

Memorandum

To: ISO Board of Governors
From: Jacquie DeRosa, Senior Market and Product Economist
Date: March 1, 2007
Re: **Update on MRTU Compliance Filing: Proposal for Future Procurement of Ancillary Services**

This memorandum is for information only and does not require Board action.

EXECUTIVE SUMMARY

The September 21 MRTU Order directs the California Independent System Operator Corporation ("CAISO") to file tariff language setting forth the criteria for defining Ancillary Services ("AS") on a more granular level, and to describe the circumstances under which it will become necessary to define more granular regions. The September 21 MRTU Order also requires the CAISO to include procedures for the use of Reliability Must Run ("RMR") resources and market resources in the tariff, and to describe the granularity method that will be followed for allocating ancillary services costs.

The CAISO has developed a conceptual proposal for defining more granular AS zones that involves the possible creation of AS sub-regions that are geographically consistent with the areas established through the Local Capacity Reliability (LCR) studies. The AS sub-regions would be based on the current WECC and CAISO AS reliability criteria, which is less stringent than the criteria used for determining the LCR areas. Under this proposal, not all LCR areas would be considered AS sub-regions. This proposal builds upon the market design that will be in place at the start of MRTU, and would be considered for future implementation.

On February 16, 2007, Management posted an Issue Paper¹ describing the proposal and is waiting for stakeholder feedback. On February 23, 2007, the CAISO will hold a stakeholder conference call to review the proposal and gather stakeholder input. Management will make a compliance filing with the Federal Energy Regulatory Commission ("FERC") on March 20, 2007.

EXPLANATION OF FERC DIRECTIVES REGARDING ANCILLARY SERVICES

The MRTU tariff states that the CAISO shall determine the quantity and location of the AS which is required using AS Regions. At the start of MRTU, the AS regions, which are all based on the zones that currently exist, include (1) the expanded system region, (2) the system region, and, (3) eight sub-regions. The eight additional sub-regions include two sub-regions for each existing zone, e.g. South of Path 15, which includes only generation resources located within the zone, and an Expanded South of Path 15 sub-

¹ The proposal can be found at the following link: <http://www.caiso.com/1b87/1b8787dd55a50.pdf>.

region, which includes Intertie resources. Accordingly, there are ten regions in total². The MRTU tariff also states that for each of the AS, the CAISO shall determine the required location dispersion in accordance with the applicable reliability requirements.

In comments to FERC, many stakeholders raised concerns about the CAISO's approach for defining the AS regions. Examples of stakeholder comments include: (1) there must be a limit established on the CAISO's discretion in the establishment of sub-regions; (2) the CAISO must ensure that associated energy can be deployed under contingency conditions, (3) regions and sub-regions should be workably competitive prior to allowing market based AS procurement, and (4) market power mitigation needs to be considered to avoid economic and physical withholding, and/or uneconomic production.

FERC ruled in the September 21 MRTU Order that the CAISO is to file tariff language setting forth the criteria for defining AS on a more granular level, and to describe the circumstances under which it will become necessary to define more granular regions. The September 21 MRTU Order also requires the CAISO to include procedures for the use of Reliability Must Run ("RMR") resources and market resources in the tariff, and to describe the granularity method that will be followed for allocating ancillary services costs. The compliance filing is due within 180 days from the date of the September 21 MRTU Order, or by March 20, 2007.

PROPOSAL FOR CREATING MORE GRANULAR ANCILLARY SERVICES REGIONS

A CAISO cross-functional team evaluated possible solutions for expounding upon the criteria for defining Ancillary Services ("AS") on a more granular level and the circumstances when it will be necessary to define more granular regions. After extensive research, the team formulated a proposal that can build upon the MRTU market design, and be integrated with analyses of the CAISO controlled grid -- including the LCR studies, deliverability studies, as well as the power flow studies that are performed on a ongoing basis to determine branch flow limits.

Under the CAISO proposal, the CAISO would move toward the creation of additional AS sub-regions that are consistent with the LCR areas. The criteria for defining the AS sub-regions would be based on less stringent requirements that are established by the WECC than are used to determine the LCR areas. Under the proposal, not all LCR areas would be considered AS sub-regions. The CAISO would create AS sub-regions by evaluating whether the system can withstand the first contingency³.

The proposal envisions the creation of AS sub-regions with upper and lower bounds. An upper bound would be needed for a generation/supply pocket that is designated as a new AS region.⁴ A lower bound would generally be needed for a transmission constrained load pocket that is designated as a new AS region. Under the proposal, the AS sub-regions could be activated (or established) and deactivated.

To determine the Operating Reserve Requirement for the overall system and AS sub-regions, at two days before the Operating Day, the CAISO would determine the AS requirement for the CAISO Control Area, as a whole, and would also determine any AS requirement for any defined region or sub-region for each hour of the Operating Day. Details for calculating the requirement for the new AS sub-region would be established with stakeholder input during the post-Release 1 MRTU stakeholder discussions, and would include a review of a slow (30-minute) reserve to restore the post contingency system to a vigilant state ready for the next contingency.

Due to the high concentration of ownership of resources within LCR areas, it is likely that additional market power mitigation measures might be needed if operating resources are procured on more granular level than the pre-MRTU congestion zones. After technical details have been developed on how any operating reserve requirements might be specified for new sub-regions and

² There are only three disjoint AS regions within the CAISO Control Area corresponding to the existing zones; the additional regions result from different combinations of these regions with each other and with the corresponding tie scheduling points.

³ The WECC MORC requires that a control area must be able to withstand the first contingency and probable double contingency and must be able to replenish any depleted Operating Reserves following a contingency within 60 minutes.

⁴ For example, if it turns out that more AS is being procured from a generation pocket than can be delivered if called upon due to outbound transmission limits, the generation pocket would be defined as a new AS sub-region with an upper bound. Similarly, if it turns out that more than 25% of the reserve requirements are procured from a single tie, that tie scheduling point may be defined as an AS sub-region with an upper bound.

how the CAISO might meet any such requirements through existing or new market products, the need for additional market power mitigation measures can be assessed, and appropriate mitigation measures may be developed and discussed.

USE OF RMR FOR ANCILLARY SERVICES

The September 21 MRTU Order also asked for an explanation of the process for the use of RMR and market procurement for AS. This stems from a concern that "use of RMR can mask signals for ancillary services." The MRTU Tariff and RMR Contract already provide a clear explanation of the procedure for issuing RMR Dispatch Notices to RMR Units under the RMR Contract. The CAISO can only dispatch RMR Units to provide AS under specific circumstances that recognize that the market should be relied upon to provide AS when at all possible.

COST ALLOCATION

With regard to allocation of AS costs, the September 21 MRTU Order states that the CAISO should clearly describe the granularity method that will be followed for allocating AS costs. Under MRTU, the allocation of AS costs is based on AS responsibility of individual Scheduling Coordinators (considering AS self provision and trade and AS behind firm Energy imports to the extent usable by CAISO). A system-wide user rate is computed for each service across all regions (resources) and markets (Day-Ahead, HASP, and Real-time) for each hour. There is no notion of local AS cost pricing for AS cost allocation purposes, and Management interprets the September 21 MRTU Order to accept the system-wide AS cost allocation methodology.

NEXT STEPS

Management will continue to solicit stakeholder input on the proposal discussed above, and will make a compliance filing with the FERC on March 20, 2007, per the directives set forth in the September 21 MRTU Order.