Comments on the Commitment Cost Enhancements Phase 2 Straw Proposal
Department of Market Monitoring
November 21, 2014

The Department of Market Monitoring (DMM) appreciates this opportunity to comment on the ISO's straw proposal for Commitment Cost Enhancements Phase 2. DMM supports the ISO's effort to address a number of outstanding issues following the completion of the Commitment Cost Enhancements initiative policy process. This initiative poses substantive questions that require further development prior to implementation. The following are DMM's comments on specific issues.

Opportunity Costs

The ISO proposes calculating opportunity costs as the difference in profits that occur as a result of incrementally restricting a resource through a start, run hour or energy limitation using a model that optimizes resource dispatch contingent on a series of projected energy prices. The calculated opportunity cost associated with any limits on start-ups or run hours would be added to the start and minimum load proxy commitment costs of resources, respectively.

Opportunity costs would only be calculated for use limitations that meet the following criteria: (1) are based on physical or regulatory restrictions (i.e. rather than contractual limitations or limits designed to reduce wear-and-tear or maintenance costs); (2) are not already optimized within the ISO's market optimization (such as daily energy use limits in the day-ahead market); and (3) are capable of being calculated within the ISO's opportunity cost model.

DMM recommends that the ISO utilize the model being developed to calculate opportunity costs associated with energy limitations as proposed and that these opportunity costs be used in place of the opportunity costs currently included in negotiated default energy bids for some resources. It would also be appropriate to include energy limitation based opportunity costs in proxy minimum load. The ISO should also ensure that opportunity cost based negotiated default energy bids are not calculated on the basis of start or run hour limitations used by the ISO to calculate start or run hour based limitations.

DMM also recommends that the opportunity cost model developed by the ISO be based on the expected future real-time prices of electricity, as well as the expected future prices of inputs including natural gas and greenhouse gas allowances. This calculation is an estimate of the true opportunity cost which will likely be estimated with error.

Under the ISO's proposal, scheduling coordinators will have the flexibility to bid in between 0 and 125 percent of the ISO's calculated proxy cost including the opportunity cost. This will allow participants

flexibility to adjust their commitment costs up or down should the calculated opportunity cost adder be either too low or too high. The 125 percent cap would limit the ability of market participants to exercise market power with their opportunity cost adder.

Due to the role the opportunity cost adders play in market power mitigation, DMM believes it will be important to estimate opportunity costs with reasonable accuracy rather than compensating for potential inaccuracies by setting the adder at a very high level, and relying on participants to voluntarily bid consistent with undefined standards such as "good utility practice" or "current market conditions within reasonable bounds" as suggest in the white paper (page 25).

The ISO proposes to add flexibility by calculating the opportunity cost as the average of multiple runs with progressively tighter limits. This is effectively a sensitivity on the constraint itself. However, since this is one of the few modeling inputs that is known with certainty, DMM questions the value of performing a sensitivity on this input instead of other model inputs that may involve a greater degree of uncertainty and have a greater impact on model results (such as price volatility in both the electricity and gas markets, electric/gas spreads, etc.).

DMM supports the ISO's proposal to develop an opportunity costs adder. We believe that further refining the opportunity cost methodology sooner rather than later will ensure that the ISO has time to begin the process to further test and refine the calculations prior to implementation of any mandatory must offer obligation.

However, we caution that substantial further work is needed to bridge the gap between the simple monthly spreadsheet model the ISO has currently developed and the type of full scale model that could incorporate both annual and monthly limits simultaneously needed to actually determine the details of this initiative and then implement any resulting proposal.

Greenhouse Gas Costs

As discussed in the proposal, natural gas suppliers will be considered covered entities under the California Air Resources Board's cap-and-trade program. DMM is concerned that natural gas prices at locations within California may include the cost of greenhouse gas compliance. If this occurs, then indices based on these prices may also include the cost of greenhouse gas compliance. If some trades do include this cost and others do not, gas price indices may reflect a variable fraction of greenhouse gas compliance costs. If the ISO grants greenhouse gas adders to all resources, using a gas price that includes either a full or partial cost of greenhouse gas compliance will double-count the greenhouse gas component of gas costs in commitment, generated bids and default energy bids.

DMM recommends that, in addition to seeking stakeholder feedback as the ISO is doing in this proposal, the ISO assess the impact of natural gas supplier compliance obligations on natural gas price indices at locations within California following January 1, 2015. If greenhouse gas compliance costs impact gas price indices, that effect can and should be estimated. Greenhouse gas adders should then be reassessed after enough time has passed to quantify the greenhouse gas effect on price indices within reasonable bounds.

Major Maintenance Adders

DMM has also requested that the following items be added to the Commitment Cost Enhancement Phase 2 stakeholder initiative in order to address problems that have been encountered with the current process for MMAs.

1) ***Clarify that resources with Power Purchase Agreements, service agreements or other contractual arrangements must use estimates of reasonable actual major maintenance costs unless they can provide actual historical maintenance data to support higher MMAs.*** The ISO tariff currently requires that MMAs "… must be based solely on resource-specific information derived from actual maintenance costs, when available, or estimated maintenance costs provided by the Scheduling Coordinators to the CAISO … " (30.4.1.1.4). DMM has found use of potential financial charges per start-up in cost schedules from PPAs to be highly problematic and believes that in many cases these do not reflect actual maintenance costs, as required by the current tariff. Therefore, DMM believes that requiring use of values reflecting a reasonable estimate of actual major maintenance costs would be a more fair and accurate approach for setting MMAs for these resources. DMM recommends that the ISO provide clarity on this issue as part of this initiative.

2) ***Establish default values for Major Maintenance Adders (MMAs) for start-up and minimum load cost for various categories of units.*** Generators could opt to include MMAs up to these values in place of the current process for submitting more detailed data on actual resource specific costs. The default values would be developed and subject to periodic updating based on information submitted by participants and reviewed by a consultant with the appropriate engineering and cost expertise. These default values would also provide a basis for setting MMAs for units with Power Purchase Agreements, service agreements or other contractual arrangements that cannot provide actual cost data or estimates.

Transition Costs

One of the goals of this initiative is to make the following policy changes and clarifications to transition costs.

- The transition cost is the cost to transition between multi-stage generator configurations when the resource is already "On" and that transition costs reflect the fuel input to transition from one configuration to another, based on the resource's actual unit-specific performance parameters, as required in the ISO tariff section 30.4.1.1.1.

- Start-up costs can reflect major maintenance adders.

The meaning and calculation of transition costs has been a source of significant confusion among market participants and even within the ISO since the multi-stage generator functionality was introduced. We appreciate the current proposal's stated objective of simplifying and clarifying this area, but also point out that there needs to be more work done before those objectives are accomplished.

The ISO should work with stakeholders to identify the specific actions and related costs that can be necessary for a resource to transition between configurations so that costs can be assessed appropriately.

We encourage the ISO to clearly state that all transition costs must be based on quantifiable and verifiable costs, related to physical parameters of the resource. And, most importantly, the ISO should provide examples of what specific costs would be included and how calculations would be done for actual prototypical units.

In the past commitment cost policy initiatives, details of how to calculate or limit inputs (such as transition costs, start-up costs of non-startable configuration and major maintenance adders) were deemed to be implementation details left to be resolved by the business unit charged with implementing policy. However, DMM believes this approach has led to confusion and inadequate review by the ISO of commitment costs submitted by participants.

DMM believes that the bulk of current and potential future MSG resources could be represented by a handful of different prototypical examples. DMM's understanding is that almost all transitions between different configurations would consist of the (1) starting another peaker, (2) starting another steam turbine, or (3) operating in duct firing mode.

When a new peaker or steam turbine is started, it seems the transition fuel cost would be limited to the fuel to start this peaker or steam turbine. The fuel used to operate the unit at the required operating level during the transition time should already be covered by the unit's heat rate and transition time over the transition period (as reflected in the energy or minimum load bids that would have to be dispatched over this transition period).

Likewise, the extra fuel necessary to operate in duct firing mode would be already captured in the higher heat rate of the configuration representing the unit in duct firing mode, and the unit's heat rate and transition time over the transition period necessary to reach duct firing mode.

The types of resources that can use the MSG functionality extend beyond multiple turbine combined cycle generators. A number of older steam turbines with multiple operating or regulating ranges use the MSG functionality. When transitioning between two configurations on these kinds of units, it is less clear that something is actually being started, and whether or not the costs for these transitions relate directly to fuel.

The ISO should also provide examples of how start-up fuel for actual non-startable configurations appearing in the ISO Master file should be calculated. DMM's initial impression is that for most if not all MSG units this should just be the actual start-up costs of each peaker or steam unit that must be started for the unit to be in the non-startable configuration.

DMM continues to question why the ISO needs to have participants submit start-up cost for non-startable configurations, since the software cannot start units in these configurations. Currently, it appeared the ISO only required this input since under current rules this input ultimately serves as the limit for start-up and transition costs of other configuration. However, if the ISO adopts the type of cost-based approach for determining start-up and transition costs, it appears this input is unnecessary.

Thus, DMM requests that the ISO clarify why it would need start-up costs for non-startable configurations, and if the ISO feels these are required to explain how these should be calculated for a sample of realistic prototypical MSG units.