

CCDEBE



Comments of Pacific Gas & Electric Company

Commitment Costs and Default Energy Bid Enhancements (CCDEBE) – Draft Tariff Language

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) offers the following comments on the California Independent System Operator’s (CAISO) CCDEBE proposed draft Tariff language.

CCDEBE Tariff changes have broad implications on other CAISO initiatives, which is the reason why they deserve ample time and discussion before being filed at FERC. Additionally, significant time has passed since the policy changes were last discussed with stakeholders.

PG&E’s comments can be summarized as follows:

1. CCDEBE Phase 1 should only be filed at FERC in conjunction with the Import Bid Cost Verification initiative
2. Remove CCDEBE Phase 2 items from draft Tariff language and differentiate non-CCDEBE related changes
3. Include Transition Cost in section 30.4.4.2
4. Provide more clarification on DEB reference level change requests in section 30.7.3.4

In addition to these comments, PG&E has several clarifying comments and questions that the CAISO should address. To this point, appended below is a tracked changes view of the draft Tariff language with comments.

1. CCDEBE Phase 1 should only be filed at FERC in conjunction with the Import Bid Cost Verification initiative

Considering the CAISO’s new Import Bid Cost Verification initiative, PG&E requests that the filing of CCDEBE Phase 1 at FERC be delayed until consistency is assured across these two important initiatives. PG&E is particularly concerned about ensuring that energy bid caps are applied appropriately both in-state and at the interties.

2. Remove CCDEBE Phase 2 items from the draft Tariff language and differentiate non-CCDEBE related changes

PG&E requests that the CAISO remove any draft Tariff language changes that are associated with CCDEBE Phase 2. In the most recent RUG call (5/21/19), the CAISO agreed to provide more clarity

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on what would be included in the initial CCDEBE FERC filing. PG&E is particularly confused by whether reference level changes for Default Commitment Costs (Default Start-Up Bids, Default Minimum Load Bids, and Default Transition Bids) are included in Phase 1 or if they have been postponed to Phase 2 (along with market power mitigation). The recent Business Requirements Specification seem to suggest that Phase 1 only addresses Default Energy Bids (DEBs).

3. Include Transition Cost in section 30.4.4.2

PG&E requests that the CAISO include Transition Cost in section 30.4.42 as read: “For Use Limited Resources using the Proxy Cost methodology, the CAISO will calculate a resource’s Default Commitment Cost Bids as the applicable Proxy Cost multiplied by one hundred and twenty-five percent (125%) plus the Opportunity Start-Up Cost or Opportunity Minimum Load Cost or **Transition Cost** as applicable.” Transition Costs should be included in the list because they also use the Proxy Cost methodology as defined in section 30.4.5.1 (d).

4. Provide more clarification on DEB reference level change requests in section 30.7.3.4

As written, the draft Tariff language in section 30.7.3.4 regarding generated bid components after market close is unclear. How will Scheduling Coordinators be able to view DEBs before bids are due in order to know whether to request a reference level adjustment? More details, such as where this information would be posted, would be helpful.

Draft Tariff Language:

4.12.1 General Responsibilities

4.12.1.1 Operate Pursuant to Relevant Provisions of CAISO Tariff

Resource-Specific System Resource owners shall operate, or cause their facilities to be operated, in accordance with the relevant provisions of this CAISO Tariff, including but not limited to the following.

- (ii) In order to be eligible for Bid Cost Recovery ~~pursuant to Sections 30.4 and 30.5.2.4~~, a Resource-Specific System Resource owner shall ensure that its Scheduling Coordinator makes an election for Default Start-Up ~~Cost Bids~~ and Default Minimum Load ~~Cost Bids~~ ~~pursuant to Sections 30.4 and 30.5.2.4~~.

Commented [A1]: General comment: PG&E suggests removing all Phase 2 related changes.
Perhaps what would be helpful is a walk-through of each section and an explanation of how it ties to CCDEBE.

Commented [A2]: Is this clean-up language or related to CCDEBE?

6.5.2.2.3 Advisory Day-Ahead Market Results

The CAISO may provide to the responsible Scheduling Coordinator its resource's hourly Energy schedules produced in the non-financially binding RUC process the CAISO conducts two (2) days prior to the Trading Day based on Bids and forecasts of system conditions as available in the CAISO Market systems at the time the CAISO conducts the non-financially binding RUC process. This information is advisory and is not financially binding.

Commented [A3]: What is the context of this change?

6.5.4.2.3 The CAISO will publish the natural gas price indices used for the Real-Time Market when available.

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11.5.6.2.5.2 Allocation of Exceptional Dispatch Costs to Scheduling Coordinators

A Scheduling Coordinator shall be exempt from the first category of the Excess Cost Payment allocation for a Settlement Interval if the Scheduling Coordinator has sufficient incremental Energy Bids that are from physically available resources in the Real-Time Market for Energy to cover its Net Negative Uninstructed Deviation in the given Settlement Interval and that have been approved by the CAISO consistent with Sections 30.7.12 and 30.11. ~~the prices of such Energy Bids do not exceed the applicable maximum Bid level as set forth in Section 39.~~

Commented [A4]: Can the CAISO elaborate on the meaning of this?

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11.8.1.3 Multi-Stage Generating Resource Start-Up Bid Costs, Minimum Load Bid Costs, or Transition Bid Costs

For the settlement of the Multi-Stage Generating Resource Start-Up Bid Costs, Minimum Load Bid Costs, and Transition Bid Costs in the IFM, RUC, and RTM, the CAISO will determine the applicable Commitment Period and select the applicable Start-Up Bid Costs, Minimum Load Bid Costs, and Transition Bid Costs based on the following rules.

Commented [A5]: Start-up costs, minimum load costs, transition costs that are subject to bid insertion should also get BCR.

Same comment for all sections on BCR..

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11.8.2.1.1 IFM Start-Up Cost

The IFM Start-Up Cost for any IFM Commitment Period shall be equal to the Start-Up Bid Costs ~~submitted by the Scheduling Coordinator applicable to the CAISO for~~ the IFM divided by the number

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of Settlement Intervals within the applicable IFM Commitment Period. For each Settlement Interval, only the IFM Start-Up Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the IFM Start-Up Costs for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration. The following rules shall apply sequentially to qualify the IFM Start-Up Cost in an IFM Commitment Period:

- (a) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is an IFM Self-Commitment Period within or overlapping with that IFM Commitment Period.
- (b) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in the Day-Ahead Market anywhere within the applicable IFM Commitment Period.
- (c) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is no actual Start-Up at the start of the applicable IFM Commitment Period because the IFM Commitment Period is the continuation of an IFM Commitment Period, RUC Commitment Period, or RTM Commitment Period from the previous Trading Day.
- (d) If an IFM Start-Up is terminated in the Real-Time within the applicable IFM Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource was starting up, the IFM Start-Up Cost for that IFM Commitment Period shall be prorated by the ratio of the Start-Up Time before termination over the total IFM Start-Up Time.
- (e) The IFM Start-Up Cost is qualified if an actual Start-Up occurs within the applicable IFM Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO IFM Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether the resource’s metered Energy is at or above the resource’s Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3.
- (f) The IFM Start-Up Cost will be qualified if an actual Start-Up occurs earlier than the start of the IFM Commitment Period if the advance Start-Up is a result of a Start-Up instruction issued in a RUC or Real-Time Market process subsequent to the IFM, or the advance Start-Up is uninstructed but is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the targeted IFM Start-Up.
- (g) The Start-Up Bid Costs for a Bid Cost Recovery Eligible Resource that is a Short Start Unit committed by the CAISO in the IFM and that further receives a Start-Up Instruction from the CAISO in the Real-Time Market to start within the same CAISO IFM Commitment Period, will be qualified for the CAISO IFM Commitment Period instead of being qualified for the CAISO RTM Commitment Period; and Start-Up Bid Costs for subsequent Start-Ups will be further qualified as specified in Section 11.8.4.1.1(h).

Commented [A6]: The capitalization of “Off” and “On” implies that they are defined terms in the Tariff. Please advise if the intent was to use defined terms or not.

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11.8.4.1.2 RTM Minimum Load Cost

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The RTM Minimum Load Cost is the Minimum Load Bid Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO applicable for the Real-Time Market, as adjusted pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under a Legacy RMR Contract or the resource has been flagged as a Legacy RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM or RUC Commitment Period; or (4) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource’s RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Cost Bids for Energy between the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.

Commented [A7]: Should be corrected to “Minimum Load Bid Costs”

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27.4.3.1 Scheduling Parameters for Transmission Constraint Relaxation

In the IFM, the enforced internal and Intertie Transmission Constraint scheduling parameter is set to \$510,000 per MWh for the purpose of determining when the SCUC and SCED software in the IFM will relax an enforced Transmission Constraint rather than adjust Supply or Demand bids or Non-priced Quantities as specified in Sections 31.3.1.3, 31.4 and 34.12 to relieve Congestion on the constrained facility. This scheduling parameter is set to \$1,5003,000 per MWh for the RTM. The effect of this scheduling parameter value is that if the optimization can re-dispatch resources to relieve Congestion on a Transmission Constraint at a cost of \$510,000 per MWh or less for the IFM (or \$1,5003,000 per MWh or less for the RTM), the Market Clearing software will utilize such re-dispatch, but if the cost exceeds \$510,000 per MWh in the IFM (or \$1,5003,000 per MWh for the RTM) the market software will relax the Transmission Constraint. The corresponding scheduling parameter in RUC is set to \$1,2502,500 per MWh.

Commented [A8]: Can the CAISO explain the relationship of the \$2000/ MWh hard cap and these prices?

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27.4.3.6 Effectiveness Threshold

The CAISO Markets software includes a lower effectiveness threshold setting that governs whether the software will consider a bid “effective” for managing congestion on a congested Transmission Constraint, which in the case of Nomograms will be applied to the individual flowgates that make up the Nomogram, rather than to the final Nomogram itself. The CAISO will set this threshold at two (2) percent.

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Commented [A9]: What does this mean?

30.4 Default Start-Up Bids, Default Minimum Load Bids, and Default Transition Bids Proxy Cost and Registered Cost Methodologies

30.4.1 Generally

The CAISO will calculate Default Commitment Cost Bids using the Proxy Cost methodology for all resources, except for –

- (a) Non-Resource-Specific Resources and Non-Generating Resources; or
- (b) a resource that is qualified by the CAISO as a Use-Limited Resource and Scheduling Coordinators for Generating Units and Resource-Specific System Resources must use the Proxy Cost methodology for their Start-Up Costs and Minimum Load Costs, as well as for Transition Costs in the case of Multi-Stage Generating Resources unless the resource has fewer than twelve (12) consecutive months of fifteen-minute LMPs for Energy at the resource’s PNode or Aggregated PNode, in which case and meets the resource’s definition Default Commitment Cost Bids will be determined as Registered Costs pursuant to Section 30.4.6. of a Use-Limited Resource.

- Commented [A10]: What is the default CC for these?
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- Commented [A11]: CCE3 cleanup?
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30.4.3 Scheduling Coordinator Reference Level Change Requests

The CAISO will verify Reference Level Change Requests for changes to Default Start-Up Bids and Default Minimum Load Bids as described in Section 30.11.

Commented [A12]: Phase 2?

30.4.4 Default Commitment Cost Bids

30.4.4.1 Using Proxy Cost Methodology

For resources under the Proxy Cost methodology, the CAISO will calculate a resource’s Default Commitment Cost Bids as applicable Proxy Cost multiplied by one hundred and twenty-five percent (125%).

Commented [A13]: Phase 2 change?

30.4.4.3 Registered Costs

For Use Limited Resources using the Registered Costs methodology, the CAISO will use the Registered Costs as registered in the Master File as the Default Commitment Cost Bids.

Commented [A14]: CCE3 change?

30.4.4.6 Maximum Default Start-Up and Minimum Load Costs Bid

In no cases shall the Default Minimum Load Bid exceed the Minimum Load Cost Hard Cap.

- Commented [A15]: Phase 2?
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30.7.3 DAM Validation

30.7.3.1 Validation Prior to Market Close and Master File Update

The CAISO conducts Bid validation in three steps:

Step 3: If the Bid successfully passes validation in Step 2, it will continue through the third level of validation where the Bid will be analyzed based on its contents to identify any missing Bid components that must be present for the Bid to be valid consistent with the market rules contained in Article III of this CAISO Tariff and as reflected in the Business Practice Manuals. At this stage the Bid will either be automatically modified for correctness and assigned a status of conditionally modified or modified, or if it can be accepted as is, the Bid will be assigned a status of conditionally valid, or valid. A Bid will be automatically modified and assigned a status of modified or conditionally modified Bid, whenever the CAISO inserts or modifies a Bid component. The CAISO will insert or modify a Bid component whenever (1) a Self-Schedule quantity is less than the lowest quantity specified as an Economic Bid for either an Energy Bid or Demand Bid, in which case the CAISO extends the Self-Schedule to cover the gap; (2) for non-Resource Adequacy Resources, the CAISO will either extend the Energy Bid Curve ~~using Proxy Costs or use the Generated Bid~~ to cover any capacity in a RUC Bid component, if necessary; and (3) for a Resource Adequacy Resource that is not a Use-Limited Resource, the CAISO will either extend the Energy Bid Curve ~~using Proxy Costs or use the Generated Bid~~ to cover any capacity in a RUC Bid component and, if necessary, up to the full registered Resource Adequacy Capacity. The CAISO will generate a Proxy Bid or extend an Energy Bid or Self-Schedule to cover any RUC Award or Day-Ahead Schedule in the absence of any Self-Schedule or Economic Bid components, or to fill in any gaps between any Self-Schedule Bid and any Economic Bid components to cover a RUC Award or Day-Ahead Schedule. To the extent that an Energy Bid to the HASP/RTM is not accompanied by an Ancillary Services Bid, the CAISO will insert a Spinning Reserve and Non-Spinning Reserve Ancillary Services Bid at \$ 0/MW for any certified Operating Reserve capacity. The CAISO will also generate a Self-Schedule Bid for any Generating Unit that has a Day-Ahead Schedule but has not submitted Bids in HASP/RTM, up to the quantity in the Day-Ahead Schedule. Throughout the Bid evaluation process, the Scheduling Coordinator shall have the ability to view the Bid and may choose to cancel the Bid, modify and re-submit the Bid, or leave the modified, conditionally modified or valid, conditionally valid Bid as is to be processed in the designated CAISO Market. The CAISO will not insert or extend any Bid for a Resource Adequacy Resource that is a Use-Limited Resource.

30.7.3.4 Validation after Market Close

To the extent that a Scheduling Coordinator fails to enter a Bid for a resource that is required to submit a Bid in the full range of available capacity consistent with the bidding provisions of Section 30 or the Resource Adequacy provisions of Section 40, the CAISO will create a Bid for the Scheduling Coordinator, which is referred to as the Generated Bid. This does not apply to Load-following MSSs. The Generated Bid will be created only after the Market Close for the DAM and will be based on data registered in the Master File, and, if applicable, published natural gas pricing data and published pricing data for greenhouse gas allowances. The Generated Bid components will be calculated as set forth in Sections 30 and 40.6.8. The Scheduling Coordinator may view Generated Bids, but may not modify such Bids, ~~except if the CAISO has approved a Reference Level Change Request for the resource's Default Energy Bid~~. The CAISO will provide notice to the Scheduling Coordinator of the use of a Generated Bid prior to Market Clearing of the IFM. In addition, validation of export priority pursuant to Sections 31.4 and 34.10.1 and Wheeling Through transactions pursuant to Section 30.5.4 occur after the Market Close for the DAM.

Commented [A16]: Can the CAISO elaborate on the meaning of this change?

Commented [A17]: When would this apply? When a SC has submitted a DEB reference level change but not the bids themselves?

Or we will be able to view the generated bid and then request a change?

Where will we be able to see that?

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30.7.10.3 Participating Loads

~~For Participating Loads, the submitted Minimum Load Cost (\$/hr) is the cost incurred while operating the resource at reduced consumption after receiving a Dispatch Instruction. The submitted Minimum Load Cost must not be negative.~~

Commented [A18]: What is this/ why removed?

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30.7.12 Validation of Bids in Excess of Soft Energy Bid Cap or Hard Energy Bid Cap

30.7.12.1 Generally

~~The validation rules in this Section apply to all Energy Bids and Minimum Load Bids submitted by Scheduling Coordinators. The provisions of this Section do not apply to Virtual Bids and Energy Bids submitted for Non-Resource-Specific System Resources.~~

Commented [A19]: PG&E disagrees with this. See PG&E's comments on Import Bid Cost Verification initiative.

30.7.12.4 After-Market Cost Recovery

~~For any Energy Bid or Minimum Load Bid price submitted above the Energy Bid price for the Minimum Load Bid the CAISO uses in the CAISO Market Processes, the Scheduling Coordinator may be eligible for after-market cost recover pursuant to Section 30.12.~~

Commented [A20]: Is this drafting clear?

Commented [A21]: Typo. Should be "recovery"

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30.11 Pre-CAISO Market Processes Adjustments to Reference Levels

~~The CAISO will adjust Reference Levels prior to executing the applicable CAISO Market Process as described in this Section 30.11.~~

30.11.1 Reasonable Thresholds

~~The CAISO will calculate Reasonableness Thresholds for the purpose of evaluating increases to Reference Levels pursuant to this Section 30.11.1.~~

Commented [A22]: grammar

30.11.1.1 General Applicability

~~The CAISO will calculate the Reasonableness Thresholds for all resources except for Non-Resource-Specific System Resources. The CAISO will not calculate Reasonableness Thresholds for evaluating Hydro Default Energy Bids or for Virtual Bids. In no case will the Reasonableness Threshold be lower than the resources' Default Commitment Cost Bids or Default Energy Bids that were established prior to the submission of the Reference Level Change Request. For resources for which the CAISO does not calculate Default Energy Bids, the CAISO will set the Reasonableness Threshold at the Soft Energy Bid Cap. Reasonableness Thresholds for Default Energy Bid or Default Minimum Load Bid adjustments cannot exceed the Hard Energy Bid Cap or Minimum Load Cost Hard Cap, respectively.~~

Commented [A23]: Import bid cost verification

Commented [A24]: Does this make sense? Why doesn't 30.11.1.2.2 Non-Natural Gas-Fired Resources Apply?

Commented [A25]: Minimum criteria for non-resource specific imports

30.11.1.2 Calculations

30.11.1.2.1 Natural Gas Resources

~~For a natural gas-fired resource, the CAISO will calculate the Reasonableness Threshold to equal the Proxy Cost based on Default Start-Up Bid, Proxy Cost-based Default Minimum Load Bid, or the Variable Cost-based Default Energy Bid calculated for the specific resource, where the natural gas commodity price component determined pursuant to Section 39.7.1.1.1.3 is multiplied by: (i) one hundred twenty-five percent (125%) for days without a published daily gas price index consistent with the rules in Section 39.7.1.1.1.3, unless the CAISO has updated natural gas commodity price used to~~

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calculate the Reasonableness Threshold pursuant to Section 30.11.1.3, in which case the CAISO will one hundred ten percent (110%); or (ii) one hundred ten percent (110%) for all other days.

Commented [A26]: verb

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30.11.2 Reference Level Change Requests

30.11.2.1 Applicability

A Scheduling Coordinator may submit a Reference Level Change Request for all resources, except for Non-Resource-Specific System Resources, for Default Start-Up Bids, Default Minimum Load Bids, Default Energy Bids, as applicable.

Commented [A27]: This should change with import bid cost verification. Should wait to make tariff changes.

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30.11.2.3 Energy Bids above Soft Energy Bid Cap

A Scheduling Coordinator whose Default Energy Bid does not exceed the Soft Energy Bid Cap and intends to submit an Energy Bid that exceeds the Soft Energy Bid Cap must submit a Reference Level Change Request. The CAISO will further verify Energy Bids in excess of the Soft Energy Bid Cap pursuant to the applicable rules in Section 30.7.

Commented [A28]: Again (similar to BRS comments) this implies that we know what the DEB is. Where/ how will CAISO publish this before bids are due?

30.11.3 Automated Reference Level Change Requests

30.11.3.1 Applicability

Scheduling Coordinators may submit automated Reference Level Change Requests. The CAISO will evaluate automated Reference Level Change Requests prior to the time the applicable CAISO Market Process is executed based on the Reasonableness Threshold the CAISO calculates for each resource as specified in Section 30.11.1. The Scheduling Coordinator must not submit a Reference Level Change Request for the purpose of strategically bidding near the Reasonableness Threshold to bid above actual or expected costs. Scheduling Coordinators shall not submit an automated Reference Level Change Request that the CAISO has previously denied as a manual Reference Level Change Request pursuant to Section 30.11.4 based on the same Documentation of Contemporaneously Available Information submitted with the manual Reference Level Change Request. **The CAISO shall not accepted automated Reference Level Change Requests for Hydro Default Energy Bids.**

Commented [A29]: Grammar? Please tie back to policy.

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30.11.3.4 CAISO Audit and Penalties

(a) Audit Process.

(b) Penalties for Failure to Comply with CAISO Requirements

If the CAISO determines that the information submitted by the Scheduling Coordinator does not support a conclusion that the Scheduling Coordinator's actual or expected fuel costs or fuel-equivalent costs as calculated in Section 30.13.2.2 were higher than those the CAISO used to determine their Reference Levels, the CAISO will penalize the Scheduling Coordinator as follows:

- (1) The determination of non-compliance will result in the CAISO prohibiting the Scheduling Coordinator from making any Reference Level Change Requests for

Commented [A30]: These penalties are not meaningful for imports if there is no reference level.

sixty (60) days from the time the CAISO informs the Scheduling Coordinator of the non-compliance.

- (2) Any subsequent determination of non-compliance will result in the CAISO prohibiting the Scheduling Coordinator from making any Reference Level Change Requests for one-hundred and eighty (180) days, from the time the CAISO informs the Scheduling Coordinator of the non-compliance.

30.11.4 Manual Reference Level Change Requests

30.11.4.1 Applicability

The Scheduling Coordinator may submit a manual Reference Level Change Request for:

- (a) Default Energy Bids, Default Start-Up Bids, and Default Minimum Load Bids, for natural gas resources; and
- (b) Default Energy Bids for non-natural gas-fired resources.

Commented [A31]: What is driving the different treatment? Is there an actual policy need?

30.12.4.3 Settlement of Recoverable Amounts

To the extent the CAISO's evaluation results in verification that the resource actually procured costs claimed by the Scheduling Coordinator were not recovered through the Bid Cost Recovery process, the CAISO will resettle Bid Cost Recovery using revised Bid Costs for the resource and will issue Recalculation Settlement Statement(s) within the normal Recalculation Settlement Statements timelines specified in Section 11.29.

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39.6.1.1 Maximum Price for Energy Bid Caps

39.6.1.1.1 Soft Energy Bid Cap

All Energy Bids, except for Virtual Bids, Demand Bids, or Bids for Non-Resource-Specific System Resources, are subject to the Soft Energy Bid Cap.

39.6.1.1.2 Hard Energy Bid Cap

All Energy Bids are subject to the Hard Energy Price Cap. Scheduling Coordinators may submit Energy Bid prices in excess of the Hard Energy Bid Cap, which the CAISO will cost-verify pursuant to the rules specified in Section 30.11.

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Commented [A33]: BIDS? Or documentation for BCR?

39.6.1.6.2 Projected Greenhouse Gas Allowance Price

For resources that are registered with the California Air Resources Board as having a greenhouse gas compliance obligation, the CAISO will calculate a projected Greenhouse Gas Allowance Price component to be used in establishing maximum Default Start-Up CostBids and Default Minimum Load CostBids after the twenty-first day of each month and will post it on the CAISO Website by the end of that month. The projected Greenhouse Gas Allowance Price component will be applicable for Scheduling Coordinators on behalf of eligible Use-Limited Resources electing to use the Registered Cost methodology until a new projected Greenhouse Gas Allowance Price component is calculated and posted on the CAISO Website. The projected Greenhouse Gas Allowance Price component will

Commented [A34]: Is this a CCDEBE change or a clean-up?

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be calculated by averaging the applicable daily Greenhouse Gas Allowance Prices calculated over the first twenty (20) days of the month using the methodology set forth in Section 39.7.1.1.1.4.

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39.7.1.1.1.2 Non-Natural Gas-Fired Resources

For non-natural gas-fueled units, incremental fuel cost is calculated based on an average cost curve as described below.

Resource owners for non-natural gas-fueled units shall submit to the CAISO average fuel costs (\$/MW) measured for at least two (2) and up to eleven (11) generating operating points (MW), where the first and last operating points refer to the minimum and maximum operating levels (i.e., PMin and PMax), respectively. The average cost curve formed by the (\$/MWh, MW) pairs is a piece-wise linear curve between operating points, and two (2) average cost pairs yield one (1) incremental cost segment that spans two (2) consecutive operating points. For each segment representing operating levels below eighty (80) percent of the unit’s PMax, the incremental cost rate is limited to the maximum of the average cost rates for the two (2) operating points used to calculate the incremental cost segment. The unit’s final incremental fuel cost curve is then adjusted, if necessary, applying a left-to-right adjustment to ensure that the final incremental cost curve is monotonically non-decreasing. The CAISO Cost curves will include, if applicable: (i) greenhouse gas allowance costs for each non-natural gas-fired resource registered with the California Air Resources Board as having a greenhouse gas compliance obligation, as provided to the CAISO by the Scheduling Coordinator for the resource; and (ii) variable operation and maintenance cost; and (iii) a volumetric Grid Management Charge adder that consists of: (i) the Market Services Charge; (ii) the System Operations Charge; and (iii) the Bid Segment Fee divided by the MW in the Bid segment. Cost curves shall be stored, updated, and validated in the Master File.

Commented [A35]:

Commented [A36]: Is this supposed to be CAISO or should we not include them in our master file cost curves?

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40.6.8.1.1 Calculation Options for Generated Bids

The Scheduling Coordinator for each non-Resource Specific System Resource that provides Resource Adequacy Capacity shall select the price taker option, LMP-based option, or negotiated price option as the methodology for calculating the Generated Bids to be submitted by the CAISO under Section 40.6.8 for both the DAM and RTMs. If no selection is made, the CAISO will apply the price taker option to calculate the Generated Bids. For the first ninety (90) days after a resource becomes a Non-Resource-Specific System Resource, the calculation of Generated Bids for Resource Adequacy capacity is limited to the price taker option or negotiated price option.

Commented [A37]: Why wouldn't import points always have to history to use the LMP option?

**Appendix A
Master Definitions Supplement**

- Minimum Load Bid

The Bid component that indicates the Minimum Load Cost for the Generating Unit, Participating Load, Reliability Demand Response Resource, or Proxy Demand Resource specified by a non-negative number in dollars per hour, which applies for the entire Trading Day for which it is submitted. Minimum Load Bids are subject to modification pursuant to the rules specified in Sections XX and XX.

Commented [A38]: Specify

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- Start-Up Bid

The Bid component that indicates the Start-Up Time and Start-Up Cost curves for the Generating Unit, which applies for the entire Trading Day for which it is submitted. Start-Up Bids Cost curves are subject to modification pursuant to the rule set forth in Section 30.7.8 and 30.11. ~~strictly monotonically increasing non-negative staircase curves, up to three segments, which represent a function of Start-Up Cost versus down time.~~

Commented [A39]: Is Start up time in the master file or something indicated for the Day?

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- Subset of Hours Contract

A contract between a Load Serving Entity and a ~~n~~Non-Resource-Specific System Resource that requires the resource to make Resource Adequacy Capacity available to the CAISO on designated days and/or during a specified number of hours, less than seven (7) days a week, twenty-four (24) hours a day.

Commented [A40]: Where is this definition used in the Tariff?

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