Comments on the Commitment Cost Enhancements Phase 2 Revised Straw Proposal Department of Market Monitoring January 15, 2014

The Department of Market Monitoring (DMM) appreciates this opportunity to comment on the ISO's revised straw proposal for Commitment Cost Enhancements Phase 2. DMM continues to support 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

DMM supports the ISO's proposal to develop an opportunity costs adder and applauds the establishment of an opportunity cost workshop group to further develop the opportunity cost model before it is implemented, as part of this stakeholder process. DMM recommends that, prior to taking this proposal to the board, the ISO develop an opportunity cost model sufficient to calculate opportunity costs for all resources likely to have an opportunity cost, rather than limiting the analysis to a case study of selected resources. 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 already 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.

In addition, the ISO's proposal includes a provision for a negotiated opportunity cost for resources that have limitations that the ISO cannot model. DMM recommends that the ISO's next draft proposal include a procedure for validating opportunity costs in the negotiated category. This procedure should define acceptable documentation for negotiated opportunity cost models. In addition, the procedure should specify an interim treatment for negotiated resources while negotiations between the ISO and the SC are ongoing. One option is to allow this subset of resources to continue using registered costs.

The ISO should also discuss the proposal internally with executive management to ensure that sufficient staff resources with the necessary expertise will be available to the business units(s) that might be charged with this responsibility. DMM notes this based on experience with several prior rules or

initiatives which were approved, but which became problematic during implementation due to lack of clarity on implementation details and lack of staff resources with the necessary expertise.

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 supports the ISO's extension of the opportunity cost modeling to include the optimization of daily start limitations that meet the three criteria listed above. DMM recommends that the ISO clarify and enforce existing requirements concerning daily use limitations. The BPM for Market Instruments defines the maximum daily start limit as the "maximum number of times a Generating Unit can be started up within one day, due to environmental or physical operating constraints." [1] However, the ISO does not currently require documentation or have a procedure to verify daily start limits entered by participants. In practice, DMM understands that, as with other daily limits submitted to Master File including start time and minimum down time, numerous participants may be utilizing a daily start limit entered in the ISO Master File as a way of preventing unit cycling and/or managing annual or monthly limitations rather than because it reflects an actual daily physical or environmental limitation.

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 minimum load opportunity costs.

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

[1] See Appendix B2 of the Market Instruments BPM, page B-3: http://bpmcm.caiso.com/BPM%20Document%20Library/Market%20Instruments/BPM_for_Market%20Insturments_V34_clean.doc

bid consistent with undefined standards such as “good utility practice” or “current market conditions within reasonable bounds” as suggest in the white paper.

The ISO continues to propose to add flexibility by calculating the opportunity cost as the average of multiple runs with progressively tighter limits (section 7.2.2.1). 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 recommends that the ISO eliminate this part of the 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, as the ISO has proposed during this stakeholder process, the current greenhouse gas protocol remains in place, DMM anticipates two potential issues. The first is that the gas index used to calculate generated bids, commitment costs and default energy bids could include a greenhouse gas markup that resources with their own greenhouse gas compliance obligation would not actually incur. In this case, resources may receive uplift payments or be mitigated to an unreasonably high estimate of marginal cost. The second is that resources without their own greenhouse gas compliance obligation may purchase gas at a price higher than the index price used by the ISO in cases where natural gas suppliers pass on the cost of greenhouse gas compliance to their end-users. Should this occur, resources could receive uplift payments or be mitigated to an unreasonably low estimate of marginal 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 commit to assessing the impact of natural gas supplier compliance obligations on natural gas price indices at locations within California after sufficient time has passed to do so. 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. DMM recommends that a commitment to do this assessment be added to the commitment cost enhancements phase 2 proposal.

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. DMM suggests that default variable operations and maintenance adders be reviewed as part of the default MMA review process. Major maintenance and variable operations and maintenance costs should be mutually exclusive for both resource specific and default values.

Transition Costs

The revised straw proposal, together with the discussion on the stakeholder call, has clarified the ISO's intent in terms of what should be included in transition costs. We support the ISO's current efforts to refine these cost accounting categories into a more focused, well defined set of verifiable numbers. The new proposal's focus on fuel inputs and maintenance costs provides clarity that is appreciated. In addition to clarifying what is expected to be included in these costs, we appreciate that the ISO has moved towards asking market participants to submit physical, instead of financial, quantities for these calculations. For example, the current system of calculating transition costs involves moving back and forth between fuel inputs and dollars multiple times to calculate a scalable cost. The proposal instead focuses on participants submitting only fuel inputs, or other physical quantities. In addition to transparency, this allows for a more accurately scalable system that the ISO can take advantage of when input prices (such as gas prices) undergo sudden changes.

We encourage the ISO to continue refining its knowledge of these costs in order to be able to apply similar, well defined expectations to the costs of transition for other types of resources. DMM and the ISO have worked together to build our collective knowledge of how transitions and transition costs work for the types of resources that make up most of the current MSG fleet. We look forward to continuing that collaboration to include new and different types of resources.