

JOINT COMMENTS OF LSA/SEIA & EDF-R ON DRAFT TARIFF LANGUAGE

Note: Though what is now “Phase I” of this initiative is intended to apply to Co-located Resources only, the CAISO has also included the High Sustainable Limit here, which only applies to Hybrid Resources with VER Components (i.e., Co-located Resources that are VERs would be subject to normal telemetry limits for stand-alone VER Resource IDs). Thus, we have added the other Hybrid Resource ID definitions suggested in May 28th comments on the Second Revised Straw Proposal, some of which are needed anyway for the definitions applicable to Co-located Resources.

Appendix A

Aggregate Capability Constraint

A constraint that reflects the combined maximum and minimum capability of Generating Units or EIM Resources that comprise a Generating Facility ~~or are co-located behind a single Point of Interconnection.~~

Co-located Resources

A Mixed-Fuel Project comprised of two or more Resource IDs, each with a single fuel type. Co-located Resources may be comprised of one or more Variable Energy Resources and resources that are not Variable Energy Resources.

High Sustainable Limit

The instantaneous generating capability of a ~~variable or intermittent Generating Unit or Hybrid Resource VER eComponent thereof,~~ updated through telemetry at the Generating Unit every five minutes, ~~provided by Hybrid Resources bidding Ancillary Services into CAISO markets.~~ The High Sustainable Limit may not exceed the Generating Unit’s PMax.

Commented [A1]: Applicability of this proposal to EIM Entities/EIM Resources requires more discussion – not mentioned or discussed at the stakeholder meeting. (This comment also applies to other EIM edits below.)

Commented [A2]: Use of the “or” term here is confusing.

-A Generating Facility usually only has one POI, so the second part of the sentence would be unnecessary.

-ACC application to completely different Generating Facilities sharing a single POI, and/or treatment of the few Generating Facilities with multiple POIs, has not been discussed in the stakeholder process.

Commented [A3]: Needs a formal definition. This definition is from the Revised Straw Proposal, with suggested edits from comments on the Second Revised Straw Proposal.

Commented [A4]: As noted in 5/28 stakeholder comments, this element requires significantly more discussion before being included in a tariff filing. Moreover, since it applies only to Hybrid Resources (per Revised Straw Proposal – see below), we are confused about why it appears here. Suggest deferral to Phase II.

Commented [A5]: The HSL was only proposed to apply to a Hybrid Resource VER Component (or “Generating Unit”) and not to any separate Co-located VER “Generating Units.” Here is the definition in the Straw Proposal (reflecting proposed stakeholder edits submitted May 28; emphasis added):

High Sustainable Limit (HSL): *The maximum output capability of the VER Component of a Hybrid Resource, based upon the full installed capacity of that Component. This data point should reflect the high limit of the net output for each VER Component of Hybrid Resources as established by the Hybrid Resource SC...to describe the maximum energy production capability of the Hybrid Resource VER Component.*

Commented [A6]: As proposed in the Revised Straw Proposal, referenced in the latest proposal. See slide 57 of the December 17 stakeholder meeting presentation.

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Hybrid Resource

A Mixed-Fuel Project physically and electronically controlled by a single Interconnection Customer and Scheduling Coordinator (SC) behind a single Point of Interconnection ("POI") that participates in CAISO markets as a single resource with a single market Resource ID. Hybrid Resources are not eligible to be Variable Energy Resources.

Commented [A7]: Definition recommended in May 28 stakeholder comments, and needed for HSL definition above.

Hybrid Resource Component

The portion of a Hybrid Resource consisting of capacity of a single fuel type, e.g., a VER-storage Hybrid Resource consists of a both a VER Component and a storage Component.

Commented [A8]: Definition recommended in May 28 stakeholder comments, and needed for HSL definition above.

Hybrid Resource VER Component Forecast

Forecasted VER Component output capability at the POI (i.e., net of losses and auxiliary load).

Commented [A9]: Needed if this is intended to be a comprehensive tariff amendment, including Hybrid Resource definitions, and for the Forecast Fee revisions below.

Hybrid Resource Dynamic Limit Tool

The means by which the Hybrid Resource SC may provide an operational forecast of the overall capability of the Hybrid Resource, netting the operations of all Components, to the CAISO. This forecast should incorporate the following: Any VER Component Forecast, any storage Component State-of-Charge forecast, and the anticipated charging or discharging operation of any storage Component. This -forecast will only be provided and utilized in CAISO Real-Time markets and is optional on the part of the Hybrid Resource SC.

Commented [A10]: Needed if this is intended to be a comprehensive tariff amendment, including Hybrid Resource definitions.

Mixed-Fuel Project

A project located behind a single POI with more than one different fuel type, which could be configured as either a Hybrid Resource (single Resource ID) or Co-located Resources (multiple Resource IDs, each with a different fuel type).

Commented [A11]: Needed whether this tariff filing is intended to cover definitions for both Co-located and Hybrid Resources, or just the former.

Point of Interconnection

The point, as set forth in Appendix A to the Large Generator Interconnection Agreement or Attachment 3 to the Small Generator Interconnection Agreement, where the Interconnection Facilities connect to the CAISO Controlled Grid. For Generating Facilities connected on the wholesale distribution system, the point of interconnection is the point at which the Generating Facility connects to the CAISO Controlled Grid. For EIM Resources, the point at which the Generating Facility connects to an EIM Entity's transmission facilities.

Commented [A12]: See other comments related to EIM applicability.

Commented [A13]: Use of this term, instead of Generating Facility, requires more discussion. For example:

-The term "Generating Facility," not "Generating Unit," is used in the ACC definition above.

-The term "Generating Facility" would seem to apply to all the Resource IDs under a single GIA, both Hybrid and Co-located.

The term "Generating Unit" would seem to apply to each of the Resource IDs in each Generating Facility. Thus, each Hybrid Resource, and each Co-located Resource ID, would be a separate Generating Unit.

Commented [A14]: The term "co-located" here (not as a defined term) is confusing, since (based on the definition) it could apply to:

-Generating Units associated with different Generating Facilities (which is not the intent); and/or

-Hybrid Resources that are part of a Generating facility with other Hybrid Resources and Co-located Resources (defined term).

27.13 Aggregate Capability Constraint

The CAISO may enforce an Aggregate Capability Constraint that reflects each Generating Unit's Facility's maximum and minimum capability for purposes of Day-Ahead Market and Real-Time Market Awards and Real-Time Dispatch, as described in the CAISO's Business Practice Manuals. If the combined PMax of Generating Units ~~co-~~ located behind a single Point of Interconnection to the CAISO Controlled Grid associated with a single Generating Facility would exceed the Interconnection Service Capacity, the Interconnection Customer may request that the CAISO enforce an Aggregate Capability Constraint. If the Interconnection Customer elects to forego an

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Aggregate Capability Constraint, the combined PMax of the ~~co-located~~ Generating Units¹ registered in the Master File for that Generating Facility may not exceed their Interconnection Service Capacity. An EIM Entity or EIM Participating Resource also may request that the CAISO enforce an Aggregate Capability Constraint for EIM Resources that are co-located behind a single Point of Interconnection to the EIM Entity's transmission facilities.

Commented [A15]: Again, confusing to use the term "co-located" (non-capitalized).

Notwithstanding Section 34.13, a ~~Generating Facility n-Interconnection Customer~~ whose Generating Units, including Variable Energy Resources, do not comply with Dispatch Instructions such that their output or combined output exceeds Interconnection Service Capacity will be ineligible for the Aggregate Capability Constraint. In such cases, the CAISO will adjust those ~~co-located~~ Generating Units' PMaxes proportionate to each Generating Unit's capacity such that the sum of the PMaxes equals the Interconnection Service Capacity of the Generating Facility. (However, the Interconnection Customer may request a re-allocation of those PMaxes as long as the total does not exceed the Interconnection Service Capacity of the Generating Facility.)

Commented [A16]: Applies to the facility, not the IC.

Scheduling Coordinators may not offer or self-provide Ancillary Services into the CAISO's Markets from Generating Units that are subject to Aggregate Capability Constraints before the CAISO provides notice that this restriction is removed. The Pricing Node for the Generating Units or EIM Participating Resources subject to an Aggregate Capability Constraint will be their Point of Interconnection.

Commented [A17]: We understand the need for a "default" PMax allocation method.

However, as noted above, the Master File problem does not apply to Hybrid Resources, only Co-located Resources, and there may be multiple Hybrid and Co-located Resources in the same Generating Facility. Thus, the IC needs a means of focusing the impact of this "punishment" on the offending Resource IDs and preserving the PMaxes of the other Resource IDs.

Commented [A18]: This would allow removal of the restriction without another tariff filing. Also request that the CAISO commit in the cover note to FERC to implement this additional fix as soon as reasonably possible (e.g., before Fall 2021 if possible).

4.8.2 Forecasting

All Scheduling Coordinators for Eligible Intermittent Resources are subject to the forecasting requirements and the Forecast Fee as described below. All Eligible Intermittent Resources must provide the CAISO meteorological and outage data as specified in Appendix Q. Scheduling Coordinators for Variable Energy Resources not located in the CAISO Balancing Authority Area that elect to use the forecast provided by the CAISO are also subject to the Forecast Fee. Scheduling Coordinators for Hybrid Resources with a Hybrid Resource VER Component ~~Generating Facilities that include a Generating Unit that would be a Variable Energy Resource absent co-located Generating Units~~ must provide the CAISO the same meteorological and outage data for ~~the variable Generating Unit~~ Hybrid Resource VER Component, ~~including the Generating Unit's High Sustainable Limit, and~~ as specified in Appendix Q for Eligible Intermittent Resources. Hybrid Resources with a Hybrid Resource VER Component must also provide the High Sustainable limit for that capacity if the Scheduling Coordinator will be submitting Ancillary Services bids for the Hybrid Resource. ~~Where~~ such Scheduling Coordinators for Hybrid Energy Resources electing ~~elect~~ to use the forecast provided by the CAISO, ~~would they are~~ also be subject to the Forecast Fee.

Commented [A19]: Extremely confusing language – must more streamlined with the suggested additional defined terms.

Commented [A20]: HSL is not proposed to be included in Appendix Q – no tariff language proposed here.

Commented [A21]: Again, since HSL is only a Hybrid Resource element (and then only for Ancillary Services provision – see above), suggest deferral to Phase II.