Energy Storage and Distributed Energy Resources Phase 2

Customer Partnership Group

July 24, 2018

1 p.m.– 3 p.m. (Pacific Standard Time)

Agenda

Item
Project Schedule Update
Market Simulation
Performance Evaluation Methodology (Control Group)
External Training
Questions Received and ISO Answers
Next Steps

Fall 2018 – ESDER Phase 2 - Project Schedule

Milestone Type	Milestone Name	Dates	Status
Board Approval	Obtain Board of Governors Approval	Jul 26, 2017	✓
External BRS	Post External BRS	Oct 17, 2017	✓
	Post Revised External BRS	Mar 01, 2018	✓
Tariff	Post Draft Tariff	Nov 17, 2017	✓
	Post Updated Draft Tariff (based on feedback)	Apr 09, 2018	✓
	File Tariff with FERC	Aug 01, 2018	
Config Guides	Settlements Config Guides	May 18, 2018	✓
BPMs	Post Draft BPM changes	Aug 06, 2018	
Tech Spec	Publish ISO Interface Spec (Tech spec)	May 21, 2018	✓
External Training	Deliver external training	Aug 07, 2018	
Market Sim	Market Sim Window	Aug 20, 2018 - Sep 28, 2018	
Production Activation	ESDER Phase 2	Nov 01, 2018	

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Market Simulation Preparation

- ## Structured Scenarios
    - http://www.caiso.com/Documents/StructuredScenarios-EnergyStorageandDistributedEnergyResourcesPhase2.pdf

- ## Performance Evaluation Methodology Elections
    - http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage_DistributedEnergyResources.aspx
        - Energy Storage and distributed energy resources phase 2 implementation customer partnership group
        - Performance Evaluation Methodology Request Forms
    - Submit to PDR@caiso.com

- ## Application Access
    - ## DRRS
    - ## MRIS

SubLAP & DLAP for Registrations with Control Group Baseline Method

- When creating a registration with Control Group as the baseline method, SubLAP is optional for the registration as the control group locations can be in multiple SubLAPs.

- An XSD change is being made to the DRRSRegistrationData XSD to make the SubLAP element optional at the registration level. It is currently mandatory.

- Since SubLAP is required to derive the DLAP and since registration with Control Group baseline would not have a SubLAP specified, it is not possible to derive the DLAP for such registrations. The DRP is **required** to submit the DLAP for such registrations.

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External Training Overview

- Training Date: August 7, 2018
- Process Changes
  - New Baseline Approval Process and Timeline
  - SCs/DRPs Calculate Baselines & Performance (DREM)
  - Ancillary Service and Demand Response
- Application Changes
  - Decommissioning DRS, Parallel Operations, Transition Timeframe
  - Changes to DRRS, Selecting New Baselines
  - Submitting Baseline and DREM into MRIS
- Settlements Changes
  - Charge Code Configuration Changes
  - Net Benefits Test
- Business Process Manuals
  - Affected Business Process Manuals

Questions Received

Q: How should the baseline adjustment work if the pre-Event adjustment period falls in the previous day (i.e. the Event starts before 4 AM)? We believe that using hours from the previous day for the adjustment period is a non-starter, because they may be Event hours (if for example there was an event immediately before midnight). Options:

– Perform no adjustment based on the pre-event period (which seems to be the current DRS behavior); or

– Perform adjustment based on any portion of the adjustment period that falls on the same day. For example, for 10-in-10, if the event starts at 3 AM, use a two- (instead of three-) hour period from 12:00 AM to 2:00 AM. If the whole pre-event adjustment period is in the previous day, then perform no adjustment, based on this period.

A: CAISO preference would be the first option (no adjustment). Because the likelihood for this to occur is low, there is minimal risk and so, the preference is to maintain the current methodology (10-in-10) that would not provide for an adjustment. Alternatively, CAISO is open to the second option, if that is what stakeholders prefer.

Questions Received

Q: How would the same scenario (as question #1 above) be applied to the post-event adjustment period for the 5-in-10 Control Group Baseline?

A: CAISO would want to apply this treatment consistently for pre- / post- (i.e., no adjustment or modified adjustment). Seeking stakeholder feedback on preference.

Q: When picking 5 out of 10 days based on the "highest totalized load during the hours when the Demand Response Services were provided," should the periods between awards be excluded? I.e., if a resource has two non-contiguous awards on the same day, should we only be looking at the award periods, or the period between the start of the first award and the end of the last award?

A: Comparison is at a **Daily** maximum, not at an **Hourly** level

Questions Received

Q: How would the same question (#3) apply to the algorithm used to select which outage and Event days to add to the selection, in cases where the number of non-outage and non-event days during the last 45 days is less than 5?

A: Same answer (compare award period/Event hours only and do not include hours between awards when determining baseline days used).

Q: What happens when the Event is during the fall DST time-change? In this case, should both instances of the period between 1 AM and 2 AM have the same CBL value? This is the current behavior of the DRS.

A: Maintain current DRS practice—use same CBL value.

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Questions Received

Q: How should the average calculation work when one of the selected days is the spring DST date? Should that day be ignored when calculating the average for the non-existent 2 AM to 3 AM hour? If yes, this would cause an issue with the weighted average calculation that is required for non-business day 5-in-10 CBLs, because the remaining weight factors would not equal 100%, making the CBL for that hour too low. We can think of two potential alternatives:

– Skip the day with the missing hour, but provide an alternate set of weighted average factors for the remaining two days (e.g. 66% and 34%). The problem with this option is that only two days will be included in the calculation of the CBL for that hour, which is not enough of a sample.

– Do not skip the day, but rather use the value from the previous hour, eliminating the issue with the weighted average. Basically, the single hour between 1 AM -8:00 and 3 AM -7:00 would be used for both the 1 AM - 2 AM and the 2 AM - 3 AM intervals.

A: CAISO prefers the second option (use the value from previous hour)

Questions Received

Q: How should the pre-event adjustment work when the event is on a DST-transition day and the adjustment period overlaps the missing or extra hours? Of course, it's possible to calculate the total load during the two hours before and after the event, but these hours may be 1 AM -8:00 to 4 AM -7:00 in the spring, or 1 AM -7:00 to 2 AM -8:00 in the fall. In both examples the period is 2 hours long, but if the times are used for previous days, they will result in 3-hour-long and 1-hour-long periods, respectively.

We suggest that in order to calculate the period to be used for the previous days, the following algorithm is used:

– First calculate the end of the period by taking the end-time of the adjustment period on the event day.
– Once the end time is known, simply subtract the duration of the adjustment period from the end time to get the start time.

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Questions Received

Q (cont'd): Examples:

– In the case of an event starting at 6 AM -7:00 on spring DST transition day:

   - Adjustment period in event day: 1 AM -8:00 to 4 AM -7:00
   - Adjustment period of selected days: 2 AM to 4 AM

– In the case of an event starting at 4 AM -8:00 on fall DST transition day:

   - Adjustment period in event day: 1 AM -7:00 to 2 AM -8:00
   - Adjustment period of selected days: 12 AM to 2 AM

A: CAISO prefers to utilize a straight-forward solution and is open to stakeholder input as to how this should be handled.

Questions Received

- Q: As part of ESDER2 implementation, we are developing baseline day selection logic to address scenarios where we may encounter missing meter data. Can you please provide guidance on how to approach the following scenarios for a 10-in-10 baseline? Assume the trade day is a weekday.

  SCENARIO A

  If an underlying location in a resource is missing meter data, but not during the event or load point adjustment intervals, is it still eligible to use in the baseline?

  A: Yes, it should be included. Any missing meter data for the location registered under that resource ID should utilize SQMD validation, estimation and editing (VEE) protocol to develop missing data for that location for any of the baseline and event meter data intervals used in calculating the resourced DR energy measurement quantity. This should be a known practice today when developing SQMD submitted to the DRS for development of baseline/performance measurements.

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SCENARIO B

An underlying location in a resource is missing meter data due to technical issues. Do we eliminate this day from the baseline calculation and (a) use the remaining days within the 10 previous like days, (b) include additional like days beyond the initial 10 until 10 baseline days are reached, or (c) something else?

A: (C) Use SQMD protocols for developing missing interval data per current SQMD VEE practices. Check with your metering group on these details.

Questions Received

As Per CAISO documentation to calculate baseline 1) We have to choose 10 like days within the 45 days excluding Event days and Holidays 2) If we cannot find 10 like days then find minimum of five or more 3) If we can't even find the minimum five days then document say the below "If the minimum number of days is not reached, the highest usage prior event days within the Customer Baseline window will be used to reach the minimum number of days. The highest usage event days are defined as the highest totalized load for the resource during event hours."

Q: Should we only use the event days alone to reach the minimum like days or it should be added available like days that is less than Five?

A: Yes, the first step is to find 5 or more non-event days. Only add in event days when you cannot reach this minimum.

Q: What happens if we don't have any event days within the baseline window of 45 days or event days does not allow us to reach the minimum 5 days?

A: Find non-event days first, if there are not at least 5 non-event days, then begin to add highest usage prior event days to obtain 5 minimum number of days.

Questions?

Next Steps

- Please submit further questions or comments to:

  Elaine Siegel at esiegel@caiso.com

  or

  initiativecomments@caiso.com

- Customer Partnership Groups webpage available at:
  http://www.caiso.com/informed/Pages/MeetingsEvents/CustomerPartnershipGroups/Default.aspx