Commitment Cost Enhancements

Second Revised Straw Proposal

July 15, 2014

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1. Changes from the revised straw proposal

Section 5.4 – Removes the opportunity cost methodology from this initiative. The methodology will continue on a separate track.

Section 6 – Additional clarifications on maintaining existing processes and an additional question to stakeholders on hedging.

Section 6.1 – Provides an update to the questions posed in this section based on stakeholder comments.

2. Background

During the winter season of 2013-2014, the ISO energy market experienced abnormally volatile and high natural gas price spikes. For example, on February 4, 2014 at 9:50 p.m., the natural gas index prices applicable to resources in the ISO markets ranged from $7.63/MMBtu to $8.62/MMBtu. But by February 5, 2014 at 10:01 a.m., those prices had increased to a range of $12.29/MMBtu to $23.53/MMBtu.

In light of the sudden increase in gas prices, the ISO was not able to reflect the gas price spike in its resource commitment decisions. The ISO calculates the start-up and minimum load costs for resources under either the "proxy cost" or "registered cost" option selected by the resource. For resources under the proxy cost option, the ISO is required to rely on at least two natural gas price indices published the day prior to running the day-ahead market, per tariff section 39.7.1.1.1.3. For the registered cost option, the gas price is based on a monthly forward projection and the total registered cost is limited to no more than 150% of the projected proxy costs. Resources selecting the registered cost option must remain under that option for 30 days, unless the proxy costs are higher than registered. Lastly, the ISO tariff specifies, per section 30.4.1.2, that a registered cost option resource that switches to the proxy cost option must remain under the proxy cost option for the remainder of the 30-day period.

To address the potential for additional natural gas price spikes for the duration of the winter season, on March 6, 2014 the ISO filed with the Federal Energy Regulatory Commission (FERC) a proposed tariff waiver of the above referenced two sections until April 30, 2014. In the tariff waiver filing, the ISO also committed to commence a stakeholder process in April to address the issues raised by gas market conditions and to more comprehensively develop an interim solution that can be implemented in the fall if such solutions do not require substantial system changes. FERC granted the ISO's tariff waiver on March 21, 2014.[1]

There are two additional processes that deserve mention here:

- First, the ISO has existing board-approved policy to specifically address inclusion of operational flow order penalties under specific circumstances. The ISO has not yet

[1] *California Indep. Sys. Operator Corp.*,146 FERC 61,218 (2014).

submitted tariff changes to FERC to implement that policy because it needs to clarify the definition of operational flow orders covered by the policy. The ISO will do that as part of the tariff development process for the operational flow order policy concurrent with this stakeholder initiative.

- Second, on March 20, 2014, the FERC released a notice of proposed rulemaking (NOPR) to address coordination and scheduling practices of the interstate natural gas pipeline companies and the electricity industry.[2] The NOPR provides the natural gas and electricity industries six months to reach a consensus. While the NOPR is not directly related to commitment cost pricing in the ISO market, issues discussed there may overlap with the proposal in this initiative.

3. Schedule for policy stakeholder engagement

The proposed schedule for the policy stakeholder process is listed below.

Date	Event
Wed 4/30/14	Issue paper/straw proposal posted
Wed 5/7/14	Stakeholder call
Wed 5/21/14	Stakeholder comments due
Tue 6/10/14	Revised straw proposal posted
Tue 6/17/14	Stakeholder call
Tue 7/1/14	Stakeholder comments due on revised straw proposal
Tue 7/15/14	Second revised straw proposal posted
Tue 7/22/14	Stakeholder call
Tue 7/29/14	Stakeholder comments due on second revised straw proposal posted
Tue 8/12/14	Draft final proposal posted
Tue 8/19/14	Stakeholder call
Tue 8/26/14	Stakeholder comments due on draft final proposal
Thu/Fri 9/18-9/19/14	Board of Governors meeting

4. Initiative scope

Under this initiative, the ISO intends to adopt more updated natural gas costs in resources' minimum load and start-up costs prior to the 2014-2015 winter season. Accordingly, the ISO is proposing a straightforward means to achieve this solution but the ISO will still need to assess whether it can implement the proposal before next winter.

For more comprehensive, long-term solutions with greater implementation impacts, the ISO will commence the bidding rules initiative in the third quarter of 2014. This future initiative will

[2] http://www.ferc.gov/whats-new/comm-meet/2014/032014/M-1.pdf

explore a broader array of bidding rules in the ISO market including for energy and commitment costs.

5. Proposal

In 2012, the ISO conducted the *Commitment Cost Refinements, 2012* stakeholder process[3] and consequently implemented the following changes:

1. Reduced the registered cost option cap from 200% to 150% of the calculated proxy cost; and
2. Included the following costs into the proxy cost calculation: major maintenance, greenhouse gas (GHG), and components of the grid management charge.

The registered cost option exists in order to strike a balance between allowing more accurate cost recovery and limiting potential market power abuse. The original proposal in the 2012 stakeholder process would have reduced the cap to 125%. This was subsequently raised to 150% out of concerns such as the potential volatility and illiquidity in the nascent GHG market, the use of futures gas prices averaged over each month rather than a more variable daily price, and natural gas balancing charges that are not included in the cost categories. On the other hand, the cap was reduced from 200% and the 30-day hold for the registered cost option was retained to mitigate market manipulation, such as the potential to inflate bid cost recovery payments by strategic behavior designed to operate resources at minimum load.[4] In addition, the ISO currently does not have a market power mitigation methodology explicitly for start-up and minimum load costs other than this 150% cap. As the Department of Market Monitoring notes:

> *Another option that has been discussed in the past has been to automatically apply mitigation only when it is determined that a unit may have local market power – such as the ISO's automated procedures for energy bid mitigation. In practice, however, units may have market power as a result of various capacity constraints that require units to be committed and operating at least at minimum load. These constraints include the minimum online constraints (MOCs) and new constraints being added through the flexible ramping product and the contingency modeling enhancements. Unlike transmission constraints used to determine if energy bid mitigation should be triggered, these other*

[3] http://www.caiso.com/informed/Pages/StakeholderProcesses/CommitmentCostsRefinement2012.aspx
[4] See "Chapter 7: Market Competitiveness and Mitigation" in Department of Market Monitoring, *2013 Annual Report on Market Issues & Performance*, April 2014.

> *constraints are much more complex and may not be binding when market power may occur.*[5]

In the 2012 stakeholder process and in recent comments to the FERC regarding the ISO's tariff waiver, numerous stakeholders have voiced a preference to bid in their start-up and minimum load costs in order to better reflect daily natural gas prices and other costs. The ISO agrees that to the extent practical, market participants should be allowed to reflect and manage their costs through bidding. The ISO wants more up-to-date gas prices reflected in the market optimization to ensure market efficiency. For example, on February 6th, the price differential between commitment costs and incremental energy bids committed a number of resources to minimum load in lieu of dispatching them for incremental energy. However, this flexibility needs to be balanced against robust bidding rules and implementation and monitoring burden. In order to maintain this balance but provide greater flexibility, the ISO proposes to increase the proxy cost option bid cap and eliminate the registered cost option.

5.1. Increase proxy cost option cap

The ISO proposes to increase the proxy cost option cap from 100% of the daily calculated cost to 125%. The ISO proposes to retain the proxy cost option, but modify it, because it already has the daily bidding functionality that stakeholders have requested and better reflects more current natural gas costs. For example, this option is updated based on at least two daily gas price indices rather than a fixed projected price under the registered cost option. The ISO proposes to retain the use of gas price indices because it helps to mitigate market power abuse and provides consistency with other ISO market process such as generated bids for physical resources and the calculation of default energy bids. Therefore, modifying the proxy cost option to allow for added flexibility would have fewer implementation impacts than modifying the registered cost option. All other characteristics of the proxy cost option would remain the same as detailed in Section 6.

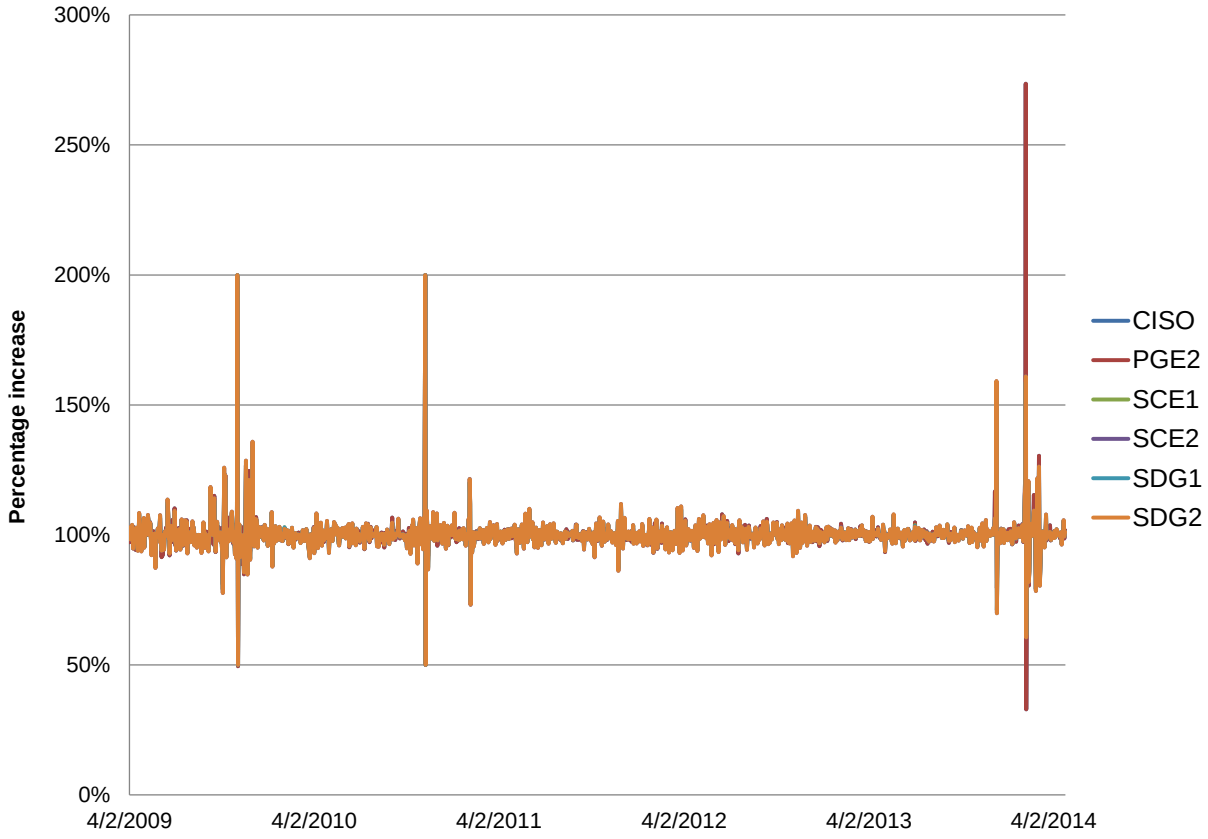
Though we propose to increase the cap, the ISO does not believe there is a need at this time to require any additional *ex post* cost verification. We believe that market participants can effectively manage their costs by bidding in their appropriate minimum load and/or start-up costs on a daily basis. A daily *ex post* cost verification regime for costs exceeding 100% of proxy (but under the proposed proxy cap of 125%) would also create a greater monitoring burden and be potentially disruptive if submitted costs are not accepted and market resettlement is required. For example, the Department of Market Monitoring notes that "if rules are modified to allow participants to submit their own start-up and minimum load bids without any specific limits, some form of mitigation will still be needed. After the fact review of bids would be very

[5] Department of Market Monitoring, *2013 Annual Report on Market Issues & Performance*, April 2014, page 262.

administratively burdensome, and would not mitigate the distortion in the market that would have already occurred due to use of the unmitigated bids."[6]

An increase in the bid cap will provide flexibility to account for a variety of costs such as normal gas price volatility and the one day lag in the gas price indices used in the day-ahead market. The figure below shows the day-over-day percentage increase in natural gas prices for each of the ISO gas regions. The figure shows that gas price volatility has been rare in the ISO market since the beginning of MRTU.

Figure 1
Day-over-day percentage increase in natural gas price (April 2009 - April 2014)



The table below is derived from the figure above and only shows the trade dates when the day-over-day percentage increase exceeds 120% in any gas region. The increase is not necessarily uniform over the entire ISO. Overall, there have been seven instances where the increase

[6] Department of Market Monitoring, *2013 Annual Report on Market Issues & Performance*, April 2014, page 262.

exceeded 125% (shown in light blue) but only two instances of extreme price spikes of over 200%, including the February 6th event (shown in darkest blue with white font).

Table 1
Day-over-day gas prices increases over 120% (April 2009 - April 2014)

Trade Date	CISO	PGE2	SCE1	SCE2	SDG1	SDG2
10/6/2009	119%	119%	124%	126%	124%	126%
10/8/2009	123%	123%	121%	123%	121%	123%
11/1/2009	198%	198%	200%	200%	200%	200%
11/18/2009	127%	127%	127%	129%	127%	129%
11/24/2009	125%	125%	120%	121%	120%	121%
12/1/2009	122%	122%	134%	136%	134%	136%
11/7/2010	200%	200%	200%	200%	200%	200%
2/3/2011	102%	102%	120%	122%	120%	121%
12/10/2013	120%	120%	156%	159%	156%	159%
2/5/2014	126%	126%	118%	119%	118%	119%
2/6/2014	274%	274%	159%	121%	159%	121%
3/1/2014	105%	105%	121%	122%	121%	122%
3/4/2014	130%	130%	125%	126%	125%	126%
Instances:						
>=125%	7	7	7	7	7	7
>=150%	3	3	4	3	4	3
>=200%	2	2	2	2	2	2

In addition to gas price spikes, there may be other costs that are not perfectly accounted for under the proxy cost option. For example, the increased cap can account for variations in the standard resource-specific costs that are used in the Master File, such as the variable O&M. The increased bid cap will allow participants to capture the vast majority of observed natural gas price volatility and additional costs.[7] This meets the ISO objective to ensure on the whole that resources are appropriately compensated for their costs and aligns with other market design changes. For the reasons stated above, the ISO proposes an increased proxy cap of 125%.

The cap need not be as high as the registered cost cap because that option relied on a fixed natural gas forecast and required the resource to remain with the same cost for at least 30 days. Furthermore, increased bidding flexibility should be considered in the context of other market changes. On May 1, the ISO implemented bid cost recovery changes, including the separation of day-ahead and real-time bid cost recovery which is expected to attract more real-time economic bids by providing more cost recovery in the day-ahead. While there are some new safeguards in the recently approved bid cost recovery tariff amendments, they do not expressly create a market power mitigation methodology for commitment costs or an uninstructed deviation penalty. It will be important to see the market impacts of these changes.

[7] Note that a 125% increase in natural gas prices will result in a total cost increase of less than 125% because of other costs included in the start-up and minimum load cost calculations.

Though the increased proxy cap will be effective on most days, it would not be able to capture extreme price spikes like those observed on February 6th. Therefore, the ISO proposes to retain a portion of the manual operations as described in the tariff waiver to update the natural gas price index using the single ICE index, which is published at approximately 10 am. This would delay the close of the day-ahead market.[8] See Section 5.3 below for more details. In the next section, we discuss the proposed elimination of the registered cost option.

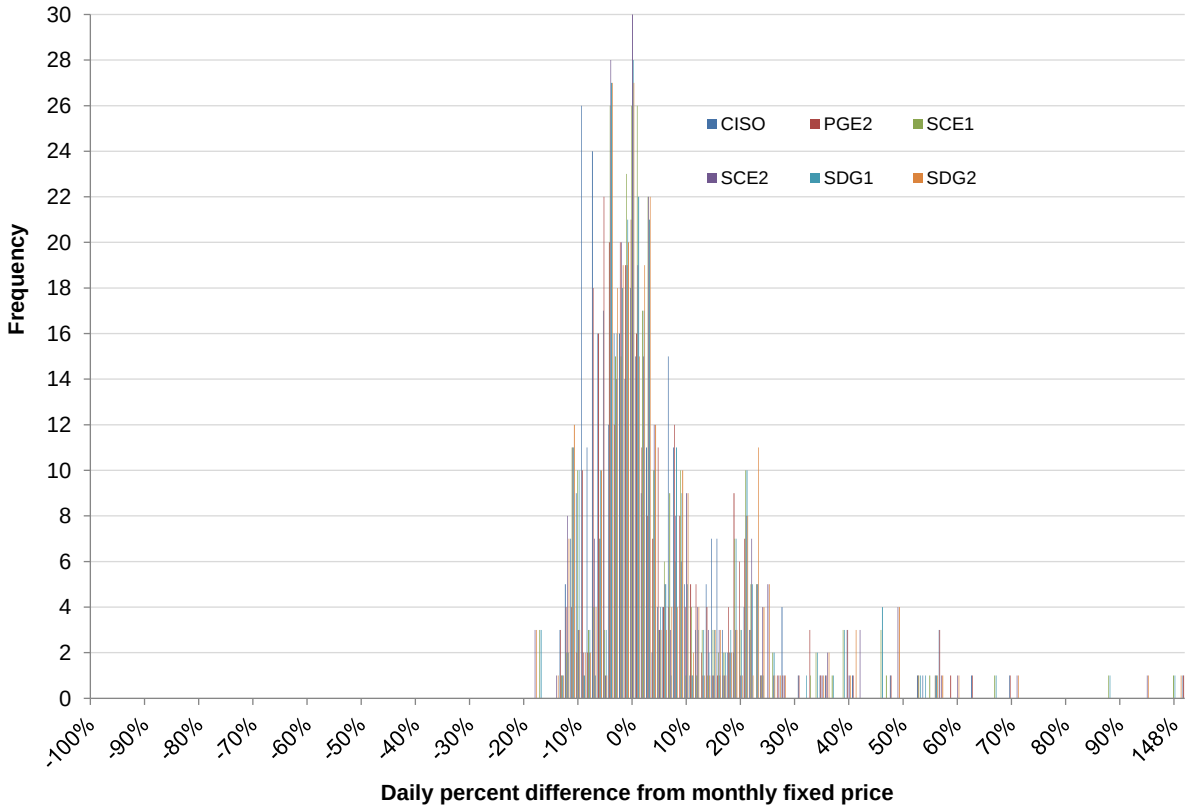
5.2. Eliminate registered cost option

The ISO proposes to eliminate the registered cost option, which means all resources will need to use the proxy cost option. The 2012 stakeholder initiative also contemplated the elimination of the registered cost option. At the time it was deemed necessary to retain this option in light of the start of the GHG market and the numerous market design changes being discussed (such as separation of the day-ahead and real-time bid cost recovery). As those milestones have passed, it is appropriate now to revisit this issue.

With the above proposed improvements to the proxy cost option, we view the existing registered cost option to be obsolete. Both cost options would have identical inputs except that the proxy cost option has a more updated natural gas price. Figure 2 below counts the number of times the daily gas price was above or below the monthly fixed gas price per region from June 2013 through April 2014. This frequency is distributed along the x-axis based on the percentage increase or decrease. The figure clearly shows that for all regions and for the majority of days, the daily gas price is above the monthly fixed price. In other words, the high bid cap on the registered cost option largely absorbs the upward price volatility that is not reflected on the whole in the monthly fixed price during this period.

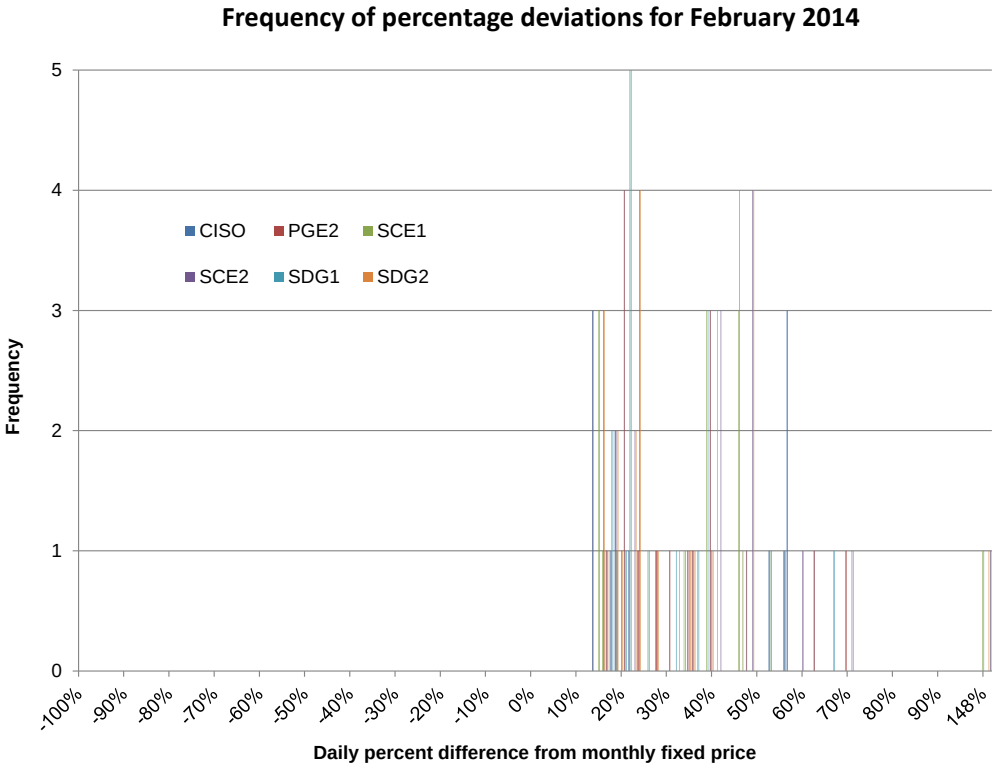
[8] The FERC NOPR seeks to start the gas day earlier which may allow the gas price indices to publish earlier in the day. On the other hand, the FERC NOPR also seeks to delay the close of the timely nomination cycle which can have the opposite effect.

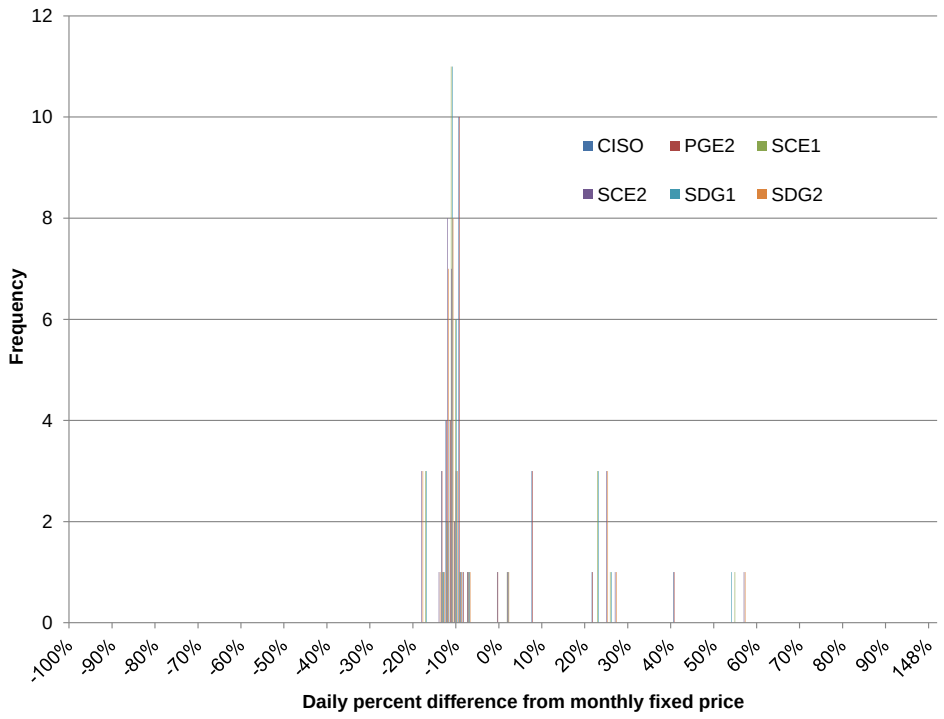
Figure 2
Frequency of percentage deviations between the daily and monthly fixed gas price
(June 2013 – April 2014)



The following pair of charts in Figure 3 highlights the inefficiency caused by the lag in the monthly fixed price. The chart on top shows that in February 2014, the daily gas prices were *always* higher than the fixed monthly price. For February 6th, the day of the extreme gas price spike, the daily gas price increase over the fixed monthly price was 364% for the CISO and PGE2 gas regions. March 2014 shows the opposite situation. Likely as a result of high gas prices in February, the monthly fixed price for March increased on average by $1/MMBTU. However, the March 2014 chart on the bottom shows that the daily gas prices trended lower as shown by the cluster of events around the -10% range.

Figure 3
Comparison of February and March 2014 deviation frequency





Implementation-wise, revisions to the registered cost option such as adding a bidding functionality or reducing the 30-day hold will require more systems and process changes. In fact, reducing the 30-day hold may well require a reduction in the current bid cap of 150%, moving the registered cost option closer to proxy.

With the elimination of the registered cost option, all resources will need to use the proxy cost option for minimum load and start-up costs. Providing a single, flexible option will also streamline the ISO's existing processes.

5.3. Retain manual process from tariff waiver

As mentioned in Section 5.1 above, the ISO intends to retain the majority of the manual process as described in the tariff waiver. This manual process only impacts the day-ahead market and attempts to correct for the lag in updating the gas price indices used in the optimization. The ISO would prefer a non-manual solution but may not be able to implement one before the next winter season. We continue to explore options to automate this process or implement a superior option.

In the meantime, we propose that the manual process be triggered when the natural gas price for any region is more than 125% of the gas price for that region from the previous night.[9] Currently, the final gas price that the ISO uses for each gas region is based on at least two gas price indices.[10] These gas prices are updated between 7:00 p.m. and 10:00 p.m. Pacific Time to be used the following day in the day-ahead market optimization. The ISO proposes to monitor the intra-day gas prices the morning of the day-ahead market optimization for any significant movements in the gas price in any one of the ISO's six gas regions. Though the ISO will monitor intra-day gas prices, we will still rely on the use of a gas price index. The only one available the morning of the day-ahead market optimization is the Intercontinental Exchange (ICE) index. The ISO tariff currently requires the use of two or more indices and the use of the single ICE index is a departure from current practice. However, the ISO believes that the manual process will be exercised rarely. If by the time the ICE index is published (at approximately 10:00 a.m.) and the natural gas price for any of ISO's six gas regions is greater than 125% of the gas price used in the previous night, the ISO would delay the day-ahead market, update the gas prices of all six regions with the ICE index numbers in the default energy bids, proxy cost calculations, and generated bids, and allow market participants to (re)submit all bids up to the proposed 125% proxy cap. In summary, the major steps are:

[9] For example: $4.00/MMBtu x 125% = $5.00/MMBtu so the manual process will be triggered if the gas price is greater than $5.00/MMBtu.
[10] See tariff section 39.7.1.1.1.3.

1. Day 1
    a. Between 19:00 and 22:00 Pacific Time update gas prices per current process in preparation of the day-ahead market run.
2. Day 2
    a. Before 10:00 monitor the intra-day gas prices and if gas prices are trending upwards, put internal processes and ISO markets on alert for potential update to the gas price index and delay in close of the day-ahead market.
    b. Approximately 10:00 – if the ICE index does not have prices that are greater than 125% of the previous night's, no change to current process and day-ahead market closes.
    c. Approximately 10:00 – if the ICE index has prices that are greater than 125% of the previous night's, proceed to:
        i. Notify participants of delay in day-ahead market close and suspend bidding temporarily
        ii. Update the gas price index used in default energy bids, proxy cost calculations, and generated bids
        iii. Notify participants that day-ahead market is open for (re)bidding and new time for close of the day-ahead market
        iv. Run optimization and publish awards

We note that the 125% proxy cap is on all costs, not just natural gas and that may create some overlap in cost accounting. However, the ISO's proposal aims to simplify the implementation and administrative burden of calculating the exact percentage for every resource and cost type.

The manual process approved in the tariff waiver also provides for comparing registered to proxy costs. Since the ISO proposes to eliminate the registered cost option, we will not retain this part of the process.

Lastly, stakeholders have asked for a permanent switch to use the ICE index. However, as the timing above shows, this would require a permanent shift in the day-ahead market process and is considered a major implementation impact. ISO continues to monitor broader industry discussions of aligning the gas and electric day that may result in a shift in the day-ahead market processes. Moreover, the use of a single gas price index is a departure from the current tariff and would require more detailed and careful consideration.

5.4. Opportunity costs for gas-fired use-limited dispatchable resources

In response to stakeholder concerns, the ISO will defer discussion of an opportunity cost methodology to a separate initiative. Though there was overwhelming stakeholder support, there are numerous details that cannot be resolved and implemented before this winter. We appreciate the many thoughtful and helpful stakeholder comments on this issue.

An opportunity cost adder was intended to increase the commitment and dispatch efficiency of use-limited resources, especially if the ISO develops more stringent must offer obligations that

include daily bid insertion. It would have provided the ISO with more bids and flexibility. While the status quo is not ideal, the ISO notes that the existing registered cost option is also not an optimal method of representing opportunity costs due to the 30-day hold to address market power concerns. The ISO provides two examples of inefficiencies for a scheduling coordinator that provides a registered cost of 150% of proxy for a use-limited gas-fired resource held to that cost for 30 days.

In the event of a slow gas price increase across a month that does not trigger the manual process, the 30-day hold may mean that a resource becomes "too" economic by the end of the 30 days. In other words, the registered cost, based on averaged futures prices, is lower than commitment costs produced by the daily gas price index. This may lead to the resource getting dispatched beyond its use limitations. The scheduling coordinator would have two options to try to remedy this situation. The first is to apply for a change from registered to proxy under the current tariff section 30.4.1.2 for the remainder of the 30 days. This process may require five to 11 business days according to section 30.7.3.2 for Master File changes. The second option is for the scheduling coordinator to immediately cease to bid the resource into the market until the end of the 30 days, at which point the registered cost could be changed. Either option is not optimal for the scheduling coordinator or the ISO as use limitations may be violated or resources may be kept from the market.

In the event of a slow gas price decrease across a month, the 30-day hold may mean that a resource becomes "too" expensive by the end of the 30 days. In other words, the registered cost, based on averaged futures prices, is higher than commitment costs produced by the daily gas price index. This may lead to very little or no commitment of the resource. The scheduling coordinator would not be able to remedy this situation except to wait for the end of the 30-day hold (note that resources cannot switch to proxy if the recalculated proxy cost is lower). This is an inefficient outcome for the scheduling coordinator and the ISO as the resource would be under-utilized.

In conversations with stakeholders, the ISO understands that scheduling coordinators or resource owners already calculate some form of opportunity cost on their own to be reflected in the registered cost provided to the ISO. Therefore, scheduling coordinators can manage their use-limited resources through bidding under the proxy cost option with today's limited must offer obligations. This is a balanced approach as scheduling coordinators can bid in use-limited resources according to their supply plan but not have the ISO generate a bid otherwise. Though the ISO will not be able to calculate an opportunity cost adder for this winter, we remain committed to doing so as soon as possible to increase the efficiency in the market. The ISO still intends to have an opportunity cost methodology in place for use-limited resources impacted by more stringent must offer obligations developed under the Reliability Services Initiative.

The ISO will announce the start of a separate initiative for the opportunity cost methodology at a later date and further discussion of this topic will continue there.

6. Maintaining existing processes and topics for further consideration

To the extent possible the ISO would like to maintain existing processes and practices such as:

- Daily bidding remains available under the proxy option.
- No change to the cost elements (*i.e.,* major maintenance adder) included under the current proxy cost option or their characteristics.
- Aside from the proposed increased bid cap, no changes are proposed to the treatment of non-natural gas-fired resources under the current proxy cost option.
- No changes are proposed to Master File entries that are currently used to calculate the proxy cost option such as the start-up energy curve or the start-up fuel cost curve.
- No change in proxy bids between the day-ahead and real-time, *i.e.*, a single minimum load or start-up cost will be used for the Trade Date.
- Maintain use of at least two natural gas price indices in the day-ahead and real-time optimizations under normal conditions.
- This proposal does not automatically modify any negotiated costs such as major maintenance adders.
- No *ex post* cost verifications for costs within the 125% proposed proxy cap

The ISO seeks to improve its commitment and dispatch and ensure on the whole that resources are appropriately compensated for their costs. We believe that the ISO's proposal provides this balance. Some stakeholders have noted that additional consideration is needed for the recovery of intra-day gas costs.[11] Since we cannot implement any real-time bidding functionality for this winter, some stakeholders have suggested that the ISO can reimburse the scheduling coordinator for intra-day gas costs incurred. This is not ideal since it would undermine efficient market dispatch. However, the ISO reiterates its request for more data in order to make an informed judgment. Some stakeholders have provided limited data (*e.g.*, intra-day gas costs for the gas price spike day of February 6, 2014) to show that some intra-day gas costs are particularly high. However, the ISO would like more comprehensive data such as:

- What were the intra-day gas prices and costs incurred by units that had a real-time-related commitment (*e.g.,* real-time only commitment to minimum load or real-time exceptional dispatch) versus the gas price index? Note the ISO is seeking actual costs incurred versus simply the intra-day gas prices. We prefer the data to be provided for at least a year to analyze trends and overall impact to the resource.
- How would the increased bid cap be considered with out-of-market intra-day gas cost recovery? For example, should the proxy cap be reduced to 100% for any resource that also receives this type of cost recovery? The ISO would also propose that the costs be considered in bid cost recovery.
- What happens when natural gas prices are lower in the intra-day than day-ahead?

[11] The ISO limits this discussion to intra-day commodity costs.

- Who would be responsible for validating out-of-market intra-day gas costs? Aside from real-time-related commitments, when else would recovery of out-of-market intra-day gas costs be allowed or under what specific conditions?
- Would recovery of out-of-market intra-day gas costs discourage hedging (either financial or physical)?
- What mechanisms, if any, can a gas-fired generator use to hedge (either financially or physically) the cost of buying gas in the intra-day market when the generator is not scheduled to operate day-ahead? For each hedging mechanisms identified, please explain how the generator would be able to recover the cost of the hedge.
- Would the overall FERC effort to align the electric and natural gas days help to alleviate the stakeholder concerns about intra-day gas price volatility and illiquidity?

The ISO would appreciate more comprehensive data in order to engage in an informed discussion. At this point, we have some evidence that intra-day costs can be higher than during the timely and evening nomination cycles but we do not know the extent to which this impacts stakeholders over time.

6.1. Update based on stakeholder comments

Several stakeholder comments on the revised straw proposal noted a desire to provide data to the ISO on a confidential basis to address the questions posed above. The ISO greatly appreciates these efforts is actively working with those parties. In the meantime, the ISO does not have any additional proposals but would like to reiterate the following points:

- The ISO has noted that its discussion of intra-day gas costs is limited to commodity costs. Several comments mention recovery of penalty costs, which brings up a broader policy question about whether a penalty designed to increase the reliability of the natural gas system should be reimbursed in the electricity market. Doing so may undermine the use of these penalties and requires close coordination between the electric and gas industries. This issue is being discussed in a limited scope under the ISO's proposed tariff revisions to address resources' ability to recover OFO penalties. The ISO clarifies it will do so as part of an OFO policy tariff development that we plan to be concurrent with the policy development portion of this stakeholder initiative, likely beginning late July or August. Outside of this narrow OFO discussion, the ISO will not be able to sufficiently address the broader question of reimbursement for penalties in this interim stakeholder initiative but can consider it in the longer-term bidding rules initiative.

- Some stakeholders have suggested that additional recovery of intra-day gas costs would be needed on a limited basis for "extraordinary" days, such as a gas price spike event. If that is the case, the ISO would like to understand if the proposed manual process would provide the means to recover all or a significant amount of those costs.

- Some stakeholders have suggested that additional recovery of intra-day gas costs is needed on a much more frequent basis. The ISO will need to review information received to better understand this scenario. The ISO will consider allowing scheduling coordinators to update minimum load and start-up costs in the real-time market in the longer term bidding rules initiative but this change would not be feasible by this winter because of the system and market rule changes it would require.

- Hedging is a business decision best left to resource owners. While it may not be economic to hedge against every contingency, the ISO does not want to discourage practices that attempt to mitigate risk. The focus of this question is to better understand whether participants can hedge, what mechanisms are available, and whether there are obstacles or disincentives in using those existing mechanisms arising out of the ISO's market design.

7. Topics for the bidding rules initiative

The ISO will start a more comprehensive bidding rules initiative in Q3 2014. In this initiative we expect to discuss topics that cannot be adequately addressed here such as:

- Reflection of intra-day natural gas costs (either through greater bidding flexibility or directly invoicing for certain gas costs) and the market rules and implementation changes needed to support it;
- Potentially breaking up the current three-day weekend gas "package" into separate Saturday/Sunday and Monday packages;
- Creating a process to periodically review the cost cap to ensure that it still enables headroom for market participants to accurately reflect their natural gas costs; and
- Consideration of using only a single gas price index (and potential change to the existing day-ahead market close timeline).

8. Next Steps

The ISO will discuss this straw proposal with stakeholders during a call to be held on July 22, 2014. Stakeholders should submit written comments by July 29, 2014 to ComCosts2@caiso.com.