



California ISO
Your Link to Power

Preliminary Results of High Level Prioritization of Market Enhancements

April 23, 2008

1. Introduction

The CAISO initiated the 5-Year Market Initiatives Roadmap stakeholder process in April, 2008 to determine the next set of market enhancements that will have high priority for the CAISO to address in 2008 and 2009.

On March 28th 2008, the CAISO published the revised 5 –Year Market Initiatives Roadmap to its website and requested stakeholders to submit written comments on the content and correctness of Roadmap. The CAISO then posted a second revision of the Roadmap on April 15th that reflected stakeholder comments and additional market enhancements submitted by stakeholders.

On April 18th stakeholders submitted written comments that reflected the three market enhancements they believe should have the highest priority for the CAISO to address and prioritized the ten existing FERC mandated market enhancements 1-10.

All documents pertaining to this effort are posted at the following link:

<http://www.caiso.com/1fb1/1fb1856366d60.html>

A formal ranking process was developed through a series of stakeholder meetings during 2006 and approved by the CAISO Board of Governors on March 1, 2007. The CAISO will use this ranking process using stakeholder input to determine what market enhancements have the highest priority.

The ranking process involves two steps:

1. High Level Prioritization

The CAISO will first conduct a high level assessment of proposed market initiatives on the Market Initiatives Roadmap by applying a simplified ranking process of three benefit and two feasibility criteria based on stakeholder input. In this iteration of the ranking process, each initiative will be graded “High”, “Medium” or “Low” based on the results of their criteria ranking. The high level benefit criteria are “Grid Reliability”, “Improving Market Efficiency”, and “Desired by Stakeholders” as shown in Figure A below. The high level feasibility criteria utilize two measures: “Market Participant Implementation Impact” and “CAISO Implementation Impact”.

2. Detailed Ranking

After determining the results of the high level prioritization the selected initiatives are ranked again using more detailed criteria based on stakeholder input. The criteria, described below, are divided into two general categories: benefit and feasibility. Each of these criteria has a weight associated with it, based on its relative importance. The weighting is a scale from 1 to 10 with 10 being the highest weight. For example, “Grid Reliability” is assigned a weight of 10 because it is a core function of the CAISO while “Process Improvement”, an important but not critical criterion, is ranked substantially lower at 5. Those proposed market initiatives that are ranked highest will be considered for the earliest implementation.

The CAISO Board Documents on the CAISO Market Initiatives Ranking Methodology are located on the CAISO website at the following link:

<http://www.caiso.com/1b94/1b94ded2511d0.html>

This paper describes the preliminary outcome of the high level prioritization process that the CAISO conducted on market enhancements contained in the 5-Year Market Initiatives Roadmap. These results should not be considered conclusive at this point, but only the first pass at defining which market enhancements the CAISO should consider a top priority in its annual planning process. These results will be discussed at the April 30th stakeholder meeting and the CAISO requests that stakeholder provide their written comments by on the high level prioritization results by May 7, 2008. In addition, anyone that would like to advocate that a particular market initiative receive a high ranking at the stakeholder meeting should notify Margaret Miller at mmiller@caiso.com so that accommodations in the agenda can be made.

2. Preliminary Results of High Level Prioritization

The CAISO applied the high level prioritization criteria in Figure A below to market enhancements contained in the Market Initiatives Roadmap to determine the list of market enhancements with the highest ranking. In this process, only market enhancements that are considered discretionary are ranked. FERC mandated market enhancements and projects that are underway are not included in the ranking process.¹

Figure A

CAISO High Level Prioritization Criteria						
#	Criteria	Strategic Objective	HIGH 10	MEDIUM 7	LOW 3	NONE 0
1	Benefit	Grid Reliability	Significant Improvement	Moderate Improvement	Minimal Improvement	No Improvement
2		Improving Overall Market Efficiency	Significant Improvement	Moderate Improvement	Minimal Improvement	No Improvement
3		Desired by Stakeholders	Universally Desired by Stakeholders	Desired by a majority of stakeholders	Desired by small subset of stakeholders	No Apparent Desire
4	Feasibility	Market Participant Implementation Impact (\$ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant Impact

¹ Long-term Resource Adequacy solutions such as a centralized capacity market were also not included in the ranking process as this issue is currently being addressed in the CPUC RA proceedings.

5		ISO Implementation (\$ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant Impact
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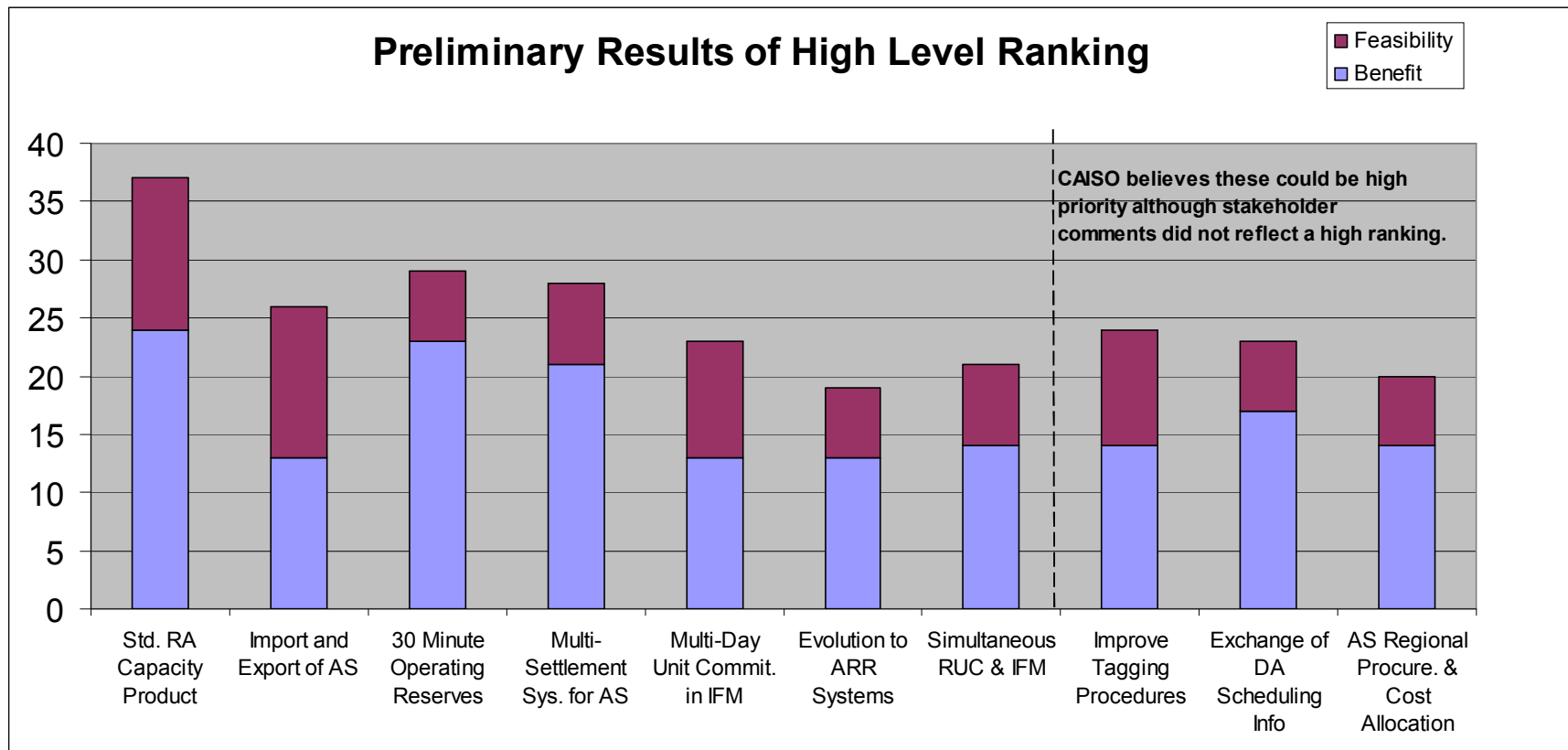
The bar chart shown in Figure B below represents the market enhancements that the CAISO ranked the highest when applying the high prioritization criteria to the market initiatives. The CAISO incorporated stakeholder comments when determining the “Desired by Stakeholders” benefit criteria. Market enhancements that did not receive any comments from stakeholders were scored as a zero in this area.

The market enhancements shown in the chart that have the largest area of the bar shaded in red represent market enhancements that are the most feasible to implement (i.e., lowest cost). A large portion of the bar shaded in blue represents a market enhancement that provides significant benefits to the market and/or desired by stakeholders.

Market enhancements displayed in the bar chart to the right of the dotted line represent market enhancements that the CAISO believed could be ranked high but that did not reflect a high priority in comments from stakeholders.

The detailed scores given to each market enhancement are detailed in Section 2.1 below.

Figure B



2.1 Detailed Results of High Level Ranking Process

Roadmap Section	Initiative Name	Category Rankings ²	Benefit	Implementation	Total Impact
2.2.2.1	Simultaneous Residual Unit Commitment (RUC & IFM)	(7,7,0) (7,0)	14	7	21
<i>RUC and IFM optimization would occur simultaneously rather than in the current MRTU design Residual Unit Commitment (RUC) is performed after completion of the IFM and does not impact Day-ahead Market Energy, Ancillary Services (AS), and Congestion/CRR pricing and settlement</i>					
2.2.2.6	Multi-Settlement System for Ancillary Services	(7,7,7) (7,0)	21	7	28
<i>This enhancement would allow for a full multi-settlement system for Ancillary Services that optimizes real-time reserves and settles deviations from day-ahead schedules at real-time prices</i>					
2.2.2.8	Multi-Day Unit Commitment in IFM	(3,7,3) (10,0)	13	10	23
<i>In MRTU Release 1, the forward looking time horizon in IFM is one day, taking into account the impact of prior commitment of units with very long start up times. This enhancement would extend commitment decisions in the IFM beyond a single day in order to create a commitment decision that is more efficient and better reflects the impact of startup-up cost for resources that have long start-up times</i>					
2.3.3	Import and Export of Ancillary Services	(3,7,3) (10,3)	13	13	26
<i>This item will consider ways to expand the ability to import and export reserves, and to clearly define the relationship between Energy schedules on interties and the associated ancillary service requirements</i>					
2.3.4	Improve Tagging Procedures and Functionality	(7,7,0) (3,7)	14	10	24
<i>This item will consider methods to better integrate and streamline the process of producing market schedules and tagging such schedules. By eliminating duplicate information that exists in market schedules and tags it may be possible to streamline</i>					

² Category Rankings are represented by the benefit and feasibility criteria as follows: (Grid Reliability, Market Efficiency, Desired by Stakeholders) (Market Participant Implementation Impact) (CAISO Implementation Impact)

the control area check-out process and eliminate market schedule and tagging inconsistencies that can have reliability impacts

2.3.5	Exchange of Day Ahead Scheduling Information	(10,7,0) (3,3)	17	6	23
<i>The CAISO would work with other control areas in the west to establish day-ahead exchange of scheduling information, to allow coordinated day-ahead congestion management and to reduce the magnitude of unscheduled loop flows in real time by capturing a major portion of such flows in the day-ahead process.</i>					
2.5.4	30 Minute Operating Reserves	(10,10,3) (3,3)	23	6	29
<i>During the stakeholder process of various Market Initiatives (CPUC Capacity Market Proceeding, Scarcity Pricing) stakeholders have raised the potential benefits of a new Ancillary Services Product to address 30 minute reliability contingencies. Currently, contingencies that could be covered by a 30 minute product are addressed using 10 minute ancillary services products which could result in the CAISO needing to procure Ancillary Services on a sub-regional basis in higher amounts than would otherwise be necessary to meet WECC requirements</i>					
3.2.7	Standard RA Capacity Product	(7,7,10) (10,3)	24	13	37
<i>RA suppliers' existing performance obligations would defined and governed by the CAISO tariff and the CAISO would assume responsibility for tracking and enforcing compliance of suppliers providing RA capacity</i>					
2.5.5	AS Regional Procurement & Cost Allocation	(7,7,0) (3,3)	14	6	20
<i>Establish minimum and maximum A/S procurement requirements in A/S Sub-Regions. Currently, the allocation of A/S costs is based on A/S responsibility of individual Scheduling Coordinators. 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</i>					
2.8.12	Transition to ARR (Auction Revenue Rights) System	(0,10,3) (3,3)	13	6	19
<i>Release all available CRRs through an auction process and allocate shares of the net auction revenues to those LSEs that would otherwise have been eligible for CRR allocation</i>					

3 FERC Mandated Market Enhancements

Stakeholders submitted comments on April 18th reflecting their desired priority of the ten FERC mandated enhancements that the CAISO is ordered to implement no later than three years after MRTU start up by prioritizing these enhancements in order 1-10.³ The table below reflects the results from stakeholder comments. The results of the ranking of the FERC mandated items will be used in planning the design and implementation of these initiatives over the 3 year release 2 time period. The CAISO will discuss the FERC mandated market enhancements in more detail with stakeholders at the meeting on April 30th.

Rank (1-10)	FERC Mandated Market Enhancement
1	Model Constraints of Combined Cycle Units
2	Sale of CRRs in the CRR Auction
3	Long-Term CRR Auction
4	Bid Cost Recovery for Units with Run Times that Exceed 24 Hours
5	Ancillary Services Substitution
6	Two Tier rather than single tier Real-Time Bid Cost Recovery
7	Multi Hour Block Constraint in RUC
8	Increase number of LAP Zones
9	Support Exports of Ancillary Services
10	Rebate of loss-over collection issues for Renewable Resources

³ 1 being the highest ranked item and 10 being the lowest ranked item.

4 Stakeholder Ranked High Priority Enhancements

The following market enhancements were described as high priority in stakeholder comments by two or more stakeholders. These are items that are not FERC mandated market enhancements and did not end up in the CAISO's preliminary results as ranked high through the high level prioritization process.

- Strengthening Market Power Provisions – 2.2.3.36
- Full Hour-Ahead Settlement Market – 2.2.3.4
- Dynamic Pivotal Supplier Test - 2.2.2.5
- Multiple SCs at a single meter – 2.2.3.25
- Payment Acceleration – 2.2.3.27
- Local Market Power Mitigation for Constrained On Generation – 2.2.3.11

The following market enhancements were submitted in stakeholder comments as high priority by a single market participant. The CAISO and stakeholders need to determine how to address these issues and how to determine if there is larger stakeholder support for some of these items.

- Import and Export of Intermittent Resources 2.3.1
- Day-Ahead Scheduling of Intermittent Resources 3.3.1
- UFE as part of Metered Demand for Cost Allocation 2.2.3.24
- Multi Segment A/S -2.2.3.16
- Consideration of import energy in RUC – 2.2.3.8
- Software for bundling Individual Pnode-CRRs into trading hubs - 2.8.5
- Sequential Physical Trading Capability 2.2.3.35
- Ability to bid start-up costs - 2.2.3.34
- System for Reporting Outages and Derates and Development of Outage Reporting Schedule for CRRs – 2.2.3.32
- Voltage Support Procurement – 2.5.1
- Black Start Procurement – 2.5.2
- Interchange Transactions after Real-Time Market-2.3.2
- Economic Methodology to determine if a Transmission outage needs to be scheduled 30 days prior to outage month -2.2.3.30

5 Non Discretionary Market Enhancements

The CAISO is currently engaged in efforts involving Renewable Integration and Demand Response. The CAISO views these efforts as non-discretionary and therefore are not included in the ranking process. They will not be ranked against other market enhancements for priority but will consume CAISO and stakeholder resources and therefore will be taken into consideration when the CAISO creates implementation plans for the other high priority market enhancements that will come out of the overall ranking process.

6 Next Steps

A stakeholder meeting will be held on April 30, 2008 to discuss the preliminary results of the high level ranking process. The CAISO is requesting that any stakeholder that would like to present support for a particular market initiative based on the ranking criteria during the stakeholder meeting notify Margaret Miller at mmiller@caiso.com by no later than COB Friday, April 25. The CAISO is also requesting written comments from stakeholders by May 7, 2008 on the preliminary results of the high level prioritization. Comments should be sent to mmiller@caiso.com.

The CAISO will review stakeholder comments and adjust the results of the preliminary high level prioritization as necessary. The CAISO will then perform the second step in the ranking process that involves detailed ranking of the market enhancements that ranked highest in the initial prioritization process.

A Straw Proposal for High Priority Enhancements will be published on May 29th reflecting stakeholder comments on the high level prioritization and the results of the detailed ranking process.