

## 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:**

IEP appreciates the CAISO's interest in investigating multiple configurations for a single NGR where each configuration is allowed different operating characteristics and economic bid curves based on physical constraints of the system. On the other hand, to the extent that the CAISO is grappling with how to insert a square peg into a round hole, we have some concerns about overall market design. The CAISO's primary goal is identify the products and services it needs to support grid reliability in a non-discriminatory manner, and enable market participants comparable opportunities to provide those services in a timely and cost-effective manner. We should not lose focus of this as the state and individual advocates explore the capabilities of a number of innovative, but often experimental/emerging, solutions to grid reliability and reduction of carbon emissions.

**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:

- 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?
  - What does consumption mean? Is consumption when a load exceeds its "normal" maximum consumption at certain times or under certain conditions?
  - What are appropriate baselines/Performance Evaluation Methods?
  - Is there any differences if load consumption results from a BTM device versus true load consumption?

- Retail and wholesale impacts of over or under performance?
- CAISO Grid Management Charges for load consumption?
- Are any state policies impacted by wholesale-directed retail load consumption?
- 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).

**Comments:**

1. Regarding the questions (a) “what does consumption mean?” (b) “Is consumption [occurring] when a load exceeds its ‘normal’ maximum consumption...?”, and (c) “is there any differences in load consumption from a BTM device versus true load consumption,” IEP believes it important that terms be defined clearly and products/services accurately measured (to avoid double-counting, etc.). While a working group may prove useful in developing clearer definitions, any such working group should not lose sight of the need for accurate measurement.

From IEP’s perspective, the term “consumption” refers to usage that is comparable but not equivalent to CAISO-metered demand. Because CAISO-metered demand is accurately measured, we have concerns about defining CAISO demand, products and/or services in a way that degrades accuracy. The CAISO’s wholesale domain is properly bounded by CAISO metered-demand.

Certainly the critical question from the CAISO’s perspective as a grid operator of the wholesale market should not be on defining consumption per se, but rather how much metered load [including ancillary services] needs to be served from the electric grid, when and where? What happens “behind the meter” may be interesting to the load, end-use consumers, retail regulators, etc., but it does not and need not fall within the domain of the CAISO as it manages wholesale markets.

While retail consumption will affect the level of wholesale demand, IEP is concerned that in pursuing the concept of “consumption” behind-the-meter in its rules and practices, the CAISO risks chasing the rabbit down the rabbit-hole and, in doing so, fundamentally alter a successful and efficient market design for wholesale transactions.

2. Regarding the question as to whether any state policies are impacted by wholesale-directed retail load consumption, CPUC retail rate design could and perhaps should be impacted.

First, in the context of enabling multiple configurations for DER/DG resources, including energy-discharge and energy-consumption from a single resource in response to CAISO wholesale dispatch instructions, IEP notes that the proposed approach necessitates complicated modeling and/or estimation tools to determine what the “baseline” consumption would have been absent CAISO-directed wholesale consumption. Certainly if DER resources grow in scope and scale to the level envisioned by policymakers and advocates, then the task of modeling/estimating behaviors of individual multi-configured DER resources will be magnified exponentially. So, too, will the risks to the electric grid if the modeling/estimating techniques perform poorly. An alternative approach would be to modify retail rates to enable retail customers at their discretion to respond to real-time wholesale pricing, particularly when wholesale energy prices are near zero or negative.

Second, IEP agrees with the CAISO that the issue related to the “distinction between charging energy and station power” (Issue Paper, p. 18) raises a number of complex technical and jurisdictional issues for consideration. We believe that the jurisdictional separation between the wholesale market (CAISO) and the retail market (CPUC) must be (a) clear and well defined, (b) the CPUC and the CAISO must align their policies based on a clear understanding of the point at which wholesale and retail separate. Moreover, we believe the jurisdictional issues ought to be addressed first and up-front, so that the “rules of the road” are clearly articulated and known by market participants and regulators.

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

- What baseline methods should the CAISO add and why?
- 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?
- What tools and capabilities will the CAISO require to assess best fit for different types of PDR aggregations?
- 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).

**Comments:**

See Response to Question above regarding Demand Response Enhancements.

With regard to the question as to what baseline methods should the CAISO add and why, IEP questions whether the baseline approach as proposed is the correct approach to pursue. To date, California policymakers, the CAISO, and stakeholders have embraced market signals to induce preferred behavior with regards to consumption and discharge of energy. High prices induce lower consumption; lower prices induce higher consumption. It is not clear that DER/DR resources cannot fit into this model. For example, historically the viability of pumped storage was always premised on the ability of the resource to consume energy at low prices in order to discharge the same energy at periods of higher prices. The economic viability of the project was premised on daily, weekly, monthly price differentials, i.e. the “spread” between the price of consumption and the value/price of discharge.

While the potential scope/scale of DER and storage resources may change dramatically over time due to public policy goals, the success of this expansion is fundamentally one of economics and it does not necessarily require a change in wholesale market rules, market products, or market design.

**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:**

As suggested by the CAISO in the ESDER 2 Issue Paper, with regards to multiple-use applications, it is critical that the CAISO and the CPUC agreed on common definitions of each service, rules governing the provision of the service, performance requirements, measurement, etc. (Issue Paper, p. 16). IEP fully agrees.

Two principles must continue to govern the development of the evolving wholesale market: (a) clear jurisdictional separation between wholesale and retail energy products and services, and (b) comparable, non-discriminatory treatment of resources providing those products and services. At the wholesale level, law and policy require non-discriminatory, comparable treatment of each and every resource providing similar wholesale products and services. These principles should govern the delivery of products and services from resources that cross the wholesale and retail divide.

Recently, the US Supreme Court seemed to clarify that products and services that compete in and clear wholesale markets run by RTOs/ISOs are ipso facto wholesale in nature. It is not clear that such products and services may move backward and forward at will between the wholesale and the retail domain. As noted above, we believe the jurisdictional issues ought to be addressed first and up-front, so that the “rules of the road” are clearly articulated and known by market participants and regulators.

### **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:**

First and foremost, as noted above, the CAISO should ensure that it and the CPUC agree on a definition of station power. Second, the definition of station power should provide comparable treatment for all resources with regards to the provision of station power.

IEP recommends a workshop or formal proceeding in which the CAISO, the CPUC, and stakeholders consider the status of the existing definition and, to the extent warranted, consider alternative definitions.

With regards to the whether battery temperature regulation should be considered part of charging or subject to a wholesale rate, IEP believes that a common set of principles should be developed and applied to all resources to ensure comparable treatment. We note that currently, the CAISO Tariff's definition of Station Power includes "Energy associated with motoring a hydroelectric Generating Unit to keep the unit synchronized at zero real power output to provide Regulation or Spinning Reserve." As IEP understands battery technology, temperature regulation is also required to maintain readiness to provide power on demand. Consistent with that definition, the energy used for battery temperature regulation appears to also fall within this definition of Station Power. The treatment of station power under the tariffs of the CAISO and the investor-owned utilities also should be aligned. The CAISO allows for generation to net station power either (1) instantaneously as the energy is generated or (2) over a calendar month in certain circumstances. The IOUs treat station power as standby service, and any netting is limited to a 15-minute metering interval.

**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:**

With regard to whether the rules should be changed for determining load subject to the transmission access charge (TAC) in order to benefit distributed generation, IEP offers a couple of points and observations.

First, transmission infrastructure investment is approved in three limited circumstances: (a) maintain grid reliability, (b) economic, and (c) policy-driven. Each of these types of transmission projects is matched to forecast demand/load. To the extent that DG resources are lowering the forecast demand in the Transmission Planning context, then the load-serving entity (LSE) serving that load is already benefitting from the presence of the DG resource in terms of lowering future transmission needs as well as reducing TAC charges borne by that LSE. To the extent that some Load that relies in whole or in part on the interconnected electric grid is able to avoid the TAC, then the costs of the TAC must be shifted to the remaining Load to make up the difference.

Second, while cost recovery of the transmission grid is volumetric in nature (MWh) imposed on internal load and exports, the electric grid (i.e. transmission and distribution “wires”) is an interconnected, capacity resource. The value of the interconnected electric grid is its *potential* use by the Load, including DER as the case may be, to move power from one point to another utilizing the electric grid as a means of conveyance. Unless the DER resource is totally disconnected from the electric grid, the DER resource (and the “load” served by the DER resource continues to benefit from the *potential* to use the interconnected system. Importantly, the DER resource is not avoiding the cost of the existing transmission system nor, in most cases, the need for new transmission to the extent that the Transmission Planning Process (TPP), relying on the Demand Forecast that has embedded in it the effects of DER resources, reveals the need for new transmission infrastructure.

Accordingly, to the extent that the DER resource is interconnected to the electric grid in order to participate in wholesale markets, it is “leaning” on the electric grid to support discharge and/or consumption. In effect, the *potential* use of the interconnected grid by the DER resource to consume/discharge energy is theoretically present in all hours. Similarly, to the extent that Behind-the-Meter (BTM) resources retain the potential to consume from and/or discharge onto to the interconnected electric grid, the BTM resource retains the *potential* to use the electric grid at all times (barring congestion).

**Other comments**

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

**Comments:**

Currently, the CAISO has designed and implemented a successful, efficient, and reliable wholesale market. The CAISO properly and purposefully modified its rules in order to recognize “use limited” resources, including the intermittent renewable resources (e.g. wind, solar). To date, use-limited resources have transitioned in one form or the other to enable their fuller participation in CAISO wholesale markets. During this period, the market wholesale market design remained relatively stable. IEP supports this model. As noted above, to the extent that the lines between wholesale and retail markets get blurred or, alternatively, the extent to which the CAISO seeks to fit a square peg in a round hole, then our concerns increase regarding the overall stability of the wholesale market.