NRG Energy, Inc. Comments on
Commitment Cost – Default Energy Bid Enhancements (CC-DEBE) Issue Paper

Submitted By	Company	Date Submitted
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NRG submits the following comments in response to the CAISO's November 18, 2016 Commitment Costs and Default Energy Bid Enhancements Issue Paper ("CC-DEBE Issue Paper"). NRG's comments are in blue.

As an initial matter, NRG greatly appreciates that the CAISO is willing to re-evaluate its bidding and cost recovery structures in a more holistic and philosophical manner in this initiative. As an indication of this willingness, the CAISO notes:

> "We understand from stakeholders that they willingly assume price risks on market awards based on their submitted prices and incur profits or losses as a normal course of business. **As a result, we posit that the main policy issue for discussion is whether market enhancements should be pursued that would provide greater flexibility to submit and clear commitment cost offers at suppliers' valuation of the asset and that would ensure mitigated prices are reasonable reflections of suppliers' cost expectations."**[1]

NRG strongly agrees with the premises set forth in this statement – that, under competitive conditions, suppliers should be permitted to submit offers that represent the suppliers' own risk tolerance and value of the generating units that would be conditioned only by high-level "circuit breaker" bid caps, and that, when conditions are not competitive, offers should be mitigated no lower than to prices that enable suppliers to recover all the costs of operating the unit in accordance with CAISO awards and instructions.

As the CAISO seeks to balance the risks between market participants exercising market power and suppliers' ability to express their value for their resources and recover the costs of complying with CAISO awards and instructions – a balance that is currently tilted strongly toward market protection and, with the yet-untested exception of suppliers now being authorized to recover their unrecovered costs at FERC, away from market participants – NRG respectfully notes that market participants, not the CAISO, bear all of the risks of CAISO market participation. While it may not be possible to mitigate all of the risks of market participation, the CAISO, as market-maker, should seek to reduce the risks of market participation to the greatest extent possible.

The CC-DEBE Issue Paper lays out four broad issues and solicits responses to questions (in **ALL CAPS** below) on each issue. NRG's responses to the questions are in ***bold italic font.*** Other NRG comments are in blue.

1. **Commitment Cost Mitigation May be Overly Restrictive.**

DO STAKEHOLDERS STILL FEEL THERE IS FREQUENT COMMITMENT COSTS OVER-MITIGATION LIMITING THEIR ABILITY TO REASONABLY REFLECT THE ASSET'S VALUE IN THE MARKETS?

[1] CC-DEBE Issue Paper at page 7.

Yes. The fact that commitment costs are capped under all circumstances, without any demonstration of the potential to exercise market power, violates the CAISO's principle that suppliers should be able to submit offers that reflect their own valuation of their assets unless the potential to exercise market power demonstrably exists.

DO STAKEHOLDERS STILL FEEL THAT WHEN MITIGATED THEY ARE AT RISK OF BEING REFLECTED IN THE MARKETS TO A LOWER PRICE LEVEL THAN THEIR OWN COST EXPECTATIONS?

Yes, especially for the later hours of the day when market participants cannot adjust their flowing gas supplies.

2. **Exceptional Dispatch Mitigation May Not Be Restrictive Enough.**

   The CAISO is primarily concerned about two situations: (1) where market participants can exercise market power in **decremental** bids – that is, submit a highly negative bid price when the CAISO needs to reduce the output of a resource; and (2) the need to exceptionally dispatch units when a natural gas constraint is enforced. While NRG does not oppose considering this topic within the scope of the CC-DEBE initiative, NRG urges the CAISO to carefully consider all of the things that inform the decremental bids submitted by market participants – things like tax credits, and OFO risks and potential penalties.

- **Reference Levels Exclude Price Impact of Externalities.**

  The specific externalities that concern NRG in this case are OFO penalties. The CAISO recognizes (or should recognize) that changing a unit's gas burn after Intra-day cycle 3 on an OFO day exposes that generator to OFO penalties. The CAISO asserts that generators can reflect OFO costs in their energy bids (at least up through intra-day cycle 3), but acknowledges that those costs may not be able to be incorporated in commitment cost bids or mitigated energy bids.

- **Reference Levels May Not Reasonably Reflect Cost Expectations.**

  In short, the CAISO's offer cap methodology does not look at intra-day gas markets and procurement costs.

The CAISO offers possible paths to address "stakeholder concerns":

- Calculating "technology-agnostic" reference (e.g., cost-based) levels

SHOULD CALIFORNIA ISO RE-EXAMINE ITS POLICY THAT GAS-FIRED UNITS' COSTS CAN BE ESTIMATED WHILE OTHER TECHNOLOGY TYPES CANNOT?

As NRG has noted, the CAISO's estimates of the gas-fired units' costs can be substantially different from the actual costs incurred by the owners of those units. While the question seems to center on the premise that it would be fairer for the CAISO to try to estimate the costs of all types of resources, not just gas-fired units, it's not clear how having the CAISO estimate the costs of all resources would lead

to more efficient outcomes if the estimates do not reflect the real costs of operating the resources. Instead of exerting more effort to estimate the costs of all types of resources, NRG offers that the CAISO should focus on two other areas: (1) better identifying the conditions in which the CAISO needs to estimate the costs of resources (e.g., where the potential to exercise market power demonstrably exists) and (2) providing bidding structures that, while protecting against the exercise of local market power, allow resource owners to represent their own assessment of the market and their own tolerance for risk by providing estimates of the costs of their units to the CAISO rather than having the CAISO try to estimate those costs.

- Consider a "no-load" bidding structure to replace the current "minimum load" bid structure

WHAT IS A REASONABLE APPROACH TO VALUING EXPECTED PRODUCTION COSTS THAT RESULTS IN AN EFFICIENT MARKET SOLUTION AND COST RECOVERY?

The resource owner's valuation of production costs should be used whenever possible. The resource owner, not the CAISO, bears the risks associated with CAISO market participation, and therefore the resource owner's valuation of production costs should be used whenever possible. The CAISO should maintain a "circuit breaker" bidding cap, but experience (e.g., the gas price volatility in the 2014 eastern polar vortex event) has shown that market conditions can change to the point that the circuit breaker cap does not allow market participants to recover actual costs. Moreover, the CAISO's reaction to past events of high volatility has not been as timely as other ISO's reactions to high volatility.

Where the potential to exercise market power has been demonstrably proven, market participants' offers should be capped to a level that at least allows the market participant to recover their costs of responding to CAISO dispatch.

The "safety net" implemented by the CAISO to allow market participants to file at FERC to recover costs they cannot recover from the CAISO is a reasonable backstop, but should be viewed as a backstop and not as a means for market participants to recover their costs except under extraordinary conditions. Leaning on this mechanism will undermine efficient price formation.

SHOULD THE CALIFORNIA ISO CONSIDER MOVING TO A "NO LOAD" VERSUS A "MINIMUM LOAD" STRUCTURE?

Yes. NRG strongly supports the CAISO moving from a "minimum load" bidding structure to a "no load" bidding structure. Under the current rules, with minimum load costs locked for a 24-hour period, the "minimum load" structure locks in a segment of MW, the costs for which cannot be changed to reflect changing gas supply conditions. No load bids would allow market participants to change the bid costs for this segment of MW.

Allowing market participants to change minimum load costs hourly could provide some of the same benefits as moving to a no load structure – it would allow market participants to change the costs of the minimum load MW to reflect changing gas supply conditions. This is especially important for units which are dispatched to their minimum load levels for extended periods of time when an** OFO **is called or at risk of being called.

SHOULD THE CALIFORNIA ISO CONSIDER ENHANCING ITS MINIMUM LOAD, OR NO LOAD COSTS, TO ALLOW HOURLY VARIATION?

Yes. As noted above, allowing for hourly variation of minimum load costs would largely address the limitations of the current minimum load structure.

SHOULD THE CALIFORNIA ISO CONSIDER MOVING FROM A REFERENCE LEVEL TO A BID-IN MITIGATED OFFER SUPPORTING DAILY SUBMISSION OF MITIGATED OFFERS?

If, by "bid-in mitigated offer", the CAISO means a bidding structure such as described in pages 21-24 of the April 15, 2016 Aliso Canyon Gas-Electric Coordination Straw Proposal, the answer is yes. NRG supports the consideration of a structure that would allow market participants to submit a reference prices that reflects the supplier's estimate, rather than the CAISO' s relatively static and lagging estimate, of the supplier's gas procurement costs. NRG understands (1) that supplier's gas price offer would have to be conditioned and supervised to prevent the exercise of market power, and (2) that the CAISO's DMM strongly prefers that this validation happen in advance of running the market[2], but feels that this option would be preferable to the structure in place today. Properly designed and administered, such an approach could provide for proper price formation, mitigate the need for after-the-fact cost recovery, and protect against the exercise of market power.

SHOULD THE CALIFORNIA ISO CONSIDER INTRODUCING FUEL PRICE ADJUSTMENTS TO ITS REFERENCE LEVEL CALCULATIONS TO REDUCE THE RISKS THAT SUPPLIERS' WILL NOT HAVE MITIGATED PRICES THAT REASONABLY REFLECT THEIR COST EXPECTATIONS?

While the structure described above in which market participants would submit their expectations of their gas costs would be best, allowing for fuel price adjustments to the CAISO's reference level calculations would be an improvement to the current paradigm. Such improvements could include the "near-term" improvements proposed by DMM:

- ***Permanently updating the gas price used for the Day-Ahead market based on the most recent Intercontinental Exchange (ICE) index prices;[3]***
- ***Incorporating "custom" (e.g., Monday only) gas package index prices into CAISO reference prices.[4] However, NRG notes that while a Monday-only index price would be beneficial, the CAISO cannot assume that suppliers can get the "Saturday-Sunday" gas prices that trade after the daily planning has occurred. Such an assumption would cause suppliers' units to be run at inaccurate gas prices on Saturday and Sunday rather than Monday.***
- ***Using the morning ICE price as the gas price used for the real-time market reference prices.[5]***

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[2] *See* November 29, 2016 Department of Market Monitoring *Comments on the Commitment Costs and Default Energy Bid Enhancements – Issue Paper* ("DMM CC-DEBE Comments") at page 4, available at http://www.caiso.com/Documents/DMMComments-CommitmentCostsandDefaultEnergyBidEnhancementsIssuePaper.pdf.
[3] *See* DMM CC-DEBE comments at pages 6-8.
[4] *See* DMM CC-DEBE comments at page 8-11.
[5] *See* DMM CC-DEBE comments at pages 11-14.

NRG supports considering these near-term improvements and looks forward to working out the details of these near-term improvements in the CC-DEBE stakeholder process. However, consideration of these near-term improvements must not defer or displace serious and timely consideration of alternate bidding structures.

WOULD A DYNAMIC ASSESSMENT PERFORMED IN TANDEM WITH THE ENERGY MITIGATION BE PREFERABLE TO STAKEHOLDERS?

Yes, to NRG.

WOULD STAKEHOLDERS SUPPORT CONSIDERING A STATIC COMPETITIVE PATH ASSESSMENT FOR COMMITMENT COST MITIGATION IF A DYNAMIC ONE IS NOT FEASIBLE?

Yes, though such consideration depends on the parameters of the static assessment and the market power mitigation to be imposed.

Additional comments:

- **The CAISO's discussion of "caps and scalars" includes the following paragraph:**

  "The California ISO is concerned that through the application of the current bid cap mitigation method, the California ISO likely allows select units the opportunity to over-state their actual cost expectations while potentially understating the costs for other units. Also of concern, is that mitigated energy bids with a 10 percent scalar would ensure over compensation for select units whose cost expectations are less than 10 percent. Caps and Scalars introduce a market design limitation that introduces risk that supplier could either bid up to cap or be mitigated to reference level at higher value than it sees its unit and over-recover payments above cost expectations. This limitation exists because the markets approach to caps and scalars is to provide adequate compensation for the select few with cost expectations well outside of the average. This could be introducing inefficiencies into the market solution and increasing cost recovery through uplift payments." [6]

  The premise that a market participant could recover payments "above cost expectations" is inconsistent with the premise that market participants should be allowed to value their assets as they see fit when market conditions are competitive. Competition, not rough, untested and lagging estimates of a supplier's costs, should discipline market participants' offers. If, under competitive conditions, suppliers' bids reflect unrealistic expectations for their units' value, the generating units will not run and the supplier will lose out.

- **Comments on the DMM CC-DEBE comments**: In general, NRG supports DMM's proposal for near-term adjustments to reference levels and DMM's willingness to consider an alternate bidding structure (submitted offers instead of CAISO-determined

[6] CC-DEB Issue Paper at 35-36.

reference levels) in the longer term. As noted above, the consideration of these near-term improvements must not defer or displace serious and timely consideration of structural changes to the CAISO's market systems.

DMM offers this comment in its comments:

"In addition, DMM recommends that the issues of gas penalties, imbalance charges, and "cash out" costs be explicitly addressed. **DMM does not believe these factors should be included in natural gas costs used to calculate bid caps, because these do not typically represent hourly marginal costs and cannot be reasonably estimated in advance.** We realize this issue may be controversial and will be subject to discussion in any stakeholder process. However, DMM believes rules and guidelines relating to these issues should be clarified in advance as much as possible."[7]

As DMM predicted, NRG strongly disagrees that OFO penalties cannot be estimated in advance and should not be subject to recovery. First, as noted before, same-day market traders will bake in the OFO cost or expected cost into bilateral gas prices. If whatever reference level the CAISO uses for real-time bids does not account for this dynamic, suppliers will be at risk for incurring penalties that they cannot recover. Further, if the CAISO dispatches a resource after the last same-day cycle on a day in which an OFO has been declared, there is almost certainly nothing a supplier can do to avoid incurring OFO charges for the resulting dispatch. To say that a supplier cannot recover those penalties, while not providing the latitude to incorporate those risks into a units' offer curve, especially in that situation, contradicts the premise that a supplier should reasonably be able to recover the costs of following CAISO dispatch.

This disagreement notwithstanding, NRG strongly agrees with the last sentence in DMM's excerpt above – that rules around recovering these costs be clarified as much in advance as possible.

- **Issues related to the misalignment between the gas day and the electric day.**

  Running the CAISO's Day-Ahead Market after the timely cycle trades means that suppliers have price certainty only with regards to the volume of gas that they expect will be burned the next day. So while suppliers may have price certainty (for a certain amount of gas), they do not have volume certainty. Unless the volume of gas transacted by the supplier matches the actual volume of gas their units will burn the next day, the supplier faces the risk of having to procure additional gas – or to lay off gas procured – in the same-day market if daily balancing is imposed (e.g., if Operational Flow Orders [OFOs] are declared).

[7] DMM CC-DEBE Comments at page 14 (emphasis added).

From January 1, 2016 through November 20, 2016, Southern California Gas Company declared OFOs on 134 of 325 days (81 days with high OFOs, 58 days with low OFOs, and 5 days with both high and low OFOs – see graph below). This means that SoCalGas declared OFOs on 41% of operating days over that period of time. Generators taking gas service from SoCalGas were required to balance scheduled supply with actual burn within a fairly tight tolerance on each of those OFO days. Additionally, on many other days during this period, the possibility of an OFO being declared affected market prices and dynamics, introducing challenges without the concurrent declaration of an OFO. While the unavailability of the Aliso Canyon storage facility unquestionably contributed to the high number of OFOs during this time of period, SoCalGas can declare – and has declared - OFOs on days when Aliso Canyon is in service. It is only reasonable, therefore, that the CAISO's bidding systems be able to account for the reality that suppliers must transact gas in the same-day markets.