

Comments of Pacific Gas and Electric Company
Commitment Cost Enhancements Phase 2 – Straw Proposal Oct. 29, 2014

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) Commitment Cost Enhancements (CCE) Straw Proposal.

1. **PG&E does not support the CAISO’s proposal to redefine use-limited resources to exclude wind, solar, nuclear, Combined Heat and Power (CHP) and Qualifying Facilities (QFs) unless CAISO demonstrates that the bid insertion and residual unit commitment (RUC) requirements for non-dispatchable resources will not change.**

The use-limitation designation is currently used as a flag to prevent infeasible bid insertion and RUC requirements for wind, solar, nuclear, CHP, and QF units that are not dispatchable in all markets or in the real-time market due contractual, regulatory, and/or physical limitations. As currently described in the straw proposal, these resources would no longer be considered use-limited. This declassification would create operational and administrative complications, including the following:

- a. Intermittent Resources: Bid Insertion and RUC

Some existing wind and solar resources are contractually and/or physically limited to generating as-available and, as such, are scheduled at quantities equal to forecasted output. Bid insertion at RA capacity for these types of resources is inappropriate as it could result in infeasible schedules.

For example, consider the scenario of a resource adequacy (RA) solar resource bids at its forecasted output, which is below its RA capacity (e.g., a solar PV facility with an RA capacity of 50 MW but whose output during non-daylight hours is zero). CAISO would generate a bid for the remaining RA capacity for which the SC did not submit a bid. The resource could then receive an award in the day-ahead, fifteen-minute, or five-minute market to run at 2 AM but would then be subject to uninstructed imbalance charges when it fails to respond to its dispatch instructions. This would increase the total volume of uninstructed deviations, potentially impacting reliability.

The straw proposal states that wind and solar resources would be exempt from bid insertion in the day-ahead and real-time market under tariff section 40.6.4.3.4. However, this section of the tariff is a subsection under the heading “Use-Limited

Resources Additional Availability Requirements” (40.6.4) so it is unclear whether this exemption would still apply if these resources are no longer considered use-limited. This section of the tariff should be moved to ensure that wind and solar resources are not subject to bid insertion.

A RUC requirement for intermittent resources is also inappropriate as it could result in similarly infeasible obligations. Under the straw proposal, use-limited resources previously exempt from RUC would no longer be exempt if they have resource adequacy (RA) capacity. Currently, an RA resource’s RUC obligation is determined by excess RA capacity above an IFM schedule (Section 40.6.1(a)). For intermittent resources, this could result in a RUC requirement that exceeds a unit’s forecasted output.

Similar to the example provided above, an RA solar resource that submits a bid equal to its forecasted output could be subject to RUC obligations if its forecasted output is lower than its RA capacity. This could result in an energy award in the real-time market and subsequent uninstructed imbalance energy charges when the unit is unable to increase its output. Assigning a RUC obligation to units that are unable to ramp their production upward to meet a real-time award would result in an under procurement of capable RUC capacity.

b. Regulatory Must-Take Resources: Bid Insertion and RUC

Nuclear, QF, and some CHP resources are non-dispatchable, non-dispatchable within certain output zones (e.g., reliability must-take generation for CHPs), or dispatchable in the day-ahead market but not in the real-time market. The straw proposal notes that these regulatory must-take resources are exempt from the standard capacity product standards; however, these units would still be subject to bid insertion and RUC obligations without the use-limitation designation.

Without the use-limited designation, if these resources are self-scheduled at a quantity below their RA capacity, they would be subject to bid insertion and RUC obligations. This could result in dispatch instructions that are infeasible given the contractual or operational constraints of the units.

For example, consider an RA unit that is able to respond to day-ahead dispatch instructions but does not have the flexibility (either due to contractual limitations or due to physical inability to ramp) to respond to real-time dispatch instructions. If that unit submitted a bid below its RA capacity, CAISO would generate a bid for the remaining RA capacity for which the SC did not submit a bid. The resource could then receive an award in real-time, and would then be subject to uninstructed imbalance charges when it fails to respond to its dispatch instructions. This would increase the total volume of uninstructed deviations.

Since it is an RA resource, the resource would also be subject to RUC obligations. This could also result in an award in the real-time market and subsequent uninstructed imbalance energy charges when the unit is unable to increase its output. As noted earlier, assigning a RUC obligation to units unable respond to real-time dispatch instructions would result in an under procurement of RUC capacity.

c. Limited-Dispatch Resources: Bid Insertion and RUC

Other resource types not explicitly discussed in the CAISO proposal that dispatch limited should not be subject to bid insertion or RUC. These units may be unable to respond to any CAISO dispatch instructions or able to respond to day-ahead dispatch instructions but not real-time instructions due to contractual or physical constraints. For example, biomass facilities may be contractually limited from following real-time instructions or may be limited by NOx emissions restrictions within a day.

If CAISO decides to redefine the use-limited category, CAISO should develop another mechanism to prevent the dispatch issues described above. PG&E proposes that CAISO use the existing ‘dispatchable’ flag in the master file to identify units that are exempt from bid insertion and RUC obligations.

PG&E supports maximizing capacity offered into all markets. The non-dispatchable flag should therefore be limited to units that demonstrate that they are physically constrained from responding to dispatch instructions (e.g., units that produce energy as-available) and units with existing contractual limitations that prevent them from responding to dispatch instructions. Scheduling coordinators (SCs) for these units should be required to submit an affidavit and appropriate documentation to explain why a unit is incapable of responding to dispatch instructions. Additionally, CAISO should not classify contracts greater than 20 MW¹ signed after November 20, 2014 as non-dispatchable on the basis of contractual limitations alone.

2. The use-limited application process should not require an annual affidavit submission. Additionally, the use-limited and non-dispatchable application processes should allow for scheduling coordinators to submit affidavits on behalf of generator owners.

Requiring an annual affidavit to maintain a use-limited designation will result in an administrative burden to SCs. Requiring an annual submission imposes an unnecessary burden for units whose operating characteristics have not varied from the year prior.

Requiring that the affidavit be co-signed by the SC and the generator owner is unnecessary given the amount of supporting documentation required. An affidavit signed by the SC on behalf of the generator should be considered sufficient. An affidavit signed

¹ CPUC form contracts for generators under 20 MW as part of the feed-in-tariff program limit resource flexibility.

by the SC on behalf of the generator owner should be similarly sufficient for units seeking non-dispatchable designation.

Scheduling coordinators and generator owners should be in agreement on the operation of a unit. If a counterparty submits an affidavit to CAISO for a resource related to either a use-limitation or non-dispatchable designation, that counterparty should be required to distribute copies of the affidavit to other counterparties (i.e., the generator owner to the SC and vice versa). If there is a disagreement between the generator owner and the SC, CAISO should review the documentation to determine whether a use-limitation is appropriate.

- 3. PG&E supports the CAISO's proposal to use an opportunity cost adder for minimum load and start-up costs to optimize the dispatch of use-limited resources. However, instead of CAISO prescribing the adder, the scheduling coordinator should calculate the adder subject to CAISO review.**

PG&E supports the use of an opportunity cost adder for minimum load and start-up costs to better optimize the use of units with a limited number of starts or run-hours for the limited purposes of this initiative. However, instead of CAISO calculating the adder for most units and negotiating the adder for a smaller number of units with more complex modeling issues, CAISO should take a mitigation-based approach to implementing minimum load and start-up opportunity cost adders for all units.

PG&E supports a process that more closely resembles the process for calculating default energy bids or maintenance adders: 1.) SCs submit an adder value along with documentation explaining how the adder was developed, 2.) CAISO reviews the adder for reasonableness, and 3.) if CAISO and the SC disagree on the value or the methodology, CAISO and the SC negotiate the value through an arbitration process.

It is more appropriate for the SC to calculate the minimum load and start-up opportunity cost of its resources than CAISO. The SC is in the best position to manage the risk associated with nodal price prediction and may have more unit-specific information (such as anticipated future maintenance work that has not yet be officially scheduled).

Scheduling coordinators should have the opportunity to update the opportunity cost adder monthly and should be able to request intra-month updates if conditions change sufficiently to warrant it (e.g., increase in fuel costs).

PG&E supports the use of minimum load and start-up opportunity costs using a mitigation-based approach within the limited scope of this initiative. PG&E understands that the scope of this initiative to include determining the processes for developing and approving opportunity costs for the minimum load and start-up costs for use-limited resources, and that this initiative will not address any associated changes to must-offer obligations. As noted in the straw proposal, "The Reliability Services initiative will develop availability incentive mechanism rules around a more stringent must offer

obligation that may entail reporting of when use limitations are exhausted (e.g., declaring an outage related to use limitations).”

4. PG&E recognizes the need to incorporate GHG costs into the optimization of all natural gas-fired resources, regardless of emissions level.

As CAISO notes, the January 1, 2015 extension of the cap-and-trade program to include natural gas suppliers necessitates revisiting the way GHG compliance costs are incorporated into generator commitment costs *and* energy bids. PG&E agrees that it is important to accurately reflect GHG costs in all bid components – start-up, minimum load, and incremental. Some aspects of how to address the extension of the cap-and-trade program to units that emit under 25,000 MT CO₂e are unlikely to be determined by the CPUC by January 1, 2015, but CAISO should be prepared to take action to reflect compliance costs even amidst that uncertainty.

The CPUC is still in the process of its rulemaking considering GHG cost recovery for natural gas suppliers, so it is unclear at this time how the GHG cost will be passed on to generators under the covered 25,000 MT CO₂e threshold. In an unapproved proposed settlement the in CPUC rulemaking, natural gas suppliers proposed that the net natural gas GHG compliance costs (i.e., GHG costs less allowances directly allocated by CARB for compliance with the Regulation) would be allocated to all customers on an equal cents per therm basis through a new gas rates schedule. However, currently covered entities including generators emitting over the 25,000 MT CO₂e threshold would be exempt to avoid double-counting. The CPUC has not approved the Settlement or the associated rate schedule.

PG&E anticipates that compliance rates paid by generators under the 25,000 MT CO₂e threshold may differ substantially from the costs faces by generators emitting over 25,000 MT CO₂e (e.g., the CAISO GHG index). This is because, in each year, natural gas suppliers are allocated a certain quantity of emissions allowances that may be used for the benefit of its customers (including generators that emit under the 25,000 MT CO₂e threshold) to directly comply with the Cap-and-Trade regulation. This would introduce inefficiency into the markets. Further discussion around how these paradigms overlap should be provided in future papers to allow participants to better propose potential solutions.

5. PG&E supports CAISO’s proposal on changing the way transition costs are accounted for, but notes that it would likely require significant changes to implement and implementation may be better suited for the fall 2015 release.

The CAISO proposal describes transition costs for multi-stage generators (MSGs) as similar to start-up costs, as they are incurred when the resource starts a new configuration. PG&E supports the changes described by CAISO and views the proposal as an improvement over the current handling of MSGs. Specifically, replacing the constraints that bound costs within a percentage band with configuration-specific calculations will better reflect the cost of transitioning a unit.

PG&E anticipates that the changes required to implement the MSG modeling component of the initiative would be substantial and, to the extent that CAISO intends to implement substantial changes only in the fall release, would be more suited to the fall 2015 release.

6. CAISO should ensure that all changes discussed in this initiative are consistent with policy changes adopted in the FRACMOO initiative.

Some of the changes to resource classification in the straw proposal may impact tariff changes recently developed through the FRACMOO stakeholder process. Specifically, any changes to use-limitation designations implemented through this initiative should not impact a resource's ability to qualify as a flexible resource as defined through the FRACMOO stakeholder process. For example, currently two use-limited resources that do not individually meet the definition of a flexible resource can be combined to meet the flexible resource criteria (Section 40.10.3.2(b)(2)).

CAISO should review the tariff changes adopted through the FRACMOO stakeholder process to ensure that the changes proposed through this initiative do not conflict with the policy objectives approved through that process.