



## Stakeholder Comments Template

### Energy Storage and Distributed Energy Resources Phase 3

This template has been created for submission of stakeholder comments on the Draft Final Proposal of ESDER 3 that was published on July 11, 2018. The Draft Final Proposal, Stakeholder Meeting presentation, and other information related to this initiative may be found on the initiative webpage at: [ESDER Webpage](#)

Upon completion of this template, please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com).

Submissions are requested by close of business on **July 27, 2018**.

Submitted by	Organization	Date Submitted
Michelle Bogen	BMW of North America, LLC	July 27, 2018

**Please provide your organization's comments on the following issues and questions.**

#### 1. Bidding and real-time dispatch options for Demand Response

*Please state your organization's position as described in the Draft Final Proposal: (Support, support with caveats or oppose)*

*If you replied supports with caveats or opposes, please further explain your position and include examples:*

#### **BMW Response:**

BMW has no comments at this time.

## 2. Removal of the single load serving entity aggregation requirement and the application of a default load adjustment

*Please state your organization's position as described in the Draft Final Proposal: (Support, support with caveats or oppose)*

*If you replied supports with caveats or opposes, please further explain your position and include examples:*

### **BMW Response:**

BMW **supports** the removal of the single Load Serving Entity (LSE) requirement for demand response aggregations in a Proxy Demand Resource (PDR). The removal of the single LSE requirement will give greater flexibility for PDRs to meet the minimum wholesale market participation size requirement and avoid excluding customers that could offer the demand response service to the electrical grid. The result of this enhancement will offer a great number of BMW EV drivers the opportunity to contribute to the growing demand response market.

## 3. Load shift product for behind the meter storage

*Please state your organization's position as described in the Draft Final Proposal: (Support, support with caveats or oppose)*

*If you replied supports with caveats or opposes, please further explain your position and include examples:*

### **BMW Response:**

BMW **supports with caveat** the Load Shift Resource for behind the meter energy storage. In BMW's January 2018 response to the ESDER Phase 3 straw proposal, BMW noted that Stem proposed to limit the Load Shift Resource product to stationary energy storage technologies. BMW would like to reiterate that mobile energy storage technologies, such as electric vehicles, should be included because they are capable of performing the same function and achieving the same goals of the Load Shift product as stationary storage technologies.

For example, in our experience, electric vehicles can be managed to shift their charging time to when it's most optimal for the electricity grid. In this way, given an indication of high renewable energy content on the grid, BMW can direct its fleet of vehicles to shift its charging to a later point in time to help the grid avoid renewable energy curtailment. All of this can be managed by the vehicle telematics.

Although not all electric vehicles have V2G capabilities to discharge the charged energy back to the grid at a later time, V1G vehicles will utilize the energy charged in their vehicles from the “load shift product” for driving power (making the electric vehicle a cleaner vehicle overall). In this way, the vehicle will avoid charging during other non-optimal hours via shifting its charging to meet the driver’s mobility needs. BMW believes that electric vehicles should also be considered for the “load shift product” because they can support the product’s goal of avoiding renewable curtailment in the same way as stationary storage resources.

#### 4. **Measurement of behind the meter electric vehicle supply equipment (EVSE) load curtailment**

*Please state your organization’s position as described in the Draft Final Proposal: (Support, support with caveats or oppose)*

*If you replied supports with caveats or opposes, please further explain your position and include examples:*

#### **BMW Response:**

BMW **supports with caveat** measurement of behind the meter electric vehicle supply equipment (EVSE) load curtailment for participation as Proxy Demand Resources (PDRs). In addition to recognition of sub-metering for EVSEs, BMW believes that the recognition should be extended to electric vehicles as well since they themselves can offer load curtailment and internal metering.

Electric vehicles are mobile resources and can inherently offer load curtailment at a variety of geographical locations depending on where the load curtailment service is needed the most. Electric vehicles (if they can meet the necessary requirements for metering) could essentially provide load curtailment by delaying their charging to a later time at any charging point.

BMW has been testing this capability through the telematics of the vehicle in partnership with Pacific Gas and Electric (PG&E) since mid-2015. In a report released at the beginning of 2017, BMW and PG&E showcased the success of the BMW ChargeForward pilot in which the charging load of customer vehicles was delayed for hour-long periods. Furthermore, BMW is testing the capability of electric vehicles to serve as the metering point in its latest BMW ChargeForward pilot: Total Charge Management. By offering load curtailment through vehicle telematics, there is also the added benefit of cost savings because the functionality is already built into the vehicle and does not require more sophisticated charging equipment. Therefore, at any charging station (even if it’s a Level 1 charger or a charger without curtailment capabilities), the electric vehicle would be able to perform the load curtailment service.

**5. Additional comments**

*Please offer any other feedback your organization would like to provide on the Draft Final Proposal.*

**BMW Response:**

BMW kindly requests CAISO to propose the timing for the next ESDER Phase 4 initiative. This will help define the overall roadmap and help with internal BMW planning timelines.

BMW appreciates the opportunity to provide comments on the ESDER Phase 3 initiatives and looks forward to offering feedback in the future.