



Comments on the Commitment Cost Enhancements Revised Straw Proposal
Department of Market Monitoring
July 8, 2014

The Department of Market Monitoring (DMM) appreciates this opportunity to comment on the ISO's revised straw proposal on commitment cost enhancements. DMM is very supportive of developing the opportunity cost adder for dispatchable use-limited natural gas resources. We believe that developing an opportunity cost calculation model is a significant undertaking and that the ISO, with input from market participants, should use the additional time that currently exists to resolve implementation issues and to develop and deploy an opportunity cost calculation model before any must offer obligations begin.

DMM is supportive of the ISO's general approach to calculating opportunity costs, as noted in comments submitted during the flexible resource adequacy criteria and must offer obligation (FRAC-MOO) stakeholder process.¹ DMM supports the ISO's efforts to move from the existing prototype to a platform that will allow the ISO to include features listed in DMM's recommendations below.

Background

The ISO proposed the opportunity cost adder as part of the FRAC-MOO process to allow use-limited resources to bid flexible capacity into the ISO markets. The opportunity cost adder offers an economic approach for use-limited resources to manage their limitation by including opportunity costs in commitment decisions, while still allowing the system to have the value of their bid should market conditions generate prices high enough to warrant the dispatch of the resource.

Currently, market participants submit use-limited resource plans that outline how the resource will be bid into the ISO markets. In many instances, participants submit plans that identify the hours that the

¹ For further discussion, see <http://www.caiso.com/Documents/DMMComments-FlexibleResourceAdequacyCriteriaMustOfferObligation-SecondRevisedStrawProposal.pdf>, <http://www.caiso.com/Documents/DMM-Comments-FlexibleResourceAdequacyCriteriaMustOfferObligation-ThirdRevisedStrawProposal.pdf>, and <http://www.caiso.com/Documents/DMMComments-FlexibleResourceAdequacyCriteriaMustOfferObligation-FourthRevisedStrawProposal.pdf>.

resource will and will not participant in the market (e.g., peak vs. off-peak, etc...)² These plans have been effective in keeping resources from exceeding their limitations, but are not an economically efficient method to managing use limitations. In many instances, flexible capacity can be unavailable to the market at times when it would be most beneficial to have it available.

The ISO proposal, described below, attempts to address the economic efficiency issue, while accounting for the use limitation, through the development of a calculated opportunity cost bid adder.

ISO proposal

The ISO proposes calculating opportunity costs as the difference in profits that occur as a result of incrementally restricting a resource through either a start or run hour limitation. For example, if a resource is limited to 10 starts, the ISO proposes calculating the opportunity cost as the difference in projected profits between operating the resource with a limit of 9 and 10 starts. In this example, the cost is then added to the start-up cost. If a resource is run hour limited, then the opportunity cost is added to the minimum load costs.

The ISO's approach is designed to calculate opportunity costs for both monthly and annual start-up and run time limitations based on physical and regulatory (often environmental) limitations. DMM understands that there are some limitations that are very complex in nature and are too complicated to be modeled using the current approach. For instance, limitations such as Delta Dispatch are not considered as part of the ISO's current proposal.

Limitations that are economic or contract based are not considered as part of the ISO's current proposal. DMM agrees with the ISO that it is inappropriate to calculate opportunity costs on the basis of these limitations. Economic or contract based limitations, such as limits included in power purchase agreements (PPAs), should be addressed by the parties themselves and are not physical or regulatory limitations on resource performance.

The ISO has indicated that to start, the ISO will exclude multi-stage generating units from opportunity costs adders due to the complexity of modeling the optimal dispatch of these resources. DMM suggests that these complexity issues are software related and can be overcome. We suggest that the ISO address this limitation and extend the calculations to include these resources as soon as practicable.

Recommendations

DMM offers the following recommendations to improve upon the ISO's current proposed approach.

As described above, the current proposal will calculate opportunity costs on the basis of monthly or annual physical and regulatory limits on starts or run hours. DMM recommends that the ISO clearly

² Use-limited resource adequacy capacity is not required to supply bids in the ISO markets for every hour, but outline their use in their use plans.

define the requirements for use plan submission for opportunity cost calculation. The existing use plan submission process requires annual limits to be submitted as monthly increments. DMM recommends that resources with annual limits be required to submit data describing that annual limit. DMM also supports applying the existing evidentiary requirements tied to use plans submitted for use-limited resource adequacy resources to resources submitting use plans for opportunity cost adders. The ISO should also consider allowing a use plan submitted as part of the resource adequacy use plan process to satisfy the opportunity cost use plan requirement. This would reduce administrative burden on scheduling coordinators and the ISO.

The opportunity cost model developed by the ISO should 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 and will likely result in some form of error. Per 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 and that the opportunity cost adder will be added on top of that calculation. DMM suggests including the opportunity cost adder along with the proxy 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.

The ISO's proposal includes a proposal 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, one of the few modeling inputs that is known with certainty. DMM recommends that the ISO drop this sensitivity and instead perform sensitivities on other model inputs during the stakeholder process. These sensitivities may serve as the basis for determining the appropriate range for opportunity cost bids.

Furthermore, DMM recommends adopting an additional approach to provide for more flexibility to address unique circumstances that may not be covered by the opportunity cost adder or the adjustment of proxy costs. Specifically, we recommend adopting an option much like the negotiated default energy bid approach for calculating the opportunity costs of some units. We recognize that not all situations can be modeled, and that there may be instances where having the flexibility to make additional negotiated adjustments would be prudent. However, this more flexible approach should only be relied upon as a supplement (rather than substitute) for the type of more automated standardized modeling approach that has been discussed as part of this stakeholder process. For instance, in some cases the type of sensitivity analysis described above might be utilized as part of the process of establishing an opportunity cost based bid under this negotiated approach. As part of the FRAC-MOO process, DMM identified additional methodology enhancements that may be important to incorporate into the approach. For instance, to the extent that 15-minute market prices underestimate revenues (which could include bid cost recovery payments), it is important to have a methodology flexible enough to incorporate systematic differences. DMM suggests that the ISO further develop its modeling to be able to test annual, in addition, to monthly use limitations; extend the model to how calculations would have worked during the 2014 winter conditions; and further refine the model to address DMM's concerns previously identified during the FRAC-MOO process.

Conclusion

DMM supports the ISO's proposal to develop an opportunity costs adder for use-limited gas units. 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. To date, progress on bridging this gap does not appear to have been made and there does not appear to be an ongoing effort or resources being dedicated to completing this project.

Therefore, DMM's main concern about this part of the initiative at this time is if the necessary details and analysis can actually be developed on the timeline envisioned for the overall commitment cost initiative. However, DMM recommends that rather than stopping work on this aspect of the initiative, the ISO continue to work on the opportunity cost model so that this component can be implemented as soon as practicable, instead of being delayed further as it has been after being de-scoped from several previous initiatives. We see this as an active initiative that should continue forward regardless of the status of the rest of this initiative. Furthermore, rather than deferring it to another initiative, the development of an opportunity cost adder should continue to develop and progress as a separate project so that it may be addressed in another part of the stakeholder process.