

# Memorandum

**To:** ISO Board of Governors

**From:** Keith Casey, Vice President, Market & Infrastructure Development

**Date:** October 26, 2010

**Re: Decision on Capacity Procurement Mechanism and Exceptional Dispatch Provisions**

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*This memorandum requires Board action.*

## EXECUTIVE SUMMARY

The California Public Utilities Commission (CPUC) and other local regulatory authorities have established resource adequacy programs to ensure that the ISO has sufficient resources offered into its market to maintain reliable grid operation. However, under special circumstances, the resource adequacy capacity may not be sufficient to meet the ISO's operational needs. In this case, the ISO uses provisions within its tariff authority to procure backstop capacity. The current provisions for backstop capacity purchases have been in effect since the April 1, 2009 start-up of the new market structure, under the "interim" capacity procurement mechanism and exceptional dispatch provisions. However, the interim mechanism and certain elements of the exceptional dispatch design expire on March 31, 2011, and FERC has required the ISO to file successor provisions no later than 120 days prior to that date, or by December 1, 2010.

Management is seeking the ISO Board of Governors' approval of its proposed capacity procurement mechanism and exceptional dispatch provisions to replace the current interim mechanism. The capacity procurement mechanism allows the ISO to procure supply capacity for a minimum of 30 days and up to a full year to backstop any shortfall in the yearly or monthly resource adequacy procurement by load-serving entities or to meet operational needs due to significant unexpected changes in system conditions. Exceptional dispatch provisions allow the ISO to commit or dispatch resources on a day-ahead or real-time basis beyond their market schedules, and, if such dispatches use non-resource adequacy capacity, to compensate the capacity with either going-forward fixed costs or supplemental revenues. In addition, when the ISO issues an exceptional dispatch for capacity that is not under a resource adequacy contract, it triggers a 30-day procurement of the capacity under the capacity procurement mechanism provisions.

Management's current proposal retains most of the provisions of the existing mechanisms and also offers some needed enhancements, as indicated in the following summary of key elements:

1. Non-resource adequacy capacity will be compensated at a compensation rate that reflects the going-forward fixed cost of a hypothetical 50 megawatt generating unit, as established by the California Energy Commission (CEC). The capacity procurement mechanism and the exceptional dispatch will use the same compensation rate, which is the same as in the current mechanism and will be updated every two years. Suppliers that believe that their actual costs exceed the default rate can file at FERC for a higher rate. Using this mechanism, the actual compensation rate will increase from the amount non-resource adequacy capacity receives under the current backstop mechanism, \$41 per kilowatt-year, to \$55 per kilowatt-year.
2. These mechanisms will be permanent features of the ISO market structure, rather than an interim mechanism.
3. The criteria the ISO currently uses to select specific capacity when more than one resource option is available will be expanded to prefer resources that do not have a limitation on the amount of energy they can produce in a given period, and that have desired performance characteristics.
4. The current criteria for using the interim capacity procurement mechanism will be expanded to include capacity at risk of retirement within six months when the ISO's reliability studies indicate the capacity is needed within the next two years.
5. A resource procured under the capacity procurement mechanism that takes a planned maintenance outage during the 30-day procurement period will have its compensation reduced pro rata, which corrects a gap in the current rules.
6. A resource procured under the current interim capacity procurement mechanism whose procurement period extends beyond March 31, 2011 will automatically be converted to the new rules for the remainder of the procurement period after that date.
7. In response to a FERC directive, the ISO re-evaluated the existing bid mitigation provisions for exceptional dispatch and found them to be adequate and appropriate. Management proposes no changes to those existing provisions.

In light of FERC's December 1, 2010 filing deadline and the importance of these provisions for the continued reliable operation of the ISO grid, Management requests the Board to approve the following motion:

***Moved, that the ISO Board of Governors approves the proposed capacity procurement mechanism and exceptional dispatch provisions, as detailed in the memorandum dated October 26, 2010; and***

***Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.***

## **BACKGROUND**

The existing interim capacity procurement mechanism (ICPM) was designed as a backstop mechanism to allow the ISO to procure additional supply capacity in instances where resource

adequacy procurement by load serving entities does not fully meet the requirements, or when necessary under unforeseen conditions to maintain reliable grid operation. The ICPM allows the ISO to make capacity designations from 30 days up to a full year, to establish the compensation rate for procuring backstop capacity services and allocate the costs incurred. An ICPM designation carries with it a requirement for the designated capacity to comply with the must-offer obligations that are applicable to resource adequacy capacity under the tariff, and as such is intended only for procuring capacity that is not already designated as resource adequacy capacity. Acceptance of an ICPM designation by the resource owner is voluntary. In addition, a resource owner accepting an ICPM designation has the choice of accepting the pre-specified compensation rate or filing with FERC for a higher rate.

In contrast, an exceptional dispatch by the ISO is short-term. An exceptional dispatch may be a commitment instruction issued the day before, or up to a few hours before a resource is needed, or it may be a dispatch instruction that is issued within the operating hour. Such instructions are considered “exceptional” in the sense that they are issued manually by ISO operators rather than through the ISO market software. Exceptional dispatch may apply to both resource adequacy and non-resource adequacy capacity, and compliance with the instruction is not voluntary. Because of the potential for a resource located in a critically constrained area of the grid to exercise market power when needed for reliability, the exceptional dispatch rules include a market power mitigation provision.

When the ISO issues an exceptional dispatch to non-resource adequacy capacity, the resource owner is entitled to additional compensation. This compensation is a capacity payment that FERC has ordered be roughly comparable to the compensation paid to resource adequacy resources. For consistency, the rate at which ISO-procured non-resource adequacy capacity is paid is the same for both the ICPM and exceptional dispatch. In the event the ISO issues an exceptional dispatch to resource adequacy capacity, no capacity payment is provided because the requirement of the resource to comply is deemed to be part of the resource’s obligations under the resource adequacy must-offer provisions.

When these mechanisms were developed prior to the start-up of the new market structure, the primary concerns raised by some parties were that: (1) the ISO would use them excessively, which would depress market prices, and (2) the compensation rate should be set at a high enough level to signal scarcity and stimulate new investment, whereas the ISO’s proposed compensation rate was designed only to compensate for a resource’s going-forward fixed costs.

Regarding the first concern, experience with the new market structure that went into operation on April 1, 2009, has shown that the actual use and costs of ICPM and exceptional dispatch have been far less than stakeholders anticipated in their comments when these provisions were filed at FERC. Since April 1, 2009, there have been only 23 ICPM designations (all triggered by exceptional dispatches), for a total of 703 MW, at a total cost of \$2.7 million with no procurement lasting longer than 30 days.

Regarding the compensation rate, FERC accepted the ISO’s proposed ICPM as an “interim” mechanism with a March 31, 2011 sunset with the understanding that the CPUC was then conducting a proceeding to consider adopting a multi-year forward resource adequacy requirement with a centralized capacity market. At that time, the ISO and the stakeholders anticipated that the successor

mechanism would be designed to be consistent with and complementary to the CPUC's revised long-term resource adequacy framework. On June 3, 2010, the CPUC adopted a final decision in the long-term resource adequacy proceeding that leaves the current resource adequacy program essentially unchanged. The implication of this decision for the current initiative is that the provisions adopted here must be aligned with, and complementary to, the existing resource adequacy framework, and must be expected to remain in place indefinitely.

## **PROPOSAL DISCUSSION**

During the course of the stakeholder process, the most contentious issues were the compensation rate, the basis for issuing capacity procurement mechanism designations including the use of the CPM to procure capacity at risk of retirement, and expansion of the selection criteria to consider use limitations and resource performance characteristics. Each of these issues is discussed below.

### Compensation Rate

Stakeholders were divided between setting the compensation rate based on the cost of new entry (i.e., to signal supply scarcity and elicit new investment) versus setting the rate at the going-forward fixed-costs of a typical 50 MW generation unit (going-forward fixed costs are the minimum costs that a unit needs to cover to remain available for service and operable). Although some suppliers argued that resources should be paid for a return on capital investment, they have also noted that the capacity procurement mechanism, by itself, is not an investment vehicle. Management proposes the going-forward fixed-cost compensation rate for the following reasons:

- Under the ICPM, all resources have elected compensation at the pre-specified capacity procurement rate (currently \$41 kW/year) in lieu of notifying the ISO they intend to file at FERC for higher rates. This indicates that the current rate structure provides sufficient compensation to cover costs; and
- The backstop procurement mechanism is designed for short-term capacity purchases and therefore not designed to incent investment in generation. A cost of new entry compensation design which includes capital investments costs is not appropriate for short-term capacity procurement.

The ISO is mindful of the impact of renewable energy on energy and ancillary services market prices and the expected resulting reduction in spot market revenues for conventional resources, but has concluded that the mechanisms discussed here for backstop procurement are not the appropriate vehicles for trying to address this concern. The ISO has started a separate major stakeholder initiative – the renewable integration market and product review – to address this and other market design issues related to the increasing participation of renewable resources in the ISO market.

This proposal includes updating the procurement compensation rate every two years based on a report produced by the CEC that provides an assessment of the levelized going-forward costs of a new hypothetical 50 MW generating unit. The CEC model used to support the going-forward cost calculations was first developed in 2003 and then updated in 2007 and 2009.

## Basis for Issuing CPM Designations

During the stakeholder process the ISO considered whether it was necessary to expand its ability to procure capacity through the CPM: (1) in advance of the day-ahead or real-time markets to allow a transmission or generator maintenance outage to proceed under existing grid conditions; or (2) in the event a sustained loss of intermittent energy causes material reductions in the available resource adequacy capacity. The latter concern will become more acute as the amount of intermittent capacity fulfills a great portion of the resource adequacy procurement requirements on load-serving entities. Management determined that it is appropriate for the ISO to engage in backstop procurement to address these two situations, and that the tariff authorizes designation of ICPM capacity for a significant event. Management therefore proposes to address these needs through simple continuation of the ICPM provisions rather than by modifying those provisions.

During the stakeholder process the ISO also considered whether to expand its ability to procure capacity to ensure that resources that are needed for reliability but are at risk of retirement can be paid a capacity payment to keep them in service. Many stakeholders do not support this ISO procurement authority. One concern is that allowing backstop procurement to prevent the retirement of a resource based on alleged financial circumstances will present a gaming opportunity. Management recognizes that it cannot and should not be expected to assess the financial situation of a resource to ensure definitively that the resource is at risk of retirement due to insufficient revenues. Rather, Management proposes to rely, as it has for certain other situations where it must rely on the assertions of a market participant, on (1) a formal declaration by the resource owner of its intent to terminate its participating generator agreement, (2) the submission of financial information plus an affidavit from a company executive regarding its financial situation, (3) existing tariff requirements to submit truthful information, with the potential to refer a situation to FERC if the resource's request appears questionable, and (4) information concerning the resource's financial situation and business case for retirement, including its going-forward costs, projected revenues and opportunity costs. This information will be analyzed by the Department of Market Monitoring to ensure against possible economic withholding of capacity and the ISO will consider the analysis done by the Department of Market Monitoring in its consideration of whether to procure such a resource.

Some parties have questioned the need for this retirement provision and pointed out that the CPUC has an established process for reporting and reviewing potential retirements in collaboration with the ISO. They are concerned that this proposal conflicts with that authority. Management does not believe that there is a conflict. The ISO would pursue a CPM designation in such cases only after providing stakeholders its assessment of the reliability need for the resource and its determination that the resource is at risk of retirement, and an opportunity for the CPUC or a load-serving entity to enter a bilateral arrangement with the resource and thereby obviate the need for CPM procurement. The need identified by the ISO can thus be fully satisfied if the CPUC uses its existing provisions and authority to render a CPM designation unnecessary. If the CPUC does not, however, the ISO will have the needed backstop capability.

## Selection Criteria for CPM and Exceptional Dispatch

Management's proposal includes other important new provisions that will refine the ISO's selection process of resources eligible to receive a CPM designation or an exceptional dispatch. When issuing a CPM designation, the ISO proposes to take into account the availability of the resource. Certain resource adequacy resources are deemed "use-limited resources" due to constraints on the amount of energy they can produce. Examples of such resources include hydro resources that are dependent on water availability and thermal generation units that are under emission limitations. Under the new provisions, the ISO proposes to select non-use-limited resources over use-limited resources. The non use-limited criterion is especially important for a CPM designation (or when an exceptional dispatch would trigger a CPM for non-resource adequacy capacity) because only non-use-limited resources are required to comply with the must-offer obligations of the tariff. Thus, if the ISO were to select a use-limited resource for a CPM, the ISO would have limited ability to commit and dispatch that resource over the CPM designation period. In addition, the ISO proposes to take into account the operational characteristics of the resource and select resources that best meet operational needs. Management believes that these proposed enhancements are warranted in light of the growing amount of intermittent capacity in the supply fleet to meet the state's renewable energy goals, changes to the grid resulting from transmission expansion, and the expected retirement of dispatchable resources under the once-through cooling regulations.

## Other Key Features

A key feature of the proposal is the elimination of the ICPM sunset date. Management considers this a prudent course of action because the current tariff provisions have been working reasonably well, capacity procurements have been relatively infrequent, and such backstop procurement capability should always be available to the ISO. Additionally, the CPUC resource adequacy program is essentially unchanged and thus durable backstop provisions will continue to provide the same protections as before. Most stakeholders agree that maintaining this procurement mechanism on only an interim basis is no longer necessary.

Last, and receiving broad stakeholder support, capacity payments made to generators procured under the CPM will be prorated to take into account planned outages taken during the term of the CPM procurement.

## **POSITIONS OF THE PARTIES**

### ***Stakeholder Process***

Between June and September 2010, the ISO conducted three stakeholder calls, one meeting and provided four opportunities to provide written comments. Client services also conducted outreach to stakeholders to gain additional insight into positions and areas of concern. Several stakeholders recommended that the ISO seek a formal opinion from the Market Surveillance Committee. In response, the Market Surveillance Committee led a discussion at its October 8 meeting and later adopted a formal opinion supporting Management's proposal. In addition, the CEC presented its cost of generation model and an overview of that model and the going-forward cost methodology at the

August 23 stakeholder meeting. A matrix of the elements of this proposal and stakeholders' positions on each of those elements is provided as Attachment A.

The Market Surveillance Committee's Opinion is provided as Attachment B.

The Department of Market Monitoring has also provided comments and is supportive of the ISO's proposal as explained in the Department of Market Monitoring market monitoring report that is included in this month's Board book.

### ***Key issues of stakeholder concern***

#### **Capacity procurement mechanism compensation: Going-forward or cost of new entry**

Issue: The generator community supports the cost of a new entry model, while the load serving entity sector supports the going-forward cost methodology.

Response: The ISO has been a proponent of cost of new entry in the context of a multi-year forward resource adequacy framework and a forward capacity market, but does not believe that cost of new entry is appropriate for backstop capacity procurement. Although the ISO is concerned with the ability of conventional generators needed to support the state's renewable energy goals to earn sufficient revenues, Management believes this is a matter that should be addressed in the separate, ongoing renewable integration market and product review initiative.

#### **Compensating resources needed for reliability that are at risk of retirement**

Issue: Stakeholders were generally dismissive of the ISO needing the authority to procure resources that are needed for reliability but are at risk of retirement. In particular, some stakeholders noted that the CPUC already has provisions to procure and compensate these resources, and that reliability must-run contracts can serve this purpose. In addition, some stakeholders argued that this type of CPM procurement would result in having capacity under a resource adequacy must-offer obligation in excess of the CPUC's preferred planning reserve margin.

Response: Expansion of the ISO's backstop procurement mechanism to address potential retirement of a unit needed for reliability within the next two years does not duplicate the CPUC's program, nor does it preclude the CPUC acting on its existing provisions and thereby obviating the need for the ISO to make a CPM designation. The ISO has committed to providing full information to market participants regarding the need for, and its intent to issue, a CPM for such a resource, and to allow an opportunity for the CPUC, one of its jurisdictional load-serving entities, or even a non-CPUC jurisdictional entity to enter an alternative arrangement with the resource prior to any CPM designation. The reliability must run contract is not a well suited alternative to CPM because the current reliability must run pro forma terms are designed narrowly for addressing local reliability and non-competitive constraints, and any expansion of applicability would require a lengthy stakeholder process to expand the applicability and develop a different cost allocation as well as individual negotiation of terms with each resource. The benefit of using the CPM for this situation is that it provides standard terms that can be simply and promptly applied when needed. Finally, with regard to concern about having excess capacity under the must-offer obligation, one potential mitigation is the

opportunity noted above for the CPUC or the load-serving entities to procure the resource ahead of any CPM designation. In addition, the ISO can mitigate this concern under existing tariff provisions by allocating shares of the CPM capacity in the form of credits to load-serving entities to offset their monthly resource adequacy requirements.

### **Procurement authority for a sustained loss of intermittent energy**

Issue: Some stakeholders argued that this use of CPM is not needed because the variability of wind and solar resource adequacy resources is already taken into account by the CPUC's counting rules for these resources, and if it happens that actual energy output falls significantly below the qualifying capacity determined by these rules, then the ISO should seek revision of the rules rather than perform backstop procurement.

Response: The sustained loss of intermittent capacity during peak periods has been documented and is a growing concern due to the increasing reliance on this type of resource. Although such occurrences could lead ultimately to revision of the resource adequacy capacity counting rules, the ISO must still manage any reliability impacts promptly when the problem arises. Similar to current backstop provisions, the ISO envisions using this authority rarely, but must be prepared to use it if needed.

### **MANAGEMENT RECOMMENDATION**

Management requests Board approval of the capacity procurement mechanism and exceptional dispatch provisions as detailed in this memorandum. The benefits of implementing these provisions will ensure that the ISO has the necessary tools to address the challenges to maintaining grid reliability in the future. These provisions will complement the state's resource adequacy program without adding unnecessary costs, as the existing provisions have done to date.