Capacity Procurement Mechanism Soft Offer Cap

Draft Final Proposal

January 6, 2020

Market & Infrastructure Policy

Introduction

The ISO began the CPM soft offer cap initiative early in 2019 to: 1) review the soft offer cap that applies to bids in the competitive solicitation process used for capacity procurement mechanism (CPM) designations, 2) examine compensation and mitigation for 12-month CPM designations, and 3) to review whether the changes proposed and approved during the RMR-CPM enhancements initiative for CPM bids above the soft offer cap continue to be appropriate.

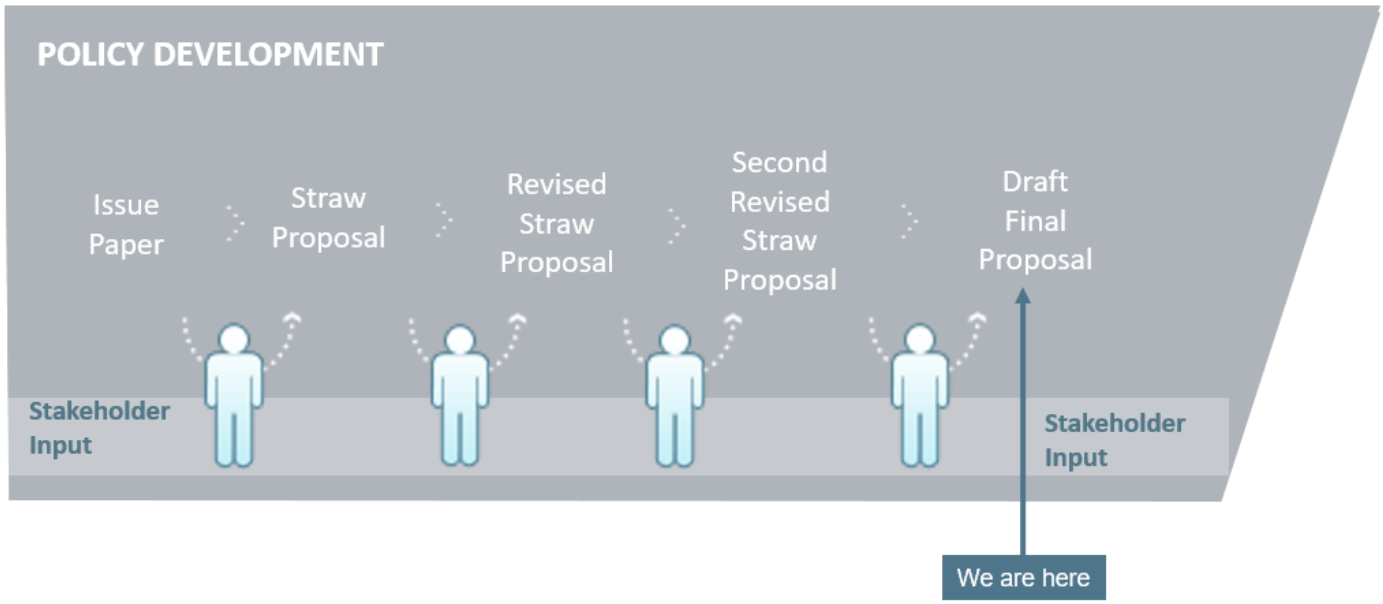
The CAISO published an issue paper in May, hosted a conference call to review the paper, and received written comments regarding the scope of this initiative. The ISO continued this process by releasing a straw proposal in July with another conference call and comments following. This draft final proposal includes a summary of the review of the soft offer cap completed by the ISO, the conclusion that the soft offer cap should not changed from its current level, potential future changes that could be implemented for the CPM process, and updates to the rules for bidding above the soft offer cap – unchanged from the RMR-CPM initiative – and accompanying tariff changes. This draft final proposal does not include any new mechanisms for market power mitigation for the CPM tool.

Stakeholder Process

Figure 1 below shows the status of the straw proposal within the overall CPM Soft Offer Cap stakeholder process. The CAISO is at the "Draft Final Proposal" stage in the CPM Soft Offer Cap stakeholder process.

The purpose of the draft final proposal is to present a proposal, in nearly final form, for the direction of the policy to ultimately be adopted. This particular draft final proposal will include a window for feedback on the proposal. However, as this proposal does not have include moving forward with any new policy changes and will therefore terminate the stakeholder process.

Figure 1: Stakeholder Process for CPM Soft Offer Cap Stakeholder Initiative



Energy Imbalance Market Classification

For this initiative, the ISO is not seeking any additional approval from the Board of Governors. The only proposed tariff change for bids above the soft offer cap was approved by the Board of Governors as part of the RMR/CPM initiative in March 2019. Therefore there is no role for the Energy Imbalance Market ("EIM") Governing Body.

Background

The ISO relies on capacity procured through the resource adequacy framework to operate the grid reliably. Resources procured as resource adequacy capacity are required to be available to the ISO to meet the load-serving and reliability needs of the grid. Occasionally, there are resources that want to retire but cannot as they are essential to maintaining grid reliability. When this happens, the ISO can use its reliability must-run (RMR) authority to retain these essential reliability resources and defer their retirement until new resources are built or transmission is enhanced. There are also situations when resources or capacity procured through the resource adequacy program are not sufficient to meet the load-serving and reliability needs of the grid. If this happens and if additional capacity is not procured by load serving entities to cure the deficiency, the ISO relies on its CPM authority to procure the needed capacity to meet any outstanding resource adequacy deficiencies.

When procuring capacity through the CPM tool, the ISO reviews bids available through the competitive solicitation process (CSP) from capacity that is not already shown for resource adequacy. Resource owners have the opportunity to submit bids for their capacity, for total or partial output from a specific resource. This process is not mandatory, and capacity not designated for resource adequacy is under no obligation to bid into the competitive solicitation process. However, if capacity is bid into the competitive solicitation process and designated an award, then the resource is obliged to accept the CPM award and the associated obligations. These obligations include a must offer obligation and make the designated capacity subject to the ISO's Resource Adequacy Availability Incentive Mechanism (RAAIM) tool, which provides financial incentives for resources to meet their resource adequacy obligations.[1]

As noted, the competitive solicitation process is voluntary and resource owners are not obligated to bid capacity into this process. However, all resources that are interconnected to the grid continue to have the obligation to be maintained within the guidelines of good utility practice and must be available to the ISO for potential exceptional dispatches.

The principle behind the competitive solicitation process is that any resource owner with capacity that does not already have a resource adequacy contract will bid that excess capacity into the competitive solicitation process, up to the resource's net qualifying capacity (NQC) value. This allows the capacity owner an opportunity to receive additional fixed compensation for any CPM designation they might receive for its capacity.

In a market where there is significant supply competing for fixed payments from a potential CPM designation, an optimal bidding strategy for market participants with surplus capacity reflects a number of resource specific parameters. These include going forward fixed costs, anticipated market revenues, expected expenses for capital additions, and a risk premium including volatility for expected market returns and other considerations.

Unlike RMR designations, CPM designations may be for partial units and intervals as short as one month. The ISO runs two competitive solicitation processes: one for the annual CPM process, where designations and payments are made for a 12-month

[1] RAAIM is a bidding incentive mechanism that has a 96.5% target availability with a +/- 2% dead band, assessed on a monthly basis. Resources that bid into the market less frequently than 94.5% of intervals are charged the RAAIM penalty price, while resources that bid more frequently than 98.5% of intervals are eligible to receive an incentive payment.

period; and one for the monthly process, where payments are generally made for 30 or 60 day designations.[2] Resources receiving annual designations receive payments for the entire year, while resources receiving monthly designations receive payments may receive a single payment for a 30-day period. However, there are still obligations for the resource receiving a monthly designation to maintain the resource consistent with good utility practice, the other 11-months of the year potentially without additional compensation.

The CPM tool includes a soft offer cap. Any bids submitted to the competitive solicitation process and accepted that are below the soft offer cap are payed the bid price without further review. Resources may bid at levels above the soft offer cap, but those bids must be verified as representative of fixed costs to be used for CPM compensation.

The soft offer cap was set four years ago in the capacity procurement mechanism replacement initiative. At that time, rules for updating the soft offer cap were established. The soft offer cap was set as a subset of the fixed costs, representing going forward fixed costs, for a new resource. These costs include insurance, ad valorem taxes, and fixed operations and maintenance costs, but not capital and financing costs or taxes. Additionally, the costs were set using a hypothetical mid-cost 550 MW advanced combined cycle resource with duct firing capability.[3] The values used to calculate the soft offer cap were taken from a California Energy Commission (CEC) study for the cost of new generation, which was published at about the same time.[4] The initiative also established rules that the ISO would evaluate if the soft offer cap adequately reflects in the going forward fixed cost of the reference resource, and may consider changing the reference resource.

[2] Monthly designations may be extended beyond their initial designation period.

[3] The CEC cost of new generation study includes costs for a low-cost, mid-cost and high cost case for the resources studied.

[4] Estimated Cost of New Renewable and Fossil Generation in California, California Energy Commission, March 2015, https://www.energy.ca.gov/2014publications/CEC-200-2014-003/CEC-200-2014-003-SF.pdf.

Policy Considerations

Do not adjust the current soft offer cap.

The soft offer cap was initially set based on figures from the 2014 draft CEC report for Estimated Cost of New Renewable and Fossil Generation in California.[5] This report included analysis for a hypothetical new mid-cost 550 MW advanced combined cycle resource with duct firing capability, and this resource was used to set the soft offer cap. The soft offer cap was initially comprised of the components making up going forward fixed costs and included: insurance, ad valorem, and fixed operations and maintenance costs. The calculation for the soft offer cap includes these values plus a 20% adder. A summary of these components from this study and the calculated soft offer cap are shown in the first row of Table 1 and result in a total soft offer cap of about $76/kW-year.

Table 1: Soft Offer Cap Calculation

CEC Report	Res Capacity (MW)	Insurance ($/kW-yr)	Ad Velorem ($/kW-yr)	Fixed O&M ($/kW-yr)	GFFC ($/kW-yr)	SOC ($/kW-yr)
2014	550	$8.09	$11.74	$43.23	$63.06	$75.67
2018	700	$7.10	$10.03	$41.77	$58.90	$70.68

In May 2019, the CEC updated the estimated cost of new generation report.[6] The new report includes changes to modelling inputs used to calculate the total costs for new generation including labor rates, inflator series, tax rates, and interconnection costs. It also includes analysis for a hypothetical new 700 MW advanced combined cycle resource with duct firing instead of the 550 MW resource used in the prior report. The going forward fixed costs (GFFC) for the 700 MW resources are included in the second row of Table 1 above. The calculation for the soft offer cap using this resource is approximately $71/kW-year, lower than the current soft offer cap by about $5/kW-year, or a 7% decrease from the current value. The primary driver between the current fixed

[5] Estimated Cost of New Renewable and Fossil Generation in California, California Energy Commission, Table 56, May 2014: https://ww2.energy.ca.gov/2014publications/CEC-200-2014-003/CEC-200-2014-003-SD.pdf. Figures from this table were converted from energy to capacity values to arrive at inputs used to compute the initial soft offer cap.

[6] Estimated Cost of New Utility-Scale Generation in California: 2018 Update, California Energy Commission, Table D-2, May 2019: https://ww2.energy.ca.gov/2019publications/CEC-200-2019-005/CEC-200-2019-005.pdf.

cost calculation and the new calculation is the economies of scale gained from the larger unit size.

The assumption that the representative resource should be a 700 MW resource instead of a 500 MW resource is not representative of observed changes in the characteristics of resources operating on the grid during the prior four years. In addition, the ISO and the CPUC anticipate significant changes to the grid's resource fleet to meet state goals to significantly reduce greenhouse gas emissions from electricity generation. In fact, preliminary numbers from the CPUC's 2019 integrated resource planning (IRP) process predict that the value for marginal system capacity will be more than $300kW-year. These estimates show marginal values for capacity that are very low over the next few years, as the system continues to have excess capacity before retirement of the once-through-cooling (OTC) natural gas resources. However, as early as 2022 the numbers begin to reflect the cost of building solar and storage as the marginal capacity resources on the system. The CPUC staff proposed using these values for the avoided cost calculator (ACC) in the proceeding for integrated distributed energy resources.[7]

During this transitional period, the ISO proposes to leave the soft offer cap at the current rate of $75.67/kW-Year ($6.31/kW-month). A number of factors compel the ISO to leave the current soft offer cap unchanged for this evaluation period. First, the rates from the 2014 study to the 2018 study changed very little. Second, although several input changes affected the calculation of the soft offer cap, the single largest change was updating the size of the hypothetical resource from 550 MW to 700 MW. This change caused total costs to be spread over a larger resource, reducing the incremental cost of capacity. This minor and explainable difference indicates that the going forward fixed costs for a new combined cycle resource did not materially change over the past five years. Retaining the existing cap level should continue to provide sufficient cost recovery under the voluntary CPM paradigm and not create incentives for load serving entities to forego bilateral RA contracts and instead rely on CPM backstop procurement. Existing gas-fired units remain the units most likely to receive CPM designations at this time. Further, it is unlikely any new gas-fired units will be added to the system.

Not changing the current soft offer cap requires no further action be taken in this stakeholder initiative nor from the ISO Board of Governors because it does not change any content in the ISO tariff.

[7] ALJ's Ruling Confirming Use of Recommendations from Rulemaking 14-08-013 and Introducing Staff Proposal for Major Updates to Avoided Cost Calculator, http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M319/K898/319898332.PDF.

Consider other options to determine a soft offer cap in the future.

The analysis the ISO used initially to set the soft offer cap was based on cost estimates included in the CEC report on the cost of new generation in California. Those estimates were for a large combined cycle resource. Combined cycle resources are unlikely to be constructed on the California system in the future. The ISO is not proposing to make adjustments at this time to the technology of the reference resource used to calculate the soft offer cap. However, as the grid's resource fleet evolves, it may be appropriate to change how the soft offer cap is set. The soft offer cap should reflect an estimate of the short-run marginal cost of capacity used to meet the ISO's resource adequacy requirements.

Several stakeholders – including Independent Energy Producers, Gridwell, CPUC, and Middle River Power – asked that the ISO re-evaluate selection of the proxy resource used to set the soft offer cap. These comments included suggestions to consider the marginal resource that is most likely to be built on the system in the future and a representative resource that may receive a CPM designation. The ISO acknowledges these comments and notes that such changes may be relevant, but that they are not necessary at this time. As noted above, CPM is used for the backstop procurement of existing resources when needed for reliability. It is not a forward procurement tool.

File changes for CPM bids above the soft offer cap.

In the recent RMR-CPM enhancements initiative, the ISO considered changing the compensation for CPM designations made at prices above the soft offer cap. In that initiative the ISO considered the existing structure for all CPM compensation and stakeholder feedback on the issue. The draft final proposal of that initiative included explicit proposals for compensation for CPM bids above the soft offer cap. These included a primary proposal and an alternative proposal if FERC were to reject the primary proposal.

The ISO is not currently planning to deviate from that proposal at this time. The tariff language changes associated with bids above the soft offer cap will be filed at FERC and reviewed during the stakeholder call to discuss this draft final proposal for the CPM enhancements initiative. Tariff language, including these changes, will be posted to the stakeholder process website along with this draft final proposal document. Stakeholders are encouraged to review and discuss the proposed changes to the tariff language during the stakeholder call and in written comments that are due by January 23.

The ISO currently compensates CPM resources that have costs exceeding the CPM soft-offer cap price based at the full cost of service, similar to the compensation for RMR

resources. The current FERC-approved formula uses Schedule F of Appendix G of the RMR tariff and allows the resource to keep all market revenues earned in addition to the payments for fixed costs. Many stakeholders stressed that allowing CPM resources with 12 month contracts to keep all market rents earned in addition to recovering their annual cost of service is excessive.

In the RMR-CPM enhancements initiative, the ISO proposed to change the pricing formula for a resource that submits a competitive solicitation process bid above the soft-offer cap price to an approach where the resource can file at FERC based on the going forward fixed cost of the resource, using the same cost categories discussed above, and the same 20% cost adder that used for the CPM reference resource in addition to retaining all market rents earned. In addition, the ISO proposes to include an alternative proposal in a separate, alternative tariff sheet when it makes its section 205 filing that will allow resources to only have compensation equal to going forward fixed costs – without the 20% cost adder – and retention of market rents. The CAISO discussed these proposals in the RMR-CPM enhancements initiative and received board approval at the March 2019 Board meeting.

Revisit implementing additional market power provisions in the future.

During this stakeholder initiative and the RMR-CPM enhancements initiative, the ISO received comments indicating concern about market power for resources awarded 12-month CPM designations. In response, the ISO generated a potential proposal for a three pivotal supplier test that would be applied to resources awarded 12-month CPM designations that fail the pivotal supplier test. After careful consideration, the ISO determined that the proposed methodology for market power mitigation included significant market inefficiencies and would be potentially administratively burdensome for the ISO. It would also blur the line between RMR and CPM procurement by making CPM designations more like RMR, which the CAISO deliberately sought to avoid in the RMR-CPM enhancements initiative.

The ISO acknowledges that this is an important issue to some stakeholders who express concern over potential 12-month CPM designations made at or around the soft offer cap, which may be higher than a resource's going forward fixed costs. However, as noted above, the ISO finds that the level of the soft offer cap continues to be a reasonable representation of the marginal capacity cost on the system. The CAISO may revisit this matter in future CPM initiatives in response to the changing resource fleet.

Other Changes

The ISO identified some additional tariff clarifications in the RMR-CPM enhancements and includes them in the proposed tariff language posted for review on the ISO initiative website.

Next Steps

This proposal maintains the level of the soft offer cap and will not include a 3-pivotal supplier test for 12-month CPM designations, which will be further discussed on the January 9, 2020 stakeholder call.

This proposal also outlines changes to the tariff for bids above the soft offer cap, which were discussed and approved by the California ISO Board of Governors during the RMR-CPM enhancements initiative. Actual proposed changes to the tariff are included on the initiative website for review and comments. These will also be discussed on the January 9, 2020 stakeholder call and all comments for these changes will be due on January 23, 2020. The ISO plans to file these changes at FERC shortly after this window.

All comments should be submitted to: initiativecomments@caiso.com.