a DR asset underperforms, then the utility has a defined method for backfilling that DR, or at the very least, it is well understood what the financial ramifications are likely to be. On the wholesale side, this is not the case. If a PDR underperforms, then the resource's Scheduling Coordinator (SC) is billed for the replacement cost of the un-delivered energy based on the real-time prices. This under-delivery and the associated settlement will not be made known to the SC until twelve business days (i.e., 12B) after the trade date. For Day-Ahead bidding – likely the most common for utility based programs – the replacement cost will at times be greater than the awarded price, meaning that awarded energy may cost the SC hard dollars without any direct control over actual PDR performance. Because over-delivery is paid at the real-time price and such prices can be negative, it is also possible to over deliver and owe monies as well. As much as this is an issue about risk, it points at the “one size fits all” baseline methodology in use for PDR as a possible issue – alternatives for which should be tested during the bridge years.

3. 2015 through 2016 Transition Period

In general, Olivine supports the staff proposals and think it is important that the IRM2 or some form of the IRM2, which provides for third party access to the wholesale market should be incorporated across the IOUs during the 2015-2016 transition period, primarily to broaden customer engagement, and to act as a forcing function to ensure the IOUs are ready to engage with third party DRPs/SCs regarding registration approvals, meter data access, wholesale settlement and, when necessary, default load adjustment issues.

We believe it will be extremely challenging, if not impossible, to quickly make enough changes to the current programs within 2014 that would provide for a smooth transition to the supply side. Current programs are not well aligned with the wholesale market and given the parameters of the enrolled customers, changes to align closely with the wholesale market will likely trigger a loss of some of the demand response currently available.

In addition to the staff proposals, Olivine believes that during the 2015-2016 bridge period, a methodology to capture demand response capabilities that are not captured otherwise during this transition period could provide significant value for California and input into the subsequent Demand Response filings.

Ideally a state-wide approach would stream-line the business processes and operational costs to provide a construct for demand response that might allow the supply side to be utilized during the transition period. While changes could impact the customer directly, there are many ways to transition program rules and timelines without impacting the customer directly. For example PDRs created from a Day-Of AMP program could be bid into the Day-Ahead market to align award and notification processes.

A utility acting as the DRP is required to have an agreement with each LSE and assumes that there will be enough Demand Response registered within a single sub-LAP, with a single LSE and likely with a single aggregator. Utility-based programs have a high percentage of Direct Access customers enrolled creating an additional challenge for transitioning utility-based programs. From our experience in several pilots including a self-funded pilot utilizing Direct Access customers as well as with pilots such as IRM2, we feel that it is important to address these policy and business process issues to provide a stream-lined avenue for all customers to participate.

Multiple DRPs could be incorporated into this approach and provide an avenue for utility based programs as well as direct participants with customers who do not have other cost effective options. A default DRP for those who do not have other options, could streamline the process overall and most specifically provide an avenue for Direct Access customers to participate.

We have also seen a significant amount of demand response resources, especially in the area of new and storage technologies that are not able to readily participate in current programs. Designing programs to encompass a variety of resources is a challenging and long process. A separate mechanism that would provide for a more individualized approach, such as customer defined availability, to incorporate those resources that may not currently fit into a demand response program, would allow for use of that resource as well as valuable input into the next filing as well as the development of a new PDR-NGR resource type at the CAISO, which continues to be an unscheduled 'discretionary' item for a future CAISO stakeholder process.

Olivine's experiences have led us to believe that there is not only a reasonable amount of incremental demand response that might be captured, there is also demand response that is currently not able to be utilized by the utilities because of the structure or priority of programs and bilateral agreements. There may be demand response that could be utilized in different ways. A critical value of having a 'program' such as this to support the transition is the ability to co-mingle small resources who may not meet the requirements individually within a single PDR to participate cost effectively.

This mechanism could be a first step toward a clearinghouse or auction mechanism and provide a platform to evaluate potential changes such as alternative baselines, energy-only PDRs without telemetry requirements, and must offer obligations for flexible capacity and dual purpose resources which may be identified as wholesale-ready but not wholly or solely utilized by the wholesale market.

/s/

Elizabeth Reid
CEO
Olivine, INC.
2010 CROW CANYON PLACE, STE. 100
SAN RAMON, CA 94583
Phone: (408) 759 – 0360
Email: breid@olivineinc.com