Updated Straw Proposal

Standard Resource Adequacy Capacity Product

ISO Updated Straw Proposal
December 4, 2008

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1 WHAT HAS CHANGED SINCE THE PREVIOUS STRAW PROPOSAL

On November 11, 2008, the first version of this straw proposal was published on the CAISO website, followed by a stakeholder meeting on November 18th. Stakeholders also had the opportunity to provide written comments, which were reviewed and posted on the California ISO (ISO) website. Eighteen different stakeholders submitted comments. The information and comment provided by stakeholders helped to shape this updated straw proposal. The following sections were changed:

Old Section #	New Section #	Title	Change
--	1	What Has Changed Since the Previous Straw Proposal	New section
1	2	Executive Summary	Updated summary of availability standards and performance incentives. Updated significant dates.
3.2.2	4.2.2	SCP Process	Added clarifying language and removed the credit requirement box from Figure 2.
4.2	5.2	Product Definition	Clarified that the duration of a tag extends no longer than the compliance period. Added some clarification for QFs and MSSs.
5	6	Previously – Availability Standards, Now - Availability Standard & Performance Incentives	Updated to include new proposal for availability standards and also includes performance obligations which were in Section 6 in previous proposal
6	Deleted	Performance Incentives	Combined with Availability Standards section above
--	7	Unit Substitution	New section
7.2	8.2	Credit Requirements	Updated section based on the new performance incentive structure.
8.2	9.2	Previously – Stakeholder Transition Proposal. Now – Transition Proposal	This section has been updated to reflect ISO's consideration for a transition proposal.

9	10	Other Issues	Updated the status of implementation options for SCP.
10.2	11.2	Proposed Schedule	Updated the schedule to remove milestones that have been completed.

2 EXECUTIVE SUMMARY

Stakeholders have stated to the ISO that their ability to efficiently transact Resource Adequacy (RA) contracts would be significantly enhanced by including a standard product definition in the ISO tariff. The need for a standardized resource adequacy product was highlighted during the ISO's Market Initiatives Roadmap process where the Standard Resource Adequacy Capacity Product (SCP) was ranked highest priority out of a list of over 70 initiatives.[1] Many stakeholders have expressed their desire to have this product implemented in the ISO Tariff as soon as possible so that it may be used as the basis for capacity contracting during 2009 for the 2010 delivery year. As a result, earlier this year, the ISO began the stakeholder process for designing the SCP by releasing an issue paper which outlined the breadth of issues that related to creating a such a product. The ISO staff reviewed each of these issues along with the stakeholder's comment to prepare a straw proposal and this updated straw proposal. The purpose of this proposal is to provide stakeholders with the ISO's current thinking about the best way to implement SCP. We look forward to additional comments and discussion with stakeholders on the pros and cons of current thinking on the subject.

The ISO is not starting from scratch to create SCP. Currently (and in MRTU) there is a process defined for the RA program. The ISO intends to maintain much of that same process when SCP is implemented and is only recommending a few key enhancements at this time. They are:

- The SCP tag. An SCP tag is a representation of capacity that is being submitted to the ISO in compliance with an RA Obligation. In many cases it will be the result of negotiations between a buyer and seller of capacity or it may be an identifier of the capacity committed by an LSE that is using their own generation to fulfill their RA Requirement. In either case the fundamental idea is that this product is "standard". It is identified by a resource ID, amount of Net Qualifying Capacity (NQC) MWs and the length of time that the tag is valid.
- Implementation of an availability standard. If a resource receives payments for providing RA capacity, there is an expectation that the resource will be available to the ISO, i.e. it is not on an outage. Under SCP, resource availability will be measured utilizing a single availability target based on the historic performance of the RA resource fleet during the peak hours of the previous year.

[1] *Market Initiatives Roadmap Process, Final Report on Ranking of High Priority Market Initiatives 7/7/2008* http://caiso.com/1ff9/1ff9aee434530.pdf

- Implementation of performance incentives. The SCP should include a mechanism to provide an incentive for each resource to meet the target availability standard. The ISO envisions that a failure to perform to the availability standard would result in a financial penalty and exceeding the target standard will enable a bonus payment.

The ISO is requesting that stakeholders submit their comments on this updated straw proposal to SCPM@caiso.com by December 18, 2008. There will be a MSC/stakeholder meeting held on December 11, 2008 at the CAISO to discuss the updated straw proposal. The final draft proposal will be published on December 23rd.

3 INTRODUCTION

The implementation of a Standard Capacity Product (SCP) is a step forward in streamlining California's Resource Adequacy (RA) program. The RA program was implemented to ensure that adequate resources were available to serve load. As the RA program evolved over the years, participants identified a need to develop a standardized capacity product to facilitate the selling, buying and trading of capacity to meet RA requirements. Stakeholders have affirmed to the ISO that their ability to efficiently transact RA contracts is hindered by the current method of negotiating agreements between parties without a standard product definition for trade. The need for resolution was highlighted during the ISO's Market Initiatives Roadmap process where the Standard RA Capacity Product was ranked highest priority out of a list of over 70 initiatives.[2] Stakeholders have expressed their desire to have this product implemented in the ISO Tariff as soon as possible so that it may be used as the basis for capacity contracting during 2009 for the 2010 delivery year. As a result, earlier this year, the ISO began the stakeholder process for designing the SCP.

In parallel, the California Public Utilities Commission (CPUC) is also conducting proceedings to further the development of California's Resource Adequacy Program. Currently the CPUC is engaged in Phase 2 of R.08-01-025[3], the "Order Instituting Rulemaking to Consider Annual Revisions to Local Procurement Obligations and Refinements to the Resource Adequacy Program." In its Scoping Memo, the CPUC references SCP as a topic for consideration and requests that:

> In conjunction with the CAISO Stakeholder processes, review the Calpine Proposal and any other proposals for a standardized resource adequacy contract and associated resource obligations.

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[2] *Market Initiatives Roadmap Process, Final Report on Ranking of High Priority Market Initiatives 7/7/2008* http://caiso.com/1ff9/1ff9aee434530.pdf

[3] *Order Instituting Rulemaking to Consider Annual Revisions to Local Procurement Obligations and Refinements to the Resource Adequacy Program*, Assigned Commissioner's Ruling and Scoping Memo, 9/15/2008 http://docs.cpuc.ca.gov/efile/RULC/90797.pdf

The Scoping Memo also includes Ancillary Services Must Offer Obligation (AS MOO) as a topic for discussion and the ISO proposal also incorporates this concept. The Scoping Memo states:

> The CAISO may present a proposal for incorporating an AS MOO into the RA program that includes specific reference to the AS products.

Clearly, the ISO, the CPUC and market participants are all seeking to accomplish the same goal – enhance the current RA program for the State of California. This straw proposal is intended to bring us closer to that objective.

4 IMPLEMENTING RESOURCE ADEQUACY WITH SCP

This section of the paper provides a summary of the current resource adequacy framework and shows the similarities to the new process using a Standard Capacity Product. It is based on the Business Practice Manual (BPM) for Reliability Requirements and Tariff Section 40 regarding Resource Adequacy. Figures 1 and 2 show the flow of each process.

4.1 CURRENT RESOURCE ADEQUACY FRAMEWORK

Each year the ISO's RA process begins with the publication of the Local Capacity Study and the Deliverability Study. The purpose of the Local Capacity Study is 'to determine the minimum capacity needed in each identified transmission constrained "load pocket" or Local Capacity Area to ensure reliable grid operations'.[4] The Deliverability study establishes the deliverability of generation in the ISO in the balancing area. It also establishes the total import capability for each import path allocated to each LSE. The information contained in these reports along with generator data is used to compile the annual Net Qualifying Capacity (NQC)Report which is a listing of the NQC of "all Participating Generators and other Generating Units that request inclusion"[5] for the next compliance year.

LSEs utilize the NQC report to identify resources which are available to contract to provide capacity to satisfy their RA requirement. Currently, there are no standard rules for these contracts and consequently the terms and conditions can vary among the contracts.

In the year ahead and month ahead timeframes, LSEs and Resources are required to provide information to the ISO demonstrating that the Resource Adequacy Requirements will be met for that period. LSEs submit Resource Adequacy Plans which identify specific resources that the LSE is relying on to satisfy its forecasted peak demand and reserve margin for the reporting period. SCs for the Resources are responsible for Supply Plans which are a verification and confirmation of the information contained in the LSEs Resource Adequacy Plan. It "establishes a formal business commitment between the CAISO and

[4] 2010 Local Capacity Area Technical Study Manual pg 3
[5] BPM for Reliability Requirements pg 34

Resource Adequacy Resources by confirming the status of the resource as [a] Resource Adequacy Resource." [6]

The Resource Adequacy Plans and Supply Plans are cross-validated by the ISO. For CPUC jurisdictional entities, the CPUC ensures that LSEs are in compliance with their RA requirements through their RA Plans, while the ISO provides feedback on the physical generating units and system resources listed in their RA Plans to see if the SCs of those resources submitted a Supply Plan confirming that the RA capacity was sold in accordance. For Non-CPUC jurisdictional entities, the ISO reviews the RA Plans and supply plans in the same manner as the CPUC jurisdictional entities and sends any discrepancies to the Local Regulatory Authority (LRA).

SCs for RA resources are required to make their RA capacity available to the ISO in accordance with the tariff. In the Day-Ahead Market an RA resource must submit economic bids or self schedules for their RA capacity in IFM and RUC. There are certain exceptions to this rule including Extremely Long Start Resources and Use Limited Resources (as described below).

RA resources that were committed in the IFM or RUC must remain available through Real-Time. Short Start Units and Dynamic System Resources that don't make their units available in the Day-Ahead Market, must submit Economic Bids or Self-Schedules into the Real-Time Market.

Extremely Long Start Resources

Extremely Long Start (ELS) Resources are those resources that are flagged in the master file and have a start-up time that is greater than18 hours. ELS resources can also be system resources that have contractual limitations that required the energy to be committed prior to the publishing of the Day-Ahead Market results. For these units a special Extremely Long Start Commitment process is used. This process is described in Section 6.8 of the BPM for Market Operations.

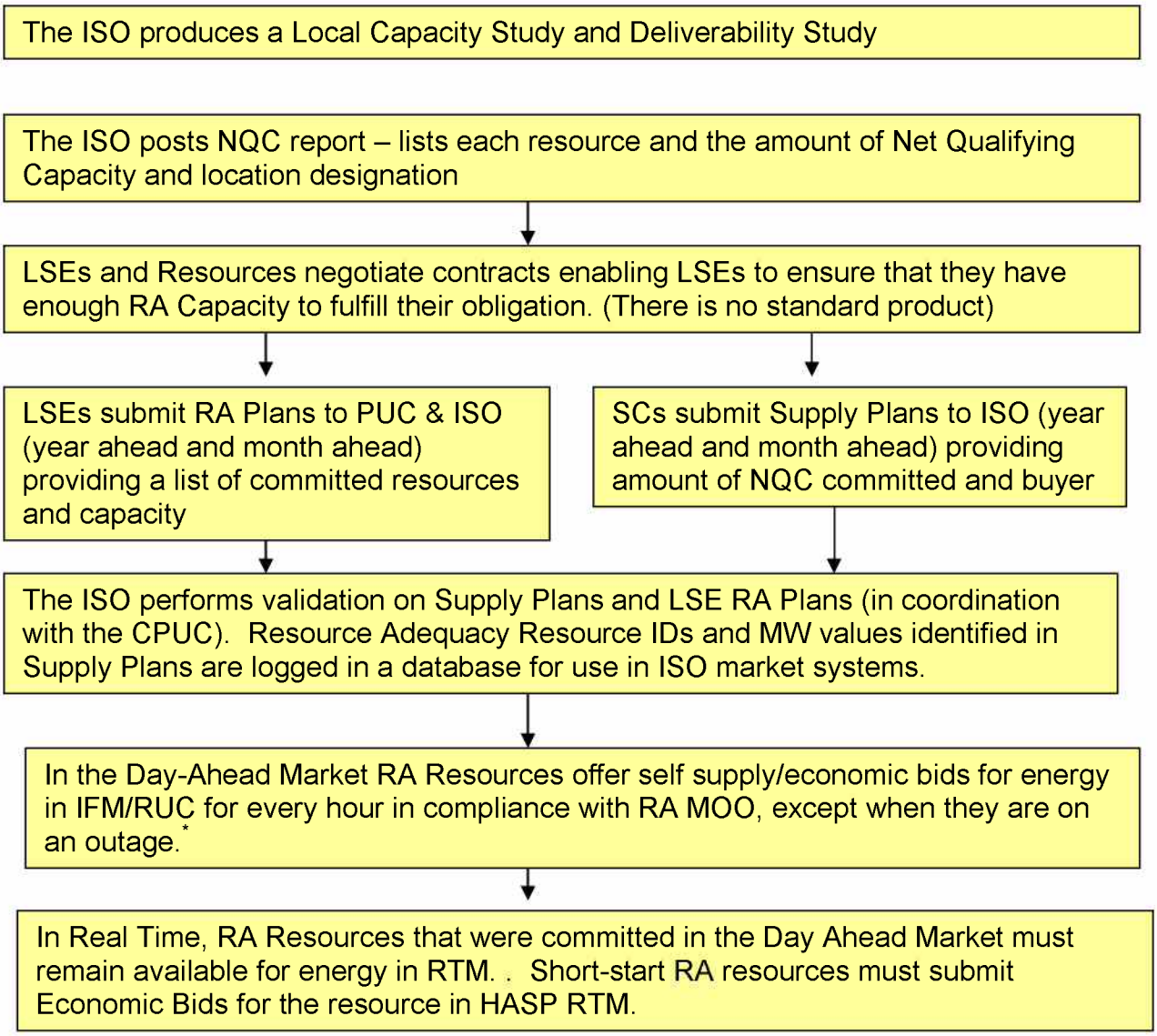
Use Limited Resources

Resources that would like to be considered Use-Limited Resources must submit an application requesting such designation, except for hydroelectric resources. BPM Section 6.1.3.2 and Tariff Section 40.6.4.2 explain that the SC for Use-Limited Resources submits an annual use plan and updates it with a monthly use plan. The only exception is hydro which can be updated intra-monthly as necessary. BPM Section 6.1.3.3, Tariff Section 40.6.4.3.1 and 40.6.4.3.2 explain that Non-Hydro and dispatchable resources are required to bid or self supply in the IFM or RUC whenever they are capable of operating in accordance with their operating criteria. These resources also provide a daily energy limit as part of their IFM bid. Hydro resources, pumping load and non-dispatchable resources must submit self schedules or bids in the IFM for their expected energy deliveries

[6] Id. At 22

and can revise bids or provide additional bids in HASP. No RUC commitment is required, but Use-Limited Resources should offer into RUC if available.

Figure1 – Current ISO RA Process under MRTU



Notes:
* The rules for Use-Limited Resources and Extremely Long Start Resources differ somewhat from the general explanation provided in this graphic.

4.2 PROPOSED RESOURCE ADEQUACY FRAMEWORK WITH A STANDARD CAPACITY PRODUCT

4.2.1 Stakeholder Comments

In their comments there was general (but not total) consensus on some issues regarding the changes to the RA framework under SCP:

- The current RA process should be changed as little as possible.
- The LSEs responsibility ends with the submission of their SCP tags

There were other important points that individual stakeholders provided in their comments and these were also considered in developing this straw proposal.

4.2.2 SCP Process

The proposed process that includes Standard RA Capacity Product tags, closely tracks with the current process. Some features of the current RA program are not changing and will remain as they are described in the BPM for Reliability Requirements and the tariff. This includes rules such as those for determining NQC, rules for new capacity and capacity exiting the market. Certain elements have been updated including the use of tags, availability standards and performance penalties.

Like the current process, the first step is to produce the Local Capacity Study, the Deliverability Study and the NQC report. LSEs utilize the NQC report to identify resources which are available to contract to provide capacity to satisfy their RA requirement.

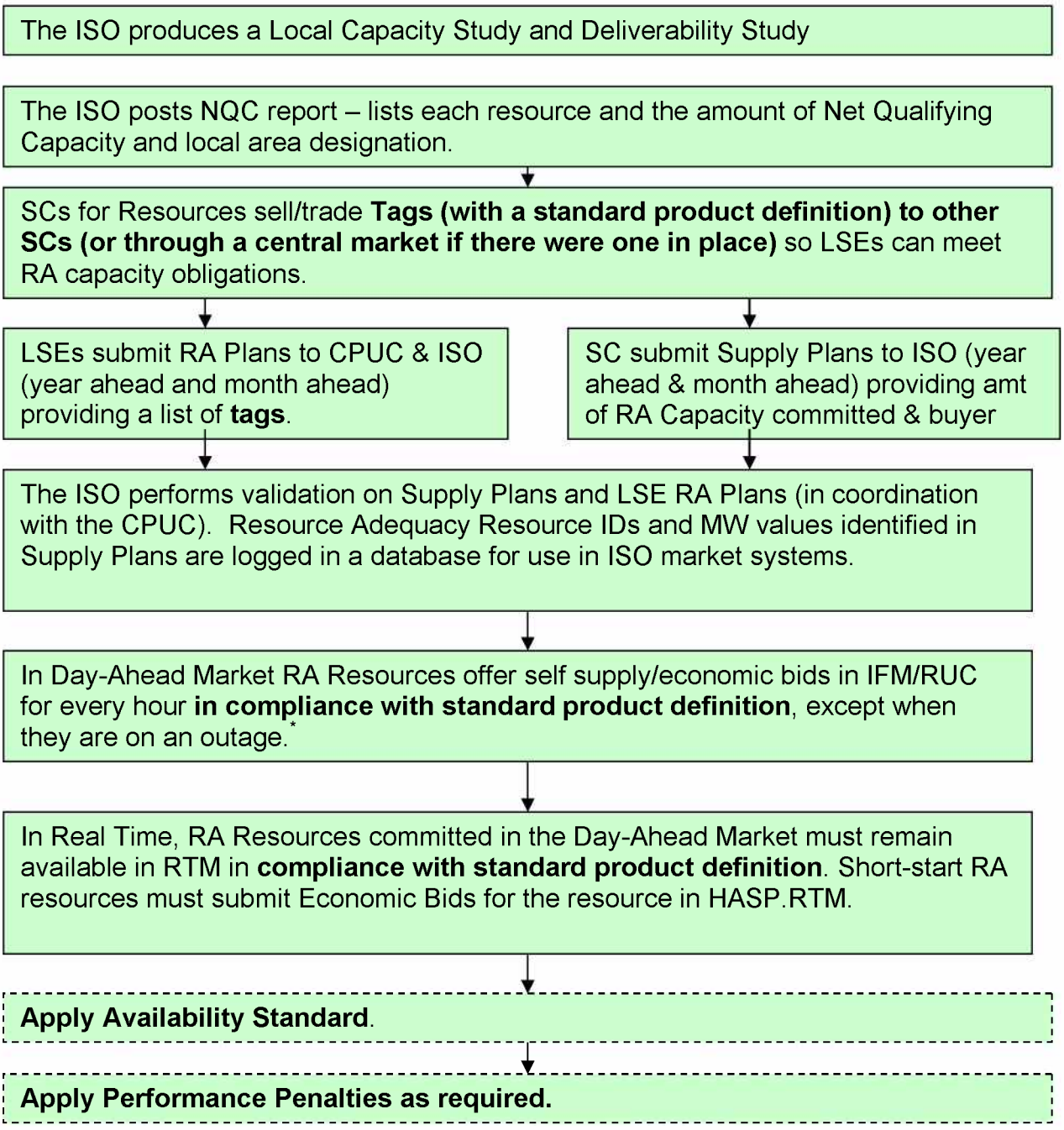
LSEs will submit a list of the tags they procure to the ISO and CPUC or their Local Regulatory Authority (LRA) in compliance with their RA requirements. These tags, which contain much of the same information listed in today's RA Plans, are supported by a set of standard rules that reside in the tariff rather than individual contracts. The SC for the RA resources will submit Supply Plans listing the tags that they have sold. The quantity of tags will be based on the amount of MWs a resource has sold to each LSE. The quantity of tags for imports will be based on the current import capacity methodology that is currently in use today. The ISO will coordinate with the CPUC and LRAs on updating the required information templates.

The tag information provided to the ISO will identify the committed RA capacity that will be subject to the RA-MOO provisions. Each set of reports will be validated by the ISO and the amount of tags issues by each resource will be confirmed. Once the validation is complete, the responsibility for compliance with the availability standard and the performance incentives belongs to the SC for the resource, not the LSE.

There will be little change from today's day ahead and real time process however resources will be required offer all services for which they are certified (e.g. energy, ancillary services). Further information on the product definition is found in Section 5.

On an ongoing basis the ISO will track the performance of RA capacity relative to its obligations under the tariff for the duration of its delivery period, and will take appropriate actions depending on performance. New availability metrics will be in place for providing performance information. The SCP will also have performance incentives and penalties. These new features are described in Section 6 of this document.

Figure 2 – Proposed Resource Adequacy Process



Notes:
* New product definition includes an updated RA Must Offer Obligation for all services for which a resource is certified (energy and AS). Also includes rules related to units with an RA obligation less than their Pmin.

5 PRODUCT DEFINITION

5.1 STAKEHOLDER COMMENTS

After the SCP Issue paper was published on the ISO website, followed by a conference call, the ISO received numerous written comments from stakeholders regarding, among other things, the qualities of a standard capacity product tag. Although there were some trends in the opinions that could be identified, when examined closely there was quite a range of options. Even the most fundamental questions had stakeholders on both sides of the fence.

Most stakeholders agreed with the ISO that SCP should be required for all RA capacity. However a few, including CMUA and NCPA felt that SCP should be an optional tool to use for procuring capacity.

The concept of using tags to identify SCP capacity received a broad spectrum of opinions. Some, such as the AReM and CPUC suggested that tags create a false sense of uniformity that is unnecessary while JP Morgan Ventures, PG&E and CFCMA agreed with the ISO that the process should include the use of tags to facilitate trading.

The stakeholder comments template asked stakeholders to provide input on the required flavors of a tag. Many stakeholders suggested that tags need to be standard and based on NQC. Others suggested that the ISO differentiate tags by whether they represent locational or system capacity. Others offered that the ISO should further define the tags using the four categories defined by the CPUC's Maximum Cumulative Contribution (MCC).

The question on the comments template regarding the obligations of RA capacity and modification of RA MOO provided a wide range of responses. Some stakeholders felt that SCP should be based on the existing RA MOO and any changes should be addressed in a CPUC proceeding while others agreed that a resource should be required to offer all services for which it is certified, including energy and ancillary services.

Finally, some of the stakeholder comments reflected the special types of resources that provide capacity in our market and requested that we make sure to address their special characteristics. This included demand response resources, qualifying facilities, imports, use-limited resources, MSS arrangements and LD contracts.

5.2 PRODUCT DEFINITION

As described in Section 4.1, LSEs have an obligation to demonstrate that they have procured enough capacity to cover their resource adequacy requirements in the RA Plans that they submit to their LRA and the ISO. In order to do this, LSEs

contract with resources for a commitment that they will be available for a certain quantity of MWs for an agreed upon period. The committed capacity is subject to the RA Must Offer Obligation as specified by the ISO tariff. The product definition of the SCP incorporates all of these elements.

The SCP is based on the following principles:

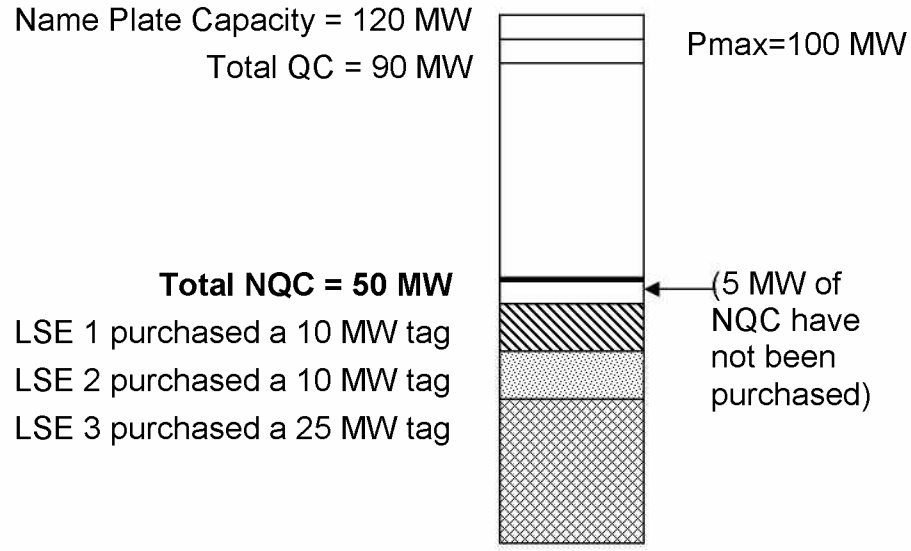
1. The purpose of the SCP is to meet the RA Requirement. The SCP is being developed to streamline and improve the current RA process for market participants and the ISO. The SCP enhances the existing procedures by providing a device that facilitates capacity trading and establishes performance rules in the tariff.

2. The SCP is fungible and can be easily traded. By its very definition a standard capacity product should have an enduring nature and represent a set of similar attributes. The SCP utilizes the Net Qualifying Capacity (NQC) that has been set forth in Section 40.4.1 of the tariff and the imports that are reported by LSEs and the SC representing resources to determine the amount of tags that a Resource is eligible to receive.

3. All RA capacity will be represented by tags. SCP is not optional or a discretionary tool for use by market participants in acquiring and selling RA capacity. A report, like today's NQC report, will be produced by the ISO providing a listing of all available tags. Each LSE will be required to make a showing of all the tags representing the capacity that has been committed in order to meet their RA Obligations. It is also the means for the SCs for resources to account for of the capacity that they will be required to make available to meet the RA obligation.

4. A tag is equal to the total capacity sold as RA Capacity or submitted to obtain RA Compliance but no greater than a resource's NQC. In the example below the Acme Unit has a Name Plate Capacity of 120 MW with a Pmax of 100 MW. The LRA determines that the QC for this unit is 90 MW and the ISO's further testing determines that the NQC for the unit is 50 MW. The graphic shows that three LSEs purchased RA capacity from Acme and each receives tags based on the amount of purchased capacity. Note that this unit has NQC that was not purchased and still has 5 MW which are unused and could be sold as a tag or tags.

Example 1 – Acme Resource (acme_2_unit)



5. Each tag will be identified by a three types of attributes. The SCP tag needs to be simple yet unique. The three elements that are key for identify the capacity that is traded are convention that identifies the offering resource, the number of MW that are being offered and the timeframe for the transaction. The Resource ID, quantity of NQC MWs and beginning and ending date are the pieces of information that define these attributes. First, the Resource ID identifies the resource that is supplying the capacity as well as the Local Capacity Area (LCA) where it is located. The quantity of NQC MWs defines the amount of capacity that is being traded and registered with the LRA and the ISO as RA capacity. Finally a start and end date applies an RA-MOO compliance period for the tag. All of these attributes ensure that performance metrics (and incentives/penalties) are being applied appropriately. Any attempt to further define the capacity will increase the complexity of the product. In fact the attributes that have been identified are the same data that is collected in the Supply Plans that are used today.

6. The duration of a tag extends no longer current compliance period. Buyers and sellers of RA capacity will agree on an amount of NQC that will be provided and the duration of that agreement. Although a bilateral agreement for capacity could be multi year, the availability of SCP tags will need to be reassessed against the NQC list for the coming year to verify that the tag information is still valid and the supplier has sufficient NQC to meet the next year of its contract. Once the verification has been completed, the tags will be reassigned for the coming year.

7. Tag Reporting for RA procurement will occur monthly. Each month LSE's will report the tags that they have procured and SCs will report the tags of

resources that have been committed. Performance standards will be measured based on the information that has been reported monthly. In order to provide more granularity (intra-month trades) a resource registry would be required due to the complexity in tracking resource obligations.

8. RA MOO allows the ISO to optimize the use all the capabilities of a Resource. An RA Resource must offer all their energy and ancillary services (for the services for which they are certified) into the DA market and real-time for tags that have been purchased by an LSE for their RA showing (with the exceptions described below). There are two key reasons why this enhancement is being applied. First, upon MRTU start up the FERC MOO will no longer apply and the pool of resources that must offer into the market will be limited to RA resources. Second, in the IFM the ISO optimizes energy and ancillary services to meet 100 percent of its forecast requirement and there will need to be enough bids to perform this optimization. This enhancement helps ensure supply sufficiency and market liquidity.

   There has been considerable discussion regarding the AS MOO in the ISO's reserve scarcity pricing stakeholder process. In the final proposal for the reserve scarcity pricing design posted on ISO website on July 15, 2008, the following revisions were proposed:

   1) All RA resources must submit AS bids for 100% of their AS certified RA capacity into the DAM, even if the RA capacity has been self-scheduled for energy. Otherwise, a zero ($0/MW) bid will be inserted;
   2) All RA resources with AS certified capacity, with the exceptions as discussed below, will always be considered for energy and AS in the DAM IFM energy and AS co-optimization.
   3) The CAISO will honor RA capacity energy self-schedules unless it is unable to procure 100% of its AS requirements in the DAM. In such case, the CAISO would curtail the energy self-schedule, or portion thereof, to allow certified AS capacity to be used for AS.
   4) Due to various restrictions of operating conditions, hydro RA resources should submit AS bids, together with their energy bids, in the day-ahead market for all their available AS capacity based on the expected available energy.[7] Hydro RA units submitting energy self-schedules will not be required to offer AS in the DAM.
   5) Non-Dispatchable Use Limited RA Resources will be exempted from the DAM AS must-offer requirement.

   Currently in the Day-Ahead Market SCs must make all RA capacity available by self-scheduling or submitting economic bids unless it is on an

[7] It is consistent with the MRTU Tariff Section 40.6.4.3.2.

outage, except for capacity from Use Limited Resources. The procedures for Use-Limited Resources are described in Section 4.1 of this paper. SCs for RA Resources that submit economic bids (instead of Self-Schedules) are subject to ISO optimization for that capacity in the Day Ahead Market. According to the BPM for Reliability Requirements, if the SC for the RA Resource submits a bid for Ancillary Service(s), the Energy Bid associated with the RA Resource and the bid for AS will be optimized to determine if Energy should be scheduled or AS should be awarded. RA Capacity that is committed in the IFM or RUC must remain available throughout real-time. RA Capacity from designated Short Start Units must be bid or self scheduled in the HASP or RTM subject to any limitations for Use-Limited resources. RA Capacity from System Resources is not required to be offered into the RTM if it's not scheduled or committed in the DAM.

9. A tag is bound by the availability standard and performance incentives in the tariff. Sections 6 of this proposal describe this process.

Demand Response (DR) as a Capacity Resource
In the current RA paradigm, Demand Response resources are taken off the top of an LSE's resource adequacy requirement. Said another way, an LSE's RA obligation is reduced by DR resources. In the future, in accordance with DR activities currently in progress to provide dispatchable DR functionality for energy and ancillary services, DR resources could be assigned SCP tags to fulfill an LSE's RA requirement in the same manner as other RA resources. Under the SCP paradigm, such capacity would be assigned tags and be required to be reported monthly in RA plans and Supply Plans.

Metered Subsystems (MSS)
The SCP product definition and availability standard and incentives cover Metered Subsystems the same as any other type of LSE. MSS LSEs and Resources will provide a resource ID, MW amount and timeframe for all RA capacity, and would therefore be subject to the availability standard and incentives on the same basis as the RA capacity of non-MSS LSEs. With regard to Load Following MSS the current BPM Section 6.3 and Tariff Section 40.2.4 explain that Load Following MSS must provide an annual RA Plan but no monthly submissions are required. Section 40.3 subjects Load Following MSS to Local Capacity Area RA requirements, whereas Section 40.6 of the tariff exempts Load Following MSS from the RA must offer requirement. The ISO expects therefore that the SCP availability standard and incentives would apply only to the Local Capacity Area RA capacity submitted by a Load Following MSS.

Qualifying Facilities (QFs)
The SCP definition covers QF Resources as well. The three attributes required for a tag are available for use. To the extent that a QF resource is unable to be considered for RA-MOO, the rules for AS-MOO would not apply although the ISO

encourages all resources to bid their all of their A/S capacity in the market if they are able.

RA less than Pmin

Section 40.4.3 of the MRTU tariff describes the general qualifications for supplying NQC. One situation that had not been contemplated when writing this section was when a resource is contracted for an RA amount that is less than the Pmin of the committed unit. In an upcoming MRTU 205 filing with FERC, the ISO remedies this omission by adding language that "For a resource with contractual Resource Adequacy capacity less than Pmin be available to the CAISO for commitment or dispatch at Pmin subject to tariff provisions for Bid Cost Recovery so that the resource's Resource Adequacy capacity can be utilized as required by this CAISO Tariff."

6 AVAILABILITY STANDARD & PERFORMANCE INCENTIVES

There will be one availability standard, an annual target availability, that will be applicable to all resources during the upcoming compliance year based on the historic performance of the RA resource fleet during the peak hours during the previous 12-month period. The target availability will be established well before the applicable compliance year and will be updated each year (ISO will work with stakeholders to decide which 12-months to include in determining the target so that the target value is available well before the start of the compliance year – time may need to be factored in so that the target value is known during procurement activities for the subsequent compliance year). The CAISO will use data from its SLIC system to calculate the target availability in the first year of the SCP. In subsequent years the CAISO will use both data from its SLIC system and the outage data that is submitted by resources that are less than 10 MW in size to calculate the annual target availability.

Availability will be determined as follows: a resource is considered 100% available if it has no Forced Outage hours during the defined peak hours in a month. Any Forced Outage during peak hours during a month will decrease the availability value. Approved Planned Outage hours taken in a month will not decrease the availability value in a month.

An assessment of each resource's performance will be done monthly using the availability criteria described in the paragraph above to determine availability, i.e., Forced Outages during peak hours count against the resource's availability during peak hours.

The assessment will look at performance during RA peak hours in the month. The CAISO proposes to define the RA peak hours based on the operating periods when high demand conditions are likely to occur and therefore resource performance is most critical to maintaining system reliability. The proposed RA peak-hours include the hour ending 14:00 Pacific Daylight Saving Time ("PDT") through the hour ending 18:00 PDT on any day during the calendar months of

April through October that is not a Saturday, Sunday, or a federal holiday, and the hour ending 17:00 PDT through the hour ending 21:00 PDT on any day during the calendar months of January through March, and November and December that is not a Saturday, Sunday, or a federal holiday. These five hours of each day have been chosen because, based on actual data, the CAISO has found that the peak load hour always falls within that five-hour range. These hours are when the CAISO has typically experienced the coincident peak demand during each of the months. By assessing performance during the hours when the system is most likely to be capacity-constrained, this approach provides appropriate incentives for resources to take actions to improve peak-period availability.

The CAISO will use data from its SLIC system for outage data. In addition, RA resources that are less than 10 MW in size will submit outage data to the CAISO each month. This data will not need to be reported through the SLIC system. The outage data will be equivalent to the data submitted by resources that are greater than 10 MW so that comparable outage data is available for all resources.

The assessment of performance each month will be done with SLIC data and the data submitted separately by resources that are less than 10 MW in size.

A financial penalty will be applied each month to the SCs of resources that do not meet the target availability, as part of the first feasible settlement statement after the conclusion of the applicable month. A potential bonus payment will be made each month (to the extent that penalty funds are available) to resources that exceed the target availability. The payment will be made as part of the first feasible settlement statement after the ISO has received payment on the assessed penalties. Because the bonus payment program is to be self-financing, the CAISO will wait until it has received the penalty funds before paying out those funds to eligible resources (to the extent such funds are available).

A dead band of 5% will be used around the target availability (2.5% on either side of the target availability value) to limit the amount of penalty and bonus payment assessments. The dead band provides for penalties and bonus payments to only be assessed when resources perform significantly better or worse compared to the established availability standard.

The "price" value in the penalty formula will be the replacement cost of capacity, which is the $41/kW-year in ICPM tariff.

The penalty formula will work as shown below. It will be a monthly charge (and will recognize the dead band).

- For resources with availability of 50% and up to the target availability percent: (% of hours of unavailability) x (RA capacity) x ($3.33/kW-month)

- For resources with availability less than 50%: (RA capacity) x ($3.33/kW-month)

The funds collected from the application of penalty charges will be allocated to resources that exceed the dead band for target availability. The funds will be distributed by calculating a monthly bonus rate and applying it to the amount of capacity that exceeded dead band above the target availability standard (i.e., a 90% target and with 5% dead band will provide a potential bonus to those resources that exceeded a 92.5% availability rate). The monthly bonus rate will be determined by dividing the total monthly penalty dollars by the sum of MW of all resources that exceeded the target plus dead band. Resource bonus payments would equal the monthly bonus rate times the MW availability above the target plus dead band level and calculated as shown below.

- Monthly Bonus Rate = Total Penalty $/∑((availability – target)*MW)
- Resource Bonus Payment = (availability – target)*MW*Monthly Bonus Rate

For example, a 500 MW resource that was available for 100% of the time during a particular month would receive a bonus payment = Monthly Bonus Rate *(100%-92.5%)*500.

Regarding non-resource-specific imports and liquidated damages (LD) contracts that are not tied to a specific generating resource the ISO faces a dilemma, and therefore has not yet determined the appropriate approach and requests suggestions from stakeholders. The root of the dilemma is that such RA capacity is not subject to outage reporting requirements and does not have associated outage data upon which to measure availability and apply the financial incentives. At the same time, the quantity of such RA capacity is significant enough that the ISO is reluctant to simply waive the availability standard and financial incentives for this capacity. The ISO would therefore like to determine a way to measure availability for this capacity in a manner that is meaningful and reasonable given the absence of an associated physical supply resource, and that will provide appropriate financial incentives to maximize availability.

One possible approach the ISO is considering is to measure availability based on the offer of the capacity into the ISO markets. Under MRTU RA imports must offer into the Day-Ahead market the full amount of their RA capacity and will have to establish a Resource ID to be able to conduct these transactions. Since imports have to schedule with a Resource ID under MRTU, the CAISO could track the extent to which each RA import resource offers into the Day-Ahead market the full amount of its RA capacity. Thus non-resource-specific imports could be held to the annual target availability value and the CAISO could apply penalties and allow these resources to be eligible for potential bonus payments. The same approach could be applied to LD contracts that are not tied to a specific generating resource.

For a demand response resource that has a Resource ID (Participating Load), these resources could be held to the annual target availability value and the ISO could apply penalties and allow these resources to be eligible for potential bonus payments. Emergency triggered demand response resources would be from exempt from the availability standard and performance incentives.

7 UNIT SUBSTITUTION

The CAISO is considering adopting a provision to allow a supplier of RA capacity that is tied to a specific generating resource to be able to substitute an alternative resource in the event the RA resource is on an outage, and by means of such substitution to avoid counting the outage of the RA resource toward the monthly availability assessment. The CAISO believes that such a provision would offer reliability benefits by encouraging the availability of otherwise non-RA capacity when RA resource outages occur, provided the substitute is comparable to the original RA resource with respect to, for example, its location on the grid to meet local area operating needs. In order to utilize the substitution provision, the supplier would need to submit the replacement unit to a pre-approval process as a substitute for a specific RA resource so that the ISO would not need to assess the acceptability of the substitute in real time. In addition, the CAISO is considering to allow such substitution only in the day-ahead time frame. As such the supplier would need to submit a request for substitution before the close of the IFM. The ISO would have the discretion of approving this request. Details of this process are still being developed.

8 CREDIT REQUIREMENTS

8.1 STAKEHOLDER COMMENTS

Most stakeholders who commented did not see the need for credit requirements. A few agreed that credit requirements would be necessary if financial penalties were assessed and suggested they be netted with the SCs entire portfolio.

8.2 CREDIT REQUIREMENTS PROPOSAL

The SCP team has given further consideration of the need for credit requirements in light of the change to the performance incentives in the updated straw proposal. Given that the financial penalties that could be imposed on a resource would not be used to fund procurement of backstop capacity, there appears to be little need for a specific credit requirement.

9 TRANSITION ISSUES

9.1 STAKEHOLDER COMMENTS

Various stakeholders submitted comments regarding the grandfathering topic in the issue paper relating their concerns about the need for a transition period while others did not see this as a requirement.

9.2 TRANSITION PROPOSAL

In our recent stakeholder forums, a number of stakeholders have expressed a desire to allow existing contracts a transition period before moving to SCP. In order for the ISO to evaluate the issue and develop the appropriate response, more analysis is needed. Since the ISO has no part in the existing bilateral RA contracts of our stakeholders, the ISO needs data to evaluate the transition requirements. The next step in the transition proposal process will be to gather information from stakeholders about these contracts so that we can understand the magnitude of the matter. In the coming days, the ISO will be sending a market notice and template requesting information related to the existing capacity contracts. Examples of the information that will be requested (not a complete listing):

- What is the duration of the contracts? When do they end?
- What types of contracts are of concern? LD contracts, tolling arrangements, PPAs, QFs, others?
- Do these contracts have a must offer component?

Once the ISO gathers and evaluates the data, we will work with the internal team to determine the impact to our systems and business processes in implementing some form of transition process.

10 OTHER ISSUES

The initial SCP Issue paper described some issues that have not been addressed elsewhere in this paper. Those topics are identified here:

- Automated RA Registry – Although this feature may enhance and broaden the current SCP proposal, it appears that the initial offering of SCP can work without this implementing this.
- Bulletin Board – this feature can wait or be provided by a third party
- Development of a Confirmation letter can be handled by stakeholders and is not require development by the ISO.
- Whether SCP should start upon implementation in 2009 or should it wait until the annual showing for 2010. Further review has indicated that, like a transition plan and grandfathering, beginning an optional implementation scheme in 2009 introduces complexity to starting up the SCP. Assuming SCP is approved by FERC in a timely manner, it will be implemented with the annual show for 2010 (occurring in October 2009).

11 NEXT STEPS

11.1 STAKEHOLDER COMMENTS REGARDING SCHEDULING

Currently the market design process is on track to file the Standard Capacity Product tariff changes with FERC in February 2009. While some stakeholders, including AReM feel that this schedule is critical to meet in order to enable parties to use the product for the 2010 Annual RA showing, others have expressed concern that the ISO should ensure that the product is thoroughly thought through and developed. Their sentiment is that they would rather get the filing done right the first time, rather than get it done quickly only to revisit and

correct the product later. The CPUC and CFCMA, among others, have expressed that it is critical that the product is well designed and they would rather have it done "right than fast".

In the last round of comments related to expanding the stakeholder process for this project there were several suggestion to augment the current process.

- The Joint Parties (AReM, Constellation, Direct Energy LLC, J. Aron & Company) suggest that two additional stakeholder meetings be held after this straw proposal is published would be beneficial to resolve contentious issues. They suggest adding a day to each of the stakeholder meetings that has already been established, making each engagement a two day event. It is critical to maintain February tariff filing target.
- CFCMA suggested that at least 4 additional meeting are required and are willing to delay the filing to achieve substantial stakeholder consensus.
- PG&E feels that the SCP project should be very limited in scope to maintain the current timeline. If the scope is more comprehensive the ISO should "take the time to get the details right."
- JP Morgan approach included an issue-staggered biweekly process so that issues can be resolved in parallel
- The CPUC, CAC/EPUC, CDWR/SWP, provided comments subsequent to the October 20 conference call regarding process providing valuable insights, but not directly related to stakeholder process or timing.

11.2 PROPOSED SCHEDULE

Currently the ISO has scheduled an MSC/Stakeholder meeting on December 11 to review the Updated Straw proposal. This is the proposed schedule:

December 4 – Publish Updated Straw Proposal
December 11 – MSC/Stakeholder meeting
December 18 – Written comments due to SCPM@caiso.com
December 23 – Publish Final Draft Proposal
January 26, 27 – Board of Governors Decision
February – File Tariff language.