

## Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide your comments on the ESDER Phase 2 stakeholder initiative Issue Paper posted on March 22 and as supplemented by the presentation and discussion during the stakeholder web conference held on April 4, 2016.

Submit comments to [InitiativeComments@CAISO.com](mailto:InitiativeComments@CAISO.com)

**Comments are due April 18, 2016 by 5:00pm**

The Issue Paper posted on March 22 and the presentation discussed during the April 4 stakeholder web conference may be found on the [ESDER Phase 2](#) webpage.

Please provide your comments on the Issue Paper topics listed below and any additional comments you wish to provide using this template.

### **NGR enhancements**

The CAISO is proposing to explore two possible areas of NGR enhancement: (1) representing use limitations in the NGR model, and (2) representing multiple configurations in the NGR model.

The CAISO is requesting stakeholders provide comments and consider the following:

- Are these two possible areas of NGR enhancement the highest priority NGR enhancements to pursue in ESDER Phase 2?
- Are there other areas of NGR enhancement that are of higher priority that should be pursued instead? If yes, which ISO-proposed NGR enhancement should be omitted from the scope?

- Please provide examples of use cases that support the NGR enhancements you view are of the highest priority and should be pursued in ESDER Phase 2.

**Comments:**

CLECA has no comments on these points.

**Demand response enhancements**

*The CAISO is proposing to explore two possible areas of demand response enhancement: (1) Exploring the ability for PDR to be dispatched to both curtail and increase load, and provide regulation service; and (2) developing alternative baselines to assess the performance of PDR and RDRR.*

*The CAISO is requesting stakeholders provide comments on these two areas of enhancement and consider the following:*

*Demand response enhancement topic area #1 – Ability for PDR to both curtail and consume energy:*

For the purposes of these comments, we will refer to this ability to curtail and consume energy as bi-directional PDR.<sup>1</sup> The first thing to consider is the time frame over which curtailment and consumption would occur. If PDR is permitted to provide regulation up and down, which it currently is not, this will be extending PDR to allow it to provide two existing products in the CAISO markets. An alternative would be a longer duration product, for example X hours of consumption during the net load trough followed by X hours of load reduction during the ramp up to the peak (e.g. through load shifting like pre-cooling). Such a product would allow for increased usage during periods of oversupply or lower market prices and decreased usage during periods of high ramping, high net load, and/or higher market prices. Such a longer-duration product does not yet exist in the CAISO market, although efforts are underway to achieve such usage patterns on the retail level through such proposals as the matinee pricing option under discussion in CPUC Rulemaking 13-12-011. Yet another alternative would be a one-way load increase option for periods of over-supply, which would effectively be the opposite of current PDR, which is load reduction only.

Whether or not regulation would be an economically viable PDR option would be a function of the regulation market prices and the cost of telemetry at the 4-second interval level. However, a major tariff and operational consideration is that PDR does not permit export of energy because it was designed for load reductions alone. Under ESDER 1, if there is some export from a BTM resource, it is zeroed out and there is no compensation. Regulation up and down might or might not result in zero *net* export if the two were the same, but 1) the prices for energy would likely be different for each and 2) at times energy would be exported. It is not clear how the CAISO PDR model could be changed to actually pay for those exports. The suggestion has been made that regulation up and down be paid for capacity outside the CAISO market and that there would be no wholesale energy settlement. Does the current

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<sup>1</sup> Is the CAISO considering an inverse PDR product which would be load-increasing only? If so, there is no mechanism for at least bundled retail load to directly buy wholesale power.

NGR option provide such a possibility? Could the CAISO model for PDR accommodate such a solution? Where would the capacity payments come from? If BTM storage were involved and were telemetered, would a sub-meter be needed to determine the level of any underlying retail usage, for example for demand charge management?

We can conceive of a longer-duration option, mentioned above, where the nature of the activity would be load shifting to hours of lower cost (which are presumed to reflect lower net load or excess supply) from hours of higher cost (which are presumed to reflect higher net load). Such activity could be undertaken entirely on the retail side if appropriate price signals are provided by TOU period rates with or without dynamic pricing or through the matinee pricing proposal. However, the impact on the wholesale market would have to be reflected in LSE load bids and/or the load forecast and the resource would not be dispatchable by the CAISO. It would effectively be load-modifying DR under the CPUC's bifurcation policy. With a new product, it might be possible to provide such a dispatchable resource on the wholesale side, but to our knowledge the CAISO does not have a PDR product for using energy when prices are low or negative (i.e. only bid when the price is below X), as we understand may be possible with NGR.

We can also conceive of a product that involves only increasing load during periods of excess supply. PG&E indeed is testing a DR program called the Excess Supply Pilot in which it is considering many of the questions raised in this template, such as compensation and appropriate baselines, associated with increased consumption rather than decreased consumption under typical DR. PG&E is also considering whether day ahead wholesale prices are appropriate triggers, since often oversupply occurs in the real-time markets. One conceivable trigger could be a certain level of renewable generation output.

- *What issues does this working group need to address and resolve to enable load consumption capability? For example:*
  - *How would financial settlements work given wholesale bids cause an increase in retail consumption and demand?*

Let us consider the construct that the CAISO is paying a customer to consume, which could occur in an oversupply situation where there are negative prices. Under the current regulatory construct, consumers pay retail prices that include generation (which may include demand charges for capacity), distribution, transmission, and non-bypassable charges. The CAISO only pays for generation and does not pay for capacity. The customer would pay its LSE for the power it consumes and would under one scenario have to be paid more by the CAISO than it is paying its LSE, so that it would benefit if it otherwise would not need to consume (i.e. wholesale price received greater than retail price paid). However, the customer would still have to pay non-bypassable charges, which are volumetric, and for T&D, so that arguably the payment from the CAISO would have to offset these costs as well. If the customer is on a rate with demand charges, there is also the risk of an increase in demand charges if the customer's load is higher than it normally would be. This risk would be mitigated if the CPUC 1) changes TOU periods so that demand charges are low during periods when increased consumption is needed (e.g. oversupply) or 2) permits tariffs that do not apply demand charges to an increase in load when a

customer is increasing its load for wholesale purposes. Under another, possibly more likely, scenario, if the customer had consumption it could shift in time, any payment from the CAISO would net out against its retail price (retail price paid-wholesale price received < alternative retail price) and create an incentive to undertake that shift. The non-bypassable charges would be the same and the T&D demand charges could be lower, depending on the TOU period, or the same, if not TOU.

There are places where retail customers can pay wholesale prices for power, although this is not a tariff option for bundled customers in California. Under this circumstance, positive or negative wholesale prices would be passed through to the customer. However, since to date negative prices appear to be occurring in the real-time market, they would not be actionable by customers.

It is possible that the CPUC may decide in the Storage OIR or elsewhere that BTM resources participating in the wholesale market should pay and be paid wholesale prices. However, a large set of ratemaking and possibly cost-shifting issues would arise if that were permitted. If a customer pays wholesale prices for any usage behind its meter, and wholesale prices are lower than retail prices, the LSE gets less revenue, which then has to be made up by other retail load unless the LSE's generation cost reduction precisely matches the reduction in revenue (i.e. there would be cost-shifting). Even if the LSE's cost reduction precisely matched the reduction in revenue, the wholesale prices would be for variable generation only; they would not cover generation demand charges (if any), utility non-bypassable charges that are part of retail tariffs such as those for public purpose programs, or T&D charges. Either the customer would still have to pay these charges, or other customers would have to pay more to cover those additional costs.

Furthermore, if wholesale pricing were permitted for PDR provided by BTM resources like storage, would the customer's actual consumption be charged at retail prices and the consumption by the storage unit be charged at wholesale prices? How would this be metered? Since the BTM storage is likely providing a retail service (e.g. demand charge management), as well as a wholesale service, it would not be appropriate under current regulatory practice for the customer to buy wholesale power where the storage is serving retail load. We understand that paying the resource at wholesale for load reductions and having it pay at retail for load increases generally would reduce or possibly eliminate net revenues based on current wholesale and retail prices. There is no mechanism for the wholesale market to pay the load retail prices.

- *What does consumption mean? Is consumption when a load exceeds its "normal" maximum consumption at certain times or under certain conditions?*

In the case of provision of regulation up and down, it is difficult to think of an appropriate baseline other than a pre-defined set point, similar to that used for generation. Presumably AGC would trigger a reduction in consumption that would lead to an increase in system frequency and vice versa. In the case of a longer-duration load-shifting product or a consumption product for over-supply periods, there could be a baseline that would be the starting point to determine incremental energy purchased from the market. For load-shifting, load reduction would be the reduction from that increased amount back down to the baseline. This is actually easier to conceptualize in a retail context where the load buys

more at times of lower cost and buys less at times of higher cost, rather than a wholesale context where the load changes are dispatched. This issue clearly requires discussion.

- *What are appropriate baselines/Performance Evaluation Methods?*

It is premature to try to answer this question until the basic construct is agreed-upon. However, this is an issue that PG&E is addressing in its Excess Supply Pilot, so its results may provide some guidance.

- *Is there any difference if load consumption results from a BTM device versus true load consumption?*

At least initially, under the current construct, all BTM consumption is retail. As noted above, we have concerns about the impact on other consumers if it being treated as wholesale.

- *Retail and wholesale impacts of over or under performance?*

In the retail market, the customer pays for whatever it uses and has a price incentive to shift load between times of different rates. The customer may participate in an LSE DR program that provides incentives and penalties for performance. A wholesale performance issue would arise if the LSE were to incorporate this load-shifting or load increase for excess supply, under an agreement with the customer, into its load bid into the CAISO market. If the shifting didn't match the quantity bid and dispatched, there could be UIE in the wholesale market which would affect the LSE. The LSE could pass this on to the customer through the agreement or could impose penalties for failure to perform.

This response is very high-level because no structure has been developed to implement such a product on either the retail or the wholesale side.

- *CAISO Grid Management Charges for load consumption?*

CLECA has no comment at this time.

- *Are any state policies impacted by wholesale-directed retail load consumption?*

CLECA has not had time to research this issue.

- *Suggest a proposed schedule and milestones for working group to deliver a Draft Final Proposal by September 8, 2016 (use the stakeholder process schedule on pages 22-23 of the March 22 Issue Paper as a guide).*

If a working group can be formed by the end of April, its first task should probably be to define what product or products are going to be considered. After that, performance attributes would have to be specified. It will be very challenging to develop a detailed recommendation for input to a draft final proposal by September 8. The retail vs. wholesale compensation issues are being addressed in the CPUC Storage OIR on multiple-use issues for storage and must be synched up with this stakeholder process.

*Demand response enhancement topic area #2 – Alternative baselines to assess the performance of PDR/RDRR:*

- *What baseline methods should the CAISO add and why?*

While not recommending any particular baseline changes at this time, we note that concerns have been raised about the existing 10-in-10 baseline and the day-of adjustment for very temperature-sensitive DR. We will wait for the utilities and aggregators to present their recommendations before responding.

- *If a performance method is recommended that requires a control group, how would third parties be able to cost-effectively set-up and operate control groups? Are there services the UDC could provide in this area?*

PG&E uses a randomized control trial to measure performance for its SmartAC program. We will wait for PG&E to present its proposal for applicability to the CAISO market before responding.

- *What tools and capabilities will the CAISO require to assess best fit for different types of PDR aggregations?*

CLECA has no response at this time.

*Suggest a proposed schedule and milestones for working group to deliver a Draft Final Proposal by September 8, 2016 (use the stakeholder process schedule on pages 22-23 of the March 22 Issue Paper as a guide).*

CLECA has no suggestion at this time. We expect that DRPs will take the lead in proposing baseline alternatives and will wait to see what they propose.

### **Multiple-use applications**

To avoid redundant and potentially divergent efforts the CAISO will initially address this topic by participating in the CPUC Order Instituting Rulemaking (R.) 15-03-011, Track 2. The CPUC and CAISO are planning to hold a joint workshop May 2-3, 2016. If the CPUC proceeding identifies issues that should be addressed in a CAISO initiative, or develops proposals the CAISO should consider formally adopting, the CAISO can open a new initiative or expand ESDER Phase 2.

The CAISO is requesting stakeholders provide comments on this topic area as well as this proposed approach.

#### **Comments:**

CLECA supports this proposed approach.

### **Distinction between charging energy and station power**

Under this topic the CAISO intends to resolve the distinction between wholesale charging energy and station power. Although this is also a topic in Track 2 of the CPUC's energy storage proceeding, station power is specifically addressed in the CAISO tariff and the CAISO will primarily address this issue in ESDER Phase 2. However, because the question of station power is inherently jurisdictional, the CAISO intends to also contribute to this topic in Track 2 of the CPUC's energy storage proceeding as may be necessary. In doing so the CAISO will seek to economize its staffing resources where possible and avoid redundant efforts, and will also seek to avoid the conflicts that have arisen in the past over the wholesale/retail line.

The CAISO is requesting stakeholders provide comments on this proposed approach as well as respond to the following questions:

- Should the CAISO modify its definition of [station power](#) to better accommodate energy storage resources?
- Should battery temperature regulation be considered part of charging (similar to efficiency loss) and subject to a wholesale rate, or should it be considered consumption/station power subject to a retail rate (where consumption exceeds output in an interval)?
- Are there any means besides separately metering the storage device by which the CAISO should distinguish between charging and station power?

**Comments:**

CLECA has no comments at this time, other than to note that if the definition of charging power is expanded to include BTM storage, and results in payment of wholesale prices rather than retail rates by storage entities, and if wholesale prices are lower than retail rates, there will be cost-shifting issues for retail customers associated with the revenue shortfall.

**Review allocation of transmission access charge to load served by DER**

The CAISO is proposing to review the rules for determining load subject to the transmission access charge (TAC) to reflect the effects of utility-side distributed generation, as proposed by Clean Coalition.

The CAISO is requesting stakeholders provide comments on this topic area. In particular, please comment on the three concerns the CAISO raised in the issue paper, and if possible offer examples to help illuminate these concerns.

1. Transmission investment is mainly driven by peak load conditions, which may not be reduced by adding distributed generation (DG).
2. New DG does not offset the cost of transmission that was previously approved and is currently in service.

3. Exempting some load from TAC charges would not decrease PTO revenue requirements, so some costs would be shifted to other customers.

**Comments:**

The Clean Coalition’s proposal is not appropriately included in this stakeholder process. Its proposal goes to the overall subject of how the Transmission Access Charge (TAC) is recovered, which should be a far broader discussion than is possible in this stakeholder process. The proposal should not be included in this stakeholder process simply because its title includes the words “distributed energy resources”. Stakeholder representatives in this process are not expert in this area, which has nothing to do with the operation of NGR or PDR.

If the proposal continues to be part of this stakeholder process, CLECA agrees with the CAISO that new DG does not offset the cost of transmission that was previously approved and is currently in service and that exempting some load would not decrease PTO revenue requirements.

The Clean Coalition proposal is to charge the TAC on the basis of Transmission Energy Downflow as opposed to Gross Load. Transmission Energy Downflow is not a defined term in the CAISO’s tariff, but rather a term coined by Clean Coalition. Clean Coalition states that its proposal is based on the Metered Subsystem concept that was developed for public entities when the CAISO was started, almost two decades ago. It took into account the fact that entities like municipal utilities and irrigation districts already had their own transmission facilities, a fundamentally different concept from DER.

The existing transmission system provides service to all load, including standby and backup service when distributed generation is not available. Furthermore, the flow of electrons cannot be tracked. The distinction made in the proposal between power delivered through the transmission system and power delivered on the distribution system is therefore questionable. To the extent that DER will avoid future transmission and should receive credit or compensation for doing so, that issue is being addressed in R. 14-10-003, the CPUC’s IDER rulemaking.

**Other comments**

Please provide any comments not associated with the topics above here.

**Comments:**

[\[insert comments here\]](#)



