Comments of Pacific Gas & Electric Company

Commitment Cost Enhancements Phase 3 – Draft Tariff Language

Submitted by	Company	Date Submitted
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Pacific Gas and Electric Company (PG&E) offers the below comments [see attached] on the California Independent System Operator's (CAISO) Commitment Cost Enhancements Phase 3 (CCE) Draft Tariff Language and looks forward to discussing during the stakeholder call on August 17th.

PG&E is particularly concerned about the implementation schedule that CAISO proposes in its tariff language. CAISO contemplates activating tariff changes related to resource characteristics six months prior to activating tariff changes related to use limited resources and inclusion of the related opportunity cost adders. Given that the output of the opportunity cost calculator (or the negotiated opportunity costs process) is the central tool offered to market participants to help efficiently manage use limitations, it seems seriously flawed to impose resource characteristics in the Master File (e.g., maximum daily start-ups must be at least two start-ups per day) beforehand. Accordingly, PG&E suggests CAISO not activate these Master File changes in the market until after sufficient time has been given to develop appropriate opportunity cost adders via the calculator or negotiated options. CAISO should explore ways to deploy the opportunity cost calculator to facilitate this effort without activating code in Production that would make the resource characteristic changes binding in the market upfront.

Additionally, PG&E comments on, among other things, the following topics in the attached edited redline of the CAISO's proposed tariff language changes and summary document:

1. The need for more formal guidance on what documentation will be deemed sufficient for establishing resources as use limited
2. Ensuring the alignment of the three-year grandfathering of contractual use limitations is consistent with policy papers and discussions
3. More clarity on how the dispute process for the negotiated opportunity cost option would work
4. Various requests for CAISO to define or clarify terminology

PG&E understands CAISO envisions the tariff language review process for CCE3 will be an iterative process and looks forward to CAISO sharing next steps for stakeholder engagement on the topic.

California Independent
System Operator Corporation

SUMMARY OF TOPICS ADDRESSED IN DRAFT COMMITMENT COST ENHANCEMENTS PHASE 3 TARIFF CHANGES

The CAISO proposes draft tariff changes in the Commitment Cost Enhancements Phase 3 (CCE3) initiative to address the topics summarized below.[1]

The CAISO plans to implement the tariff changes in two stages, but contemplates filing the changes in a single tariff amendment filing requesting two different effective dates. Specifically, the CAISO plans to implement the tariff changes related to resource characteristics following the winter release, currently scheduled for February 13, 2018. The CAISO is currently targeting a March 1, 2018 effective date for the resource characteristic-related tariff changes.

Commented [HJ1]: PG&E sees serious issues with the CAISO activating tariff language related to resource characteristics before activating the tariff changes related to use limited resources. As CAISO's development/negotiation of opportunity costs is a central tool necessary for PG&E to manage the new resource characteristics being imposed (e.g., could lead to running through number of starts too early), PG&E opposes the CAISO activating these changes without a properly functioning calculator with defined opportunity costs in place.

PG&E recognizes CAISO may need to deploy the opportunity cost calculator code earlier in order to facilitate the opportunity cost development process; however, CAISO should do so without formally activating any code related to this or resource characteristics in its Production market runs. CAISO should explore ways to do so leveraging its testing environments or via its Production environment with functionality "non-binding" in the market.

For changes relating to use-limited resources and the development of opportunity cost adders for start-up, minimum load, and variable energy costs, the CAISO is proposing an effective date approximately six months after the opportunity cost calculator functionality is released. The six-month time period will allow scheduling coordinators and the CAISO to work with the opportunity cost calculator and to develop negotiated opportunity costs for resources, where appropriate. During this six-month time period, use-limited resources would continue to have the registered cost methodology available, but that option would be retired effective as of the same date the tariff changes related to use-limited resources go into effect.

The CAISO contemplates that the opportunity cost calculator will be also released as part of the winter release scheduled for February 13, 2018. The CAISO is currently targeting a September 1, 2018 effective date for the tariff changes related to use-limited resources.

Commented [HJ2]: Per the comment above, PG&E feels the CAISO should look into ways to activate both components of the tariff changes concurrently in the Fall 2018 Release once opportunity costs have been established and the calculator results have thoroughly been vetted and tested by market participants. Tariff language should reference the conclusion of this successful testing as a necessary criteria before effective Go-Live of all tariff language.

I. Tariff Changes to Be Implemented in the First Stage of the Initiative

A. Resource Characteristics Provided in the Master File

Currently, the tariff requires the information that a participating generator provides to the Master File regarding the operational and technical constraints of its resources to be accurate and actually based on the physical characteristics of the resources.[2]

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[1] Except where otherwise noted, all of the topics addressed below were originally raised in the CCE3 initiative. Further information regarding the topics is available at http://www.caiso.com/informed/Pages/StakeholderProcesses/CommitmentCostEnhancementsPhase3.aspx.

[2] *See* existing tariff section 4.6.4. For the sake of clarity, this summary distinguishes among existing tariff provisions (*i.e.*, provisions in the current CAISO tariff), revised tariff provisions (*i.e.*, existing

The CAISO proposes to revise this requirement and similar requirements in other tariff provisions to state that the information the participating generator provides must be accurate, complete, responsive to the CAISO's requests, and actually based on the design capabilities of the resources and their constituent equipment, as reasonably adjusted to reflect degradation in performance over time. The CAISO also proposes to state in the tariff that, where the tariff or a business practice manual provides an additional definition or restriction as to a specific operational or technical restraint provided in the Master File, the information provided to the CAISO as to that constraint must also comply with that additional definition or restriction. The CAISO will reject any proposed or existing information that does not satisfy these requirements, and will also reject a value proposed for inclusion in the Master File that is inconsistent with a participating generator's commitment to provide resource adequacy capacity.[3]

Commented [HJ3]: Can CAISO provide more specificity on what "responsive to CAISO requests" entails?

In addition, the CAISO proposes to allow participating generators to include alternative values in the Master File for certain characteristics of their resources.[4] Specifically, with respect to maximum daily start-ups, maximum daily number of multi-stage generating (MSG) resource transitions, operational ramp rate values, operating reserve ramp rate values, and regulation ramp rate values, participating generators can provide for inclusion in the Master File alternative values that the CAISO will utilize during normal, non-emergency market operations, and which may be less than or equal to the values based on the resources' design capabilities, subject to the following limitations:

- Maximum daily start-ups must be at least two start-ups per day unless the CAISO permits only one start-up per day in the Master File due to the design capabilities or degradation in performance of a resource operating beyond its useful life.

- Maximum daily number of MSG transitions must be at least two MSG transitions per day unless the CAISO permits only one MSG transition per day in the Master File due to the design capabilities or degradation of a resource operating beyond its useful life.

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tariff provisions that the CAISO proposes to revise pursuant to the CCE3 initiative), deleted tariff provisions (*i.e.*, existing tariff provisions that the CAISO proposes to deleted pursuant to the initiative), and new tariff provisions (*i.e.*, new provisions that the CAISO proposes to add to the tariff pursuant to this initiative).

3 Revised tariff sections 4.6.4, 4.12.2, 4.13.3, 30.7.3.5; tariff appendix A, revised definitions of "Maximum Daily Start-Ups", "Minimum Down Time", "Minimum Run Time", "Multi-Stage Generating Resources", "Pump Ramping Conversion Factor", "Security Constrained Unit Commitment". The CAISO originally proposed to revise the tariff to address this topic in the Bidding Rules Enhancements (BRE) initiative but subsequently moved the topic to the CCE3 initiative.

4 Revised tariff section 4.6.4; tariff appendix A, revised definition of "Maximum Daily Start-Ups". The CAISO originally proposed to revise the tariff to address this topic in the BRE initiative but subsequently moved the topic to the CCE3 initiative.

- Operational ramp rate values must be sufficient to permit the resource to provide its flexible resource adequacy capacity obligation. If a participating generator provides alternative operational ramp rate values for the Master File, the Master File values for operating reserve ramp rates and regulation ramp rates must be values at which the resource is reasonably capable of operating.

The CAISO will utilize alternative Master File values in the CAISO markets and in automated exceptional dispatch tools. However, the CAISO may issue exceptional dispatches based on the design capabilities of a generating unit, regardless of whether the participating generator also provides an alternative value for use in the CAISO markets.[5]

B. Remove Ramp Rates as a Component of Daily Bids

Currently, ramp rates are a component of daily bids for energy, ancillary services, and RUC availability.[6] The CAISO proposes to revise the tariff to remove all ramp rates (*i.e.*, operational ramp rates, operating reserve ramp rates, and regulation ramp rates) as components of daily bids and to make conforming changes to reflect that its market processes will utilize the ramp rates included in the Master File.[7]

C. Revise the Negotiated Default Energy Bid Process

The tariff currently does not include a process for the CAISO to renegotiate a default energy bid established under the negotiated rate option.[8]

The CAISO proposes to revise the tariff to state that the CAISO may require the renegotiation of such a default energy bid, may review and propose modifications to the default energy bid, and may require the scheduling coordinator to provide updated information to support continuation of the default energy bid.[9]

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5 Revised tariff section 4.6.4.

6 *See, e.g.*, existing tariff section 30.5.2.2.

7 Revised tariff sections 8.3.7, 8.4.1.1(b), 30.5.2.2 – 30.5.2.4, 30.5.2.6 – 30.5.2.7, 34.17.1(c), 34.17.5; deleted tariff section 30.7.7; tariff appendix A, revised definitions of “Operating Reserve Ramp Rate”, “Operational Ramp Rates”, “Ramp Rate”, “Regulation Ramp Rate”.

8 *See* existing tariff section 39.7.1.3.1.

9 Revised tariff section 39.7.1.3.1.

D. Minor Clarifications

The CAISO proposes to provide clarifications to its tariff to capitalize and more accurately use defined terms, include more descriptive section titles, correct punctuation, and more provide more specific cross-references.[10]

II. Tariff Changes to Be Implemented in the Second Stage of the Initiative

A. Definition and Scope of Use-Limited Resources

Currently, the CAISO tariff defines a use-limited resource as a resource that, due to design considerations, environmental restrictions on operations, cyclical requirements, or other non-economic reasons, is unable to operate continuously.[11] The tariff also states that specified types of resources are deemed to be use-limited resources and that scheduling coordinators for all other types of resources can submit applications that allow the CAISO to determine whether they are use-limited resources.[12]

The CAISO proposes to replace the existing process under the tariff with a registration and validation process that applies to all resources seeking to demonstrate that they are use-limited resources, and to allow use-limited resources to seek to recover opportunity costs as summarized below.[13] Pursuant to the new process, in order to be considered a use-limited resource, the scheduling coordinator for a resource must provide sufficient documentation demonstrating that:

(1) The resource has one or more limitations affecting its number of starts, its number of run-hours, or its energy output due to (a) design considerations, (b) environmental restrictions, or (c) qualifying contractual limitations that meet requirements set forth in the tariff;

(2) The applicable market process cannot recognize the resource's limitation(s); and

(3) The resource has the ability to select hours of operation independent of uncontrollable factors.[14]

Commented [HJ4]: To date, CAISO has not published formal documents thoroughly defining what documentation will be deemed sufficient for establishing a resource as use limited. The location of this description should be detailed in the tariff (e.g., BPM) and should be published prior to tariff filing to allow for feedback from market participants.

Furthermore, the CAISO should develop and document a dispute resolution process concerning the use limited documentation requirement (and define in the tariff where this process is detailed). This dispute process should also articulate the interim treatment of the resource's use limited status.

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10 Revised tariff sections 30.4.1.1.2, 30.7.9, 40.6.8(d); tariff appendix A, revised definition of "Multi-Stage Generating Resources".

11 Existing tariff appendix A, definition of "Use-Limited Resource".

12 Existing tariff section 40.6.4.1.

13 New tariff sections 30.4.1.1.6-30.4.1.1.6.1; deleted tariff section 40.6.4.1; tariff appendix A, revised definition of "Use-Limited Resource".

14 New tariff section 30.4.1.1.6.1.1.

Pursuant to a process set forth in the business practice manual, the CAISO will review the limits and the supporting documentation provided by the scheduling coordinator as well as any translation of indirect limits to determine whether the scheduling coordinator has made the required demonstration.[15]

B. Opportunity Cost Methodology

The CAISO proposes to allow a resource that meets the criteria as a use-limited resource to recover any or all of the following types of opportunity costs, provided that the scheduling coordinator can provide sufficient documentation:

- Start-up opportunity costs, defined as the estimated profits foregone by a use-limited resource with a limitation on its number of starts, if the use-limited resource had one less start in the applicable time period.[16] Use-limited resources will receive start-up opportunity costs as an adder to their start-up costs, with the adder not subject to the existing 125-percent proxy cost cap that applies to other types of start-up costs.[17] For use-limited resources that are MSG resources, their transition costs will likewise include a start-up opportunity cost adder not subject to the proxy cost cap.[18]

- Minimum load opportunity costs, defined as an adder consisting of the estimated profits foregone by a use-limited resource with a limitation on its number of run-hours, if the use-limited resource had one less run-hour in the applicable time period.[19] Use-limited resources will receive start-up opportunity costs as an adder to their minimum load costs, with the adder not subject to the proxy cost cap.[20]

- Variable energy opportunity costs, defined as an adder consisting of the estimated profits foregone by a use-limited resource with a limitation on its energy output, if the use-limited resource had one less megawatt-hour of energy output in the applicable time period.[21] Use-limited resources will

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15 *Id.*

16 Tariff appendix A, definition of new term “Start-Up Opportunity Costs”.

17 Revised tariff sections 30.4.1.1.1(a), 30.4.1.1.2(a), 30.7.9(c). As summarized below, the CAISO proposes to retire the existing registered cost cap in stage two of this initiative. Therefore, the existing 150-percent registered cost cap will also be retired.

18 Revised tariff section 30.4.1.1.5; tariff appendix A, revised definition of “Transition Cost”.

19 Tariff appendix A, definition of new term “Minimum Load Opportunity Costs”.

20 Revised tariff sections 30.4.1.1.1(a), 30.4.1.1.2(a), 30.7.10.1.

21 Tariff appendix A, definition of new term “Variable Energy Opportunity Costs”. The CAISO also proposes to add to tariff appendix A the new term “Opportunity Costs,” defined as start-up opportunity costs, minimum load opportunity costs, or variable energy opportunity costs.

receive variable energy opportunity costs as an adder to their default energy bids under the variable cost option.[22]

A scheduling coordinator for a use-limited resource may seek to establish such opportunity costs for any limitation(s) that satisfy the requirements covered under item (1) in the preceding section of this summary, apply for period(s) longer than the time horizon considered in the applicable day-ahead market process, and can be reflected in a monthly, annual, and/or rolling 12-month period.[23]

Based on the documentation submitted, the CAISO will evaluate whether it can model the limitation(s) for which the use-limited resource seeks to recover opportunity costs under its opportunity cost calculation methodology. If the CAISO cannot model one or more such limitations, the opportunity costs for such limitations will instead be established by a negotiated process similar to the process for negotiated default energy bids. The CAISO's determination of whether an opportunity cost will be calculated or negotiated will remain in place unless and until: (1) the scheduling coordinator submits updated documentation contained in a new request to recover an opportunity cost that requires the CAISO to change its existing determination; or (2) the scheduling coordinator demonstrates that negotiation of an opportunity cost is required because the results of calculating an opportunity cost are inadequate.[24]

Commented [HJ5]: PG&E feels the CAISO should define a dispute process similar to that for default energy bids for disputes in the negotiated opportunity costs process. CAISO should also better define what qualifies as "inadequate" in terms of the results of the CAISO's opportunity cost calculations.

The following types of use-limited resource capacity is not eligible for an opportunity cost adder under the new tariff provisions: the capacity of a condition 2 RMR unit, a reliability demand response resource, regulatory must-take capacity, and any other type of use-limited resource to the extent it has a limitation that satisfies the relevant requirements but applies for a period less than or equal to the time horizon considered in the day-ahead market.[25]

With respect to use limitations that the CAISO can model, no more frequently than each month the CAISO will calculate opportunity costs for the use limitations using a calculation methodology set forth in the tariff. Under the methodology, each calculation of opportunity costs will equal the estimated profits if the use-limited resource had one less unit of starts, run-hours, or energy output, whichever is applicable, in the future time period of the validated limitation, taking into account a ten percent margin with regard to the limitation of the Use-Limited Resource that is most likely to be reached. The CAISO will provide the results of the calculations or updated calculations for a use-limited resource to its scheduling coordinator.[26]

Commented [HJ6]: This language seems too restrictive. For example, what if CAISO runs data issues or inaccuracies with the calculator output requiring a recalculation? CAISO should build in flexibility to run the calculator more frequently as needed.

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22 Revised tariff section 39.7.1.1; new tariff section 39.7.1.1.4.

23 New tariff section 30.4.1.1.6.1.2.

24 *Id.*; new tariff section 30.4.1.1.6.3.

25 New tariff section 30.4.1.1.6.1.2.

26 New tariff sections 30.4.1.1.6.2-30.4.1.1.6.2.2.

If the CAISO cannot model a use limitation, the CAISO will request in the negotiation process that the scheduling coordinator provide the CAISO with a proposed opportunity cost methodology along with documentation supporting the methodology and a proposed schedule for updating opportunity costs under the methodology. The CAISO will either approve the submitted methodology or enter into good-faith negotiations with the scheduling coordinator to establish an agreed-upon methodology and the schedule for updating the opportunity costs.[27]

Commented [HJ7]: CAISO should detail where thorough descriptions of this documentation requirement will be located. Likewise, this description should be available for review/feedback from market participants before CAISO files with FERC

In addition, generated bids for energy will include opportunity costs.[28]

C. Retire the Registered Cost Methodology

The tariff currently states that scheduling coordinators for resources that are not use-limited resources will be subject to the proxy cost methodology for their start-up costs, minimum load costs, and transition costs, while scheduling coordinators for use-limited resources can elect on a 30-day basis to be subject to either the proxy cost methodology or the registered cost methodology for such costs.[29]

The CAISO proposes to retire the registered cost methodology and to make conforming changes to the tariff provisions that reference it.[30]

4.6.4 Identification Of Generating Units

Each Participating Generator shall provide data identifying each of its Generating Units and such information regarding the capacity and the operating characteristics of the Generating Unit as may be reasonably requested from time to time by the CAISO. Each Participating Generator shall provide information on its governor setting and certify that it has not inhibited the real power response of any Generating Unit by any means that would override the governor response except as necessary to address physical operational constraints for reasons that include ambient temperature limitations, outages of mechanical equipment or regulatory considerations. In the event there is a need to inhibit the real power response of any Generating Unit, the Participating Generators shall provide a written description of this limitation with its certification. All information provided to the CAISO regarding the operational and technical constraints in the Master File shall be accurate, complete, responsive to the CAISO's requests, and actually based on the design capabilities~~physical characteristics~~ of the resource~~s~~ and its constituent equipment, as reasonably adjusted to reflect degradation in performance over time.~~-~~ Where the CAISO Tariff or a Business Practice Manual provides an additional definition or restriction as to a specific operational or technical constraint provided to the Master File, the information provided to the CAISO as to that constraint must also comply with that additional definition or restriction. ~~except for t~~The Pump Ramping Conversion Factor value~~, which~~ is configurable and need not reflect a resource's design capabilities.

With respect to Maximum Daily Start-Ups, maximum daily number of MSG Transitions, Operational Ramp Rate values, Operating Reserve Ramp Rate values, and Regulation Ramp Rate values, Participating Generators shall also be permitted to provide for inclusion in the Master File alternative values that the CAISO will utilize during normal, non-emergency market operations, and which may be less than or equal to the values based on the resource's design capabilities, subject to the following limitations on such alternative Master File values:

(1) Maximum Daily Start-Ups must be at least two (2) Start-Ups per day unless the CAISO permits only one (1) Start-Up per day in the Master File due to the design capabilities or degradation in performance of a resource operating beyond its useful life.

(2) Maximum daily number of MSG Transitions must be at least two (2) MSG Transitions per day unless the CAISO permits only one (1) MSG Transition per day in the Master File due to the design capabilities or degradation in performance of a resource operating beyond its useful life.

(3) Operational Ramp Rate values must be sufficient to permit a resource to provide its Flexible RA Capacity obligation. If a Participating Generator provides alternative Operational Ramp Rate values for the Master File, the Master File values for Operating Reserve Ramp Rates and Regulation Ramp Rates must be values at which the resource is reasonably capable of operating.

The CAISO will reject a value proposed for inclusion in the Master File that is infeasible given the design capabilities of the resource or is inconsistent with a Participating Generator's commitment to provide Resource Adequacy Capacity. If the CAISO rejects a proposed value, the default Master File value for the resource will be its design capability value

The CAISO will utilize alternative Master File values in the CAISO Markets and in automated Exceptional Dispatch tools. However, the CAISO may issue Exceptional Dispatches based on the design capabilities of a Generating Unit, regardless of whether the Participating Generator also provides an alternative value for use in the CAISO Markets.* * * *

Commented [HJ8]: "Emergency" should be a capitalized defined term in the Tariff outlining what conditions justify CAISO deviating from these alternative market-based Master File values.

Commented [HJ9]: This language ("beyond its useful life") is stricter than the language from the Draft Final Proposal ("nearing the end of its lifecycle"). CAISO should modify this language to ensure it is consistent with Policy.

Commented [HJ10]: Can CAISO elaborate on what it means by "automated Exceptional Dispatch tools"?

PG&E suggests the this language be edited to the following for clarity:

"The CAISO will utilize alternative Master File values in the CAISO Markets and in automated Exceptional Dispatch tools. However, the CAISO may issue manual Exceptional Dispatches based on the design capabilities of a Generating Unit, regardless of whether the Participating Generator also provides an alternative value for use in the CAISO Markets."

30.4.1.1.6 Use-Limited Resources

30.4.1.1.6.1 Registration and Validation Process

A Scheduling Coordinator seeking to obtain Use-Limited Resource status for resource(s) will follow the registration and validation process set forth in this CAISO Tariff and the Business Practice Manual. The registration and validation process requires each Scheduling Coordinator to demonstrate that the resources meet the Use-Limited Resource criteria as set forth in Section 30.4.1.1.6.1.1, and allows each Scheduling Coordinator to seek to recover Opportunity Costs for Use-Limited Resources by making the demonstration set forth in Section 30.4.1.1.6.1.2.

30.4.1.1.6.1.1 Use-Limited Resource Criteria

In order for a resource to be considered a Use-Limited Resource, a Scheduling Coordinator must provide sufficient documentation demonstrating that:

(1) The resource has one or more limitations affecting its number of starts, its number of run-hours, or its Energy output due to (a) design considerations, (b) environmental restrictions, or (c) qualifying contractual limitations;

(2) The applicable market process cannot recognize the resource's limitation(s); and

(3) The resource has the ability to select hours of operation independent of uncontrollable factors.

Design considerations that satisfy the requirements of this Section are those resulting from physical equipment limitations. A non-exhaustive list of such physical equipment limitations includes restrictions documented in original equipment manufacturer recommendations or bulletins, or limiting equipment such as storage capability for hydroelectric generating resources. Other design considerations that satisfy the requirements of this Section are those resulting from performance criteria for Demand Response Resources established pursuant to programs or contracts approved by Local Regulatory Authorities. Environmental restrictions that satisfy the requirements of this Section are those imposed by regulatory bodies, legislation, or courts. A non-exhaustive list of such environmental restrictions includes limits on emissions, water use restrictions, run-hour limitations in operating permits or other environmental limits that directly or indirectly limit starts, run hours, or MWh limits, but excludes restrictions with soft caps that allow the resource to increase production above the soft caps through the purchase of additional compliance instruments. Qualifying contractual limitations that satisfy the requirements of this Section are those contained in long-term contracts that (i) were reviewed and approved by the CPUC on or before January 1, 2015 and (ii) were evaluated by the CPUC for the cost implications of the limitations on such resources' numbers of starts, number of run-hours, or Energy output. Contracts limits that provide for higher payments when start-up, run-hour, or Energy output thresholds are exceeded are not qualifying contractual limitations. Effective **[the date three years after these tariff revisions go into effect]**, no contractual limitations will constitute qualifying contractual limitations that satisfy the requirements of this Section.

Pursuant to a process set forth in the Business Practice Manual, the CAISO will review the limits and the supporting documentation provided by the Scheduling Coordinator as well as any translation of indirect limits to determine whether the Scheduling Coordinator has made the required showing under this Section.

30.4.1.1.6.1.2 Establishing Opportunity Cost Adders

A Scheduling Coordinator for a Use-Limited Resource may seek to establish Opportunity Cost adders for any limitation(s) that:

(1) Satisfy the requirements of Section 30.4.1.1.6.1.1;

(2) Apply for period(s) longer than the time horizon considered in the applicable Day-Ahead Market process; and

(3) Can be reflected in a monthly, annual, and/or rolling twelve (12) month period.

Commented [A11]: CAISO should provide more specificity of what this means.

Commented [A12]: CAISO should clarify that this is effective three years after the opportunity cost model tariff changes go into effect.

Also, CAISO should add language consistent with that presented to the Board of Governors (p.5 of Board Memo) reserving the right to extend the transitional period if deemed necessary:
"Given the uncertainty of the quantity of capacity that will be captured by the provision, and increasing flexibility needs of the markets, Management cannot fully assess the market impacts of extending the provision beyond three years at this time. However, Management does commit to evaluate, prior to the end of the three year period, potential market and reliability impacts if the provision were to be extended at that time."

Commented [HJ13]: In the Policy phase, CAISO framed the limitation in the following manner. The Tariff language should reflect this, and not the language that the CAISO has included in the draft Tariff language:
"Conventional resources that, as of January 1, 2015, are on an original long-term contract individually reviewed and approved through a comprehensive regulatory process as a new build **which evaluated cost implications on rate payers with a limitation on starts, run-hours, or output**, will be eligible for an opportunity cost reflective of such limitation, provided sufficient supporting documentation is provided, for up to three years following the effectiveness date of opportunity costs as determined through CCE3."

The CAISO will review the documentation provided by the Scheduling Coordinator and determine whether the CAISO can model the limitation in order to calculate an Opportunity Cost pursuant to the methodology set forth in Section 30.4.1.1.6.2, or whether the Opportunity Cost for the limitation must instead be established pursuant to the negotiation process set forth in Section 30.4.1.1.6.3. The CAISO's determination of whether an Opportunity Cost will be calculated or negotiated will remain in place unless and until: (1) the Scheduling Coordinator submits updated documentation contained in a new request to recover an Opportunity Cost that requires the CAISO to change its existing determination; or (2) the Scheduling Coordinator demonstrates that negotiation of an Opportunity Cost is required because the results of calculating an Opportunity Cost are inadequate as set forth in the Business Practice Manual.

The following types of Use-Limited Resource ~~s~~ capacity is not eligible for an Opportunity Cost adder: the capacity of a Condition 2 RMR Unit, a Reliability Demand Response Resource, Regulatory Must-Take Capacity, and any other type of Use-Limited Resource to the extent it has a limitation that satisfies the requirements of Section 30.4.1.1.6.1 but applies for a period less than or equal to the time horizon considered in the Day-Ahead Market.

30.4.1.1.6.2 Calculation of Opportunity Cost Adders

30.4.1.1.6.2.1 Calculation Schedule

No more frequently than each month, the CAISO will calculate, and will update the most recent calculations of, Start-Up Opportunity Costs for each validated limitation on a Use-Limited Resource's number of starts, Minimum Load Opportunity Costs for each validated limitation on a Use-Limited Resource's number of run-hours, and Variable Energy Opportunity Costs for each validated limitation on a Use-Limited Resource's Energy output for which the Scheduling Coordinator has made the required showing under Section 30.4.1.1.6.1.2. Such calculations or updated calculations will actually be used to set the adder will for each validated limitation that can be reflected in a monthly or a rolling twelve (12) month period and will be advisory for each validated limitation that can be reflected in an annual period. The CAISO will provide the results of the calculations or updated calculations for a Use-Limited Resource to its Scheduling Coordinator.

In the event that the CAISO is unable to perform such calculations or updated calculations for all Use-Limited Resources, the CAISO will give priority to performing such calculations or updated calculations for those Use-Limited Resources that are currently on pace to reach their maximum allowed numbers of starts, maximum allowed numbers of run-hours, or maximum allowed Energy output more quickly than the most recent calculations of Opportunity Costs indicated. To the extent that the CAISO is unable to perform such calculations or updated calculations for a Use-Limited Resource, the CAISO will utilize the most recently calculated or updated Opportunity Costs that have been set or are advisory for the Use-Limited Resource.

30.4.1.1.6.3 Negotiation of Opportunity Costs

If, after receipt of the documentation required pursuant to Section 30.4.1.1.6.1.2, the CAISO determines that it cannot rely on the Opportunity Cost calculator to calculate Opportunity Costs for an eligible limitation pursuant to Section 30.4.1.1.6.2, the CAISO will establish the Opportunity Costs for the limitation pursuant to this Section. Upon making this determination, the CAISO will notify the Scheduling Coordinator for the resource and request that the Scheduling Coordinator provide the CAISO with a proposed methodology for determining Start-Up Opportunity Costs, Minimum Load Opportunity Costs, and/or Variable Energy Opportunity Costs for the limitation along with documentation supporting the methodology, and a proposed schedule for updating such Opportunity Cost(s) under the methodology. The CAISO will either approve the submitted Opportunity Cost methodology or enter into good-faith negotiations with the Scheduling Coordinator to establish an agreed-upon Opportunity Cost methodology and the schedule for updating the Opportunity Costs under the methodology.

Commented [A14]: CAISO should insert language consistent with SC's ability to dispute CAISO's methodology, which could also lead to negotiated option.

Commented [A15]: CAISO should detail timing (either here or in BPM) as how long this process would take is not defined here or elsewhere. PG&E suggests CAISO leverage timing from the current default energy bid negotiation process, which is detailed in Tariff Section 39.7.1.3.

Commented [A16]: Grammatical error

If the CAISO and the Scheduling Coordinator enter into good-faith negotiations, the negotiation period for a minimum of sixty (60) days following the provision of all required documentation by the Scheduling Coordinator. Following the 60-day period, the parties can agree to continue good-faith negotiations or the Scheduling Coordinator can exercise its right to file with FERC as described below. In the event that the CAISO and the Scheduling Coordinator are unable to agree upon negotiated Opportunity Costs before the negotiation period terminates, the CAISO may propose reasonable interim Opportunity Cost value(s) that will apply to the Use-Limited Resource until the CAISO and the Scheduling Coordinator agree upon negotiated Opportunity Costs. The Scheduling Coordinator may accept or reject the proposed interim Opportunity Cost value(s). If the Scheduling Coordinator rejects the proposed interim Opportunity Cost value(s), the Use-Limited Resource will not receive Opportunity Costs unless and until the CAISO and the Scheduling Coordinator agree upon negotiated Opportunity Costs, or such costs are established by an order issued by FERC. In the event that the negotiation period terminates without the CAISO and the Scheduling Coordinator reaching agreement upon negotiated Opportunity Costs, and the Scheduling Coordinator declines to continue negotiations, the Scheduling Coordinator may file proposed Opportunity Costs and supporting documentation with FERC pursuant to Section 205 of the Federal Power Act.

Any updates to the negotiated Opportunity Costs adders established pursuant to this Section will consist solely of updates to the Opportunity Cost values themselves, and shall not affect the methodology for establishing those values. Any change in methodology would require the Scheduling Coordinator to initiate a new request pursuant to Section 30.4.1.1.6.1.2.

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