### Market Initiatives Road Map

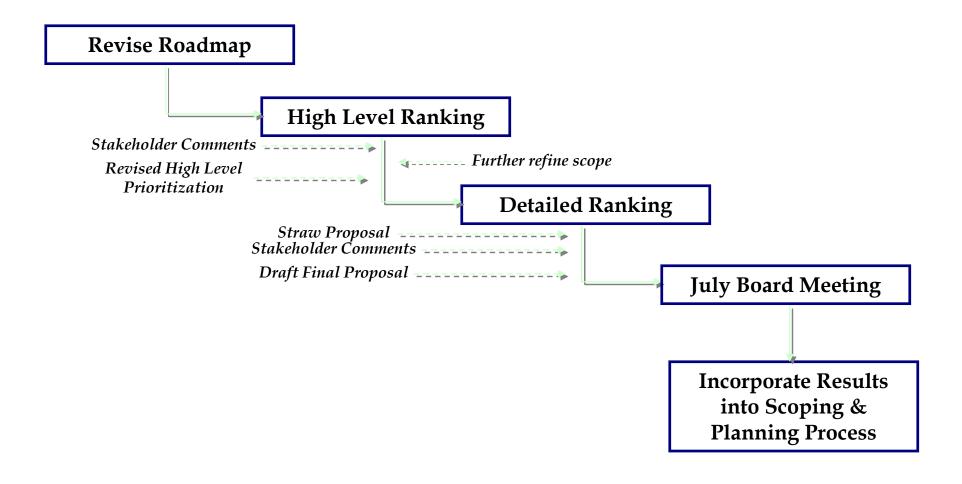


#### **Department of Market & Product Development**



5-Year Market Initiatives Roadmap Stakeholder Meeting April 30, 2008

#### **Roadmap Stakeholder Process**



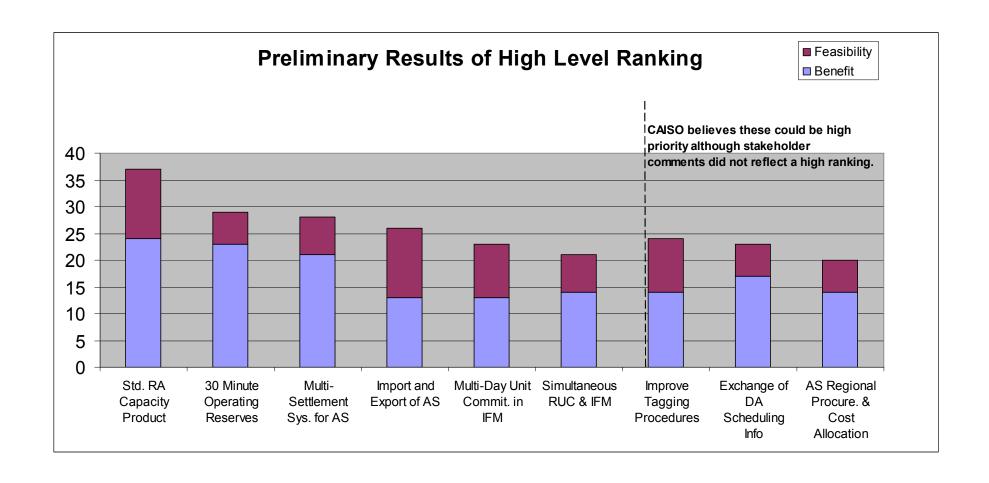


#### **Stakeholder Comments**

- CAISO incorporated stakeholder comments when determining the "desired by stakeholders" benefit criteria
- Stakeholder comments used to assess priority of FERC Mandated enhancements
- A number of enhancements were supported by a single market participant or only two or three market participants
- The Roadmap does not represent priority so comments requesting to move enhancements to earlier releases (i.e. MRTU Release 1) could not be accommodated.



#### **Results of Preliminary High Level Prioritization**





#### **FERC Mandated Enhancements**

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



#### **Next Steps**

- May 7 CAISO requesting written stakeholder comments regarding results of preliminary high level prioritization of market enhancements to <a href="mailto:mmiller@caiso.com">mmiller@caiso.com</a>
- May 29 Publish Straw Proposal which will reflect revised high level prioritization and results of detailed ranking
- June 5 Stakeholder Conference Call
- June 12 Stakeholder comments due
- June 19 Publish Draft Final Proposal
- July 16-17 July Board of Governors Meeting



## The Standard RA Capacity Product received the highest level of interest among stakeholders.

	Strategic Objective	Impact	Score	Attribute
Benefit	Grid Reliability	Moderate improvement	7	Consistent performance from RA resources
	Improving market efficiency	Moderate improvement	7	Increased liquidity by providing standard product
	Desired by stakeholders	Universally desired	10	Supported by many stakeholders
Feasi	Market participant implementation impact	No Impact	10	Reduced transaction costs
ibility	ISO implementation impact	Moderate	3	Performance monitoring, software, undefined scope
	Total Points		37	



#### **Multi-Settlement System for Ancillary Services**

	Strategic Objective	Impact	Score	Attribute
	Grid Reliability	Moderate Improvement	7	Increase in liquidity of reserves
Benefit	Improving market efficiency	Moderate Improvement	7	Reduced risks for suppliers, more liquid market, decreased costs for provision of A/S, market flexibility
	Desired by stakeholders	Desired by a majority of stakeholders	7	Moderate interest reflected in comments
Feas	Market participant implementation impact	Minimal	7	Market participant software impacts
Feasibility	ISO implementation impact	Significant	0	Complete redesign of existing A/S Markets, significant software impact, settlements impact
	Total Points		28	



### **30 Minute Ancillary Services**

	Strategic Objective	Impact	Score	Attribute
	Grid Reliability	Significant Improvement	10	More reserves available and reduction in Exceptional Dispatches
Benefit	Improving market efficiency	Significant Improvement	10	Reduce potential for market power through increased liquidity. More cost effective at addressing 30 minute contingencies .
	Desired by stakeholders	Desired by small subset of stakeholders	3	Limited interest reflected in comments
Fea	Market participant implementation impact	Moderate	3	Software impacts, contracts, meeting requirements for new product
easibility	ISO implementation impact	Moderate	3	Development of new market product, rules, impact to market systems
	Total Points		29	



### **Multi-Day Unit Commitment in IFM**

	Strategic Objective	Impact	Score	Attribute
	Grid Reliability	Minimal Improvement	3	Operational continuity of commitment from one day to the next
Benefit	Improving market efficiency	Moderate Improvement	7	More efficient unit commitment that adequately reflects the impact of start-up costs from resources with long start-up times
	Desired by stakeholders	Desired by small subset of stakeholders	3	Minimal interest reflected in comments
Feasibility	Market participant implementation impact	None	10	Little to no impact
bility	ISO implementation impact	Significant	0	Software performance, source of bids and schedules for future days commitment
	Total Points		23	



#### **Simultaneous RUC and IFM**

	Strategic Objective	Impact	Score	Attribute
	Grid Reliability	Moderate Improvement	7	Integrating RUC into the IFM would co-optimize resources to provide RUC capacity along with Energy, AS and congestion management
Benefit	Improving market efficiency	Moderate Improvement	7	Simultaneous pricing will clear each resource for its highest value use and pay accordingly.
	Desired by stakeholders	No apparent desire	0	No interest reflected in comments
Fea	Market participant implementation impact	Minimal	7	Substantial stakeholder process
Feasibility	ISO implementation impact	Significant	0	Substantial stakeholder process for development of market rules, plus modification to IFM optimization engine
	Total Points		21	



# **Transition to ARR (Auction Revenue Rights System)**

	Strategic Objective	Impact	Score	Attribute
	Grid Reliability	No Improvement	0	No impact on grid reliability
Benefit	Improving market efficiency	Significant Improvement	10	Streamline several complex CRR processes, and deepen CRR auction participation leading to more robust auction prices for valuing all CRRs.
	Desired by stakeholders	Desired by small subset of stakeholders	3	Limited interest reflected in comments
Feas	Market participant implementation impact	Moderate	3	LSEs now participating in allocation would have to revise their nomination processes to submit economic bids for all CRRs
asibility	ISO implementation impact	Moderate	3	Would require stakeholder process to develop auction processes and determine allocation of ARRs.
	Total Points		19	



#### **Import & Exports of Ancillary Services**

	Strategic Objective	Impact	Score	Attribute
	Grid Reliability	Minimal Improvement	3	Expanded import & export functionality should provide modest increase in AS supply
Benefit	Improving market efficiency	Moderate improvement	7	Greater optimization of supply capacity between AS & energy, and for broader regional AS market.
	Desired by stakeholders	Desired by small subset	3	Limited interest reflected in comments
Ţ	Market participant implementation impact	No Impact	10	Minimal to no impact
easibility	ISO implementation impact	Moderate Impact	3	Require new functionality for optimizing use of inter-tie transmission capacity between AS & energy.
	Total Points	•	26	

#### **Improve Tagging Procedures & Functionality**

	Strategic Objective	Impact	Score	Attribute
Ве	Grid Reliability	Moderate Improvement	7	content of tags will allow more accurate modeling of power flows in DA and HA time frames
Benefit	Improving market efficiency	Moderate improvement	7	Integration of day-ahead scheduling and tagging procedures will simplify and streamline the tagging process.
	Desired by stakeholders	No apparent desire	0	No interest reflected in comments
Feasibility	Market participant implementation impact	Moderate Impact	3	Need to configure systems to include tagging info in bid submissions.
ility	ISO implementation impact	Minimal Impact	7	Enhance IFM & HASP output to include confirmed tags with final import & export schedules.
	Total Points		24	



#### **Exchange of Day-Ahead Scheduling Information**

	Strategic Objective	Impact	Score	Attribute
	Grid Reliability	Maximum Improvement	10	Data exchange will allow parallel flows to be predicted and reduce amount of RT unscheduled flow mitigation.
Benefit	Improving market efficiency	Moderate improvement	7	Knowledge of expected parallel flows will allow BAAs to take actions to mitigate overloaded paths for fair compensation.
	Desired by stakeholders	No apparent desire	0	No interest reflected in comments
П	Market participant implementation impact	Moderate impact	3	Need for ISO & participating BAAs to establish systems to accept and utilize scheduling information
easibility	ISO implementation impact	Moderate impact	3	Need for ISO & participating BAAs to establish systems to accept and utilize scheduling information
	Total Points		23	



## **Sub-Regional Scarcity Pricing & A/S Cost Allocation**

- This initiative is being addressed in the Scarcity Pricing initiative and has been excluded from the ranking process
  - The CAISO proposes to defer Scarcity Pricing in A/S Sub-Regions and locational A/S cost allocation to allow time to learn for MRTU operation
  - The CAISO will review and decide on the two issues with stakeholders one year after the implementation of the system-wide Scarcity Pricing

