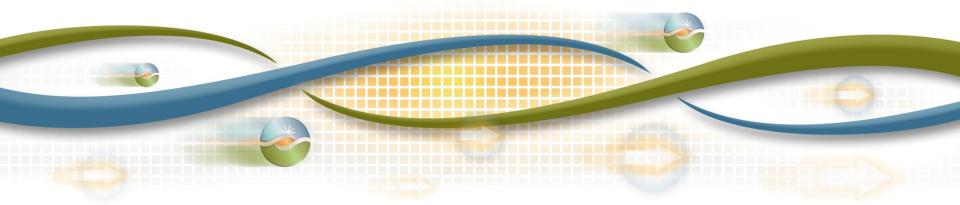


2017 Policy Initiatives Roadmap Development

November 3, 2016 Market and Infrastructure Policy



Overview

- Stakeholder Initiatives Catalog and Policy Initiatives Roadmap process
- 2017 Policy Initiatives Roadmap with current and planned initiatives
- ISO's draft rankings of discretionary initiatives
- Comments the ISO is requesting from stakeholders at this step of the process
- Next steps



Annual stakeholder process to develop policy initiative roadmap

- Two-step process:
 - 1. Revise the stakeholder initiatives catalog
 - Update listed initiatives
 - Add new proposed initiatives and delete obsolete initiatives
 - 2. Policy initiatives roadmap
 - Rank discretionary policy initiatives
 - ISO initially ranks
 - ISO revises rankings based on stakeholder input
 - ISO develops roadmap for upcoming year's policy stakeholder processes
 - Present to EIM Governing Body and ISO Board in February



Stakeholder initiatives catalog divides policy initiatives into various categories:

- In-progress
- FERC-mandated
- Non-discretionary
 - Address significant reliability or market efficiency issues, or initiatives that the ISO has previously committed to stakeholders, the ISO Board, or FERC that it would conduct in the upcoming year.
- Discretionary
 - ISO and stakeholders rank
 - Benefits
 - Feasibility
 - Ranking determines priority



2017 Policy Initiative Roadmap

2016		20	17				
Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec			
Bid Cost Reco	overy						
RegionalIntegrati	ion CA Greenhouse						
Regional Transmis	sion Access Charge						
Regional Reso	urce Adequacy						
Stepped Constr	aint Parameters						
Commitment Cos	st Enhancements Pha	se 3					
Generator Co	ntingency Modeling/	RAS Modeling					
	Contingency Mode	ling Enhancements					
Flexib	le RA Criteria and Mu	st Offer Obligation P	hase 2				
(Commitment Cost an	d DEB Enhancements	5				
		Review	TAC Structure				
	Freq	uency Response Phas	se 2				
	Transitio	nal Grid Management C	Charge for New PTOs				
		Reliability S	Services Phase 3				
			Gas Constraint Oper	ational Tools			
	Full Ne twork Model Enhancements - Phase 2						
	Energy Storage and A	Aggregated Distribute	ed Energy Resources				
		Economica	nd Maintence Outag	es			



Prioritization criteria

		Criteria	HIGH	MEDIUM	LOW	NONE
		Gillena	10	7	3	0
4		Grid Reliability	Significant Improvement	Moderate Improvement	Minimal Improvement	No Improvement
E	Benefit	Improving Overall Market Efficiency	Significant improvement	Moderate improvement	Minimal improvement	No impact
c		Desired by Stakeholders	Universally desired by stakeholders	Desired by majority of stakeholders	Desired by a small subset of stakeholders	No apparent desire
C	Feasibility	Market Participant Implementation Impact (\$ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant impact
E	Feasi	ISO Implementation Impact (\$ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant impact



Discretionary initiatives and first-cut ranking (slide 1 of 7)

Initiative Name	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasibility	Total Score
Real-Time Market Enhancements	7	7	7	21	7	3	10	31
Risk-of- Retirement Process Enhancements	10	3	3	16	10	3	13	29
CRR Auction Efficiency	0	7	7	14	7	7	14	28
Donation by Third Party for Transmission Capacity Available for EIM Transfers	3	7	3	13	7	7	14	27
Regional Multi- Year RA*	7	7	3	17	7	3	10	27
Export Charges	3	3	7	13	7	7	14	27



Discretionary initiatives and first-cut ranking (slide 2 of 7)

Initiative Name	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasibility	Total Score
Combine IFM/RUC with Multi-Day Unit Commitment	3	10	7	20	3	3	6	26
Aggregated Pumps and Pumped Storage	3	7	3	13	7	3	10	23
Potential EIM- wide Transmission Rate	3	3	3	9	7	7	14	23
Regulation Pay- for-Performance Enhancements	3	3	3	9	7	7	14	23
Review MIC	3	7	3	13	7	3	10	23
EIM External Resource Participation	3	7	3	13	7	3	10	23



Discretionary initiatives and first-cut ranking (slide 3 of 7)

Initiative Name	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasibility	Total Score
Multi-Stage Generation Bid Cost Recovery	3	7	3	13	7	3	10	23
Integrated Optimal Outage Coordination - Phase 2	3	3	3	9	7	7	14	23
Marginal Loss Surplus Allocation Approaches	0	3	3	6	10	7	17	23
Market Mechanism for Blackstart and System Restoration	3	3	3	9	7	7	14	23
Compensation for Third Parties Making Capacity Available for EIM Transfers	3	3	3	9	7	7	14	23
EIM Over/Under Scheduling Load Enhancements	3	3	3	9	7	7	14	23



Discretionary initiatives and first-cut ranking (slide 4 of 7)

Initiative Name	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasibility	Total Score
Examination of NQC Values for ELCC Methodology	3	3	3	9	7	7	14	23
Regulation Service RT Energy Make Whole Settlement	3	3	3	9	7	7	14	23
Allowing Convergence Bidding at CRR Sub-Load Aggregation Points	3	3	3	9	7	7	14	23
Hourly Bid Cost Recovery Reform	0	3	3	6	7	7	14	20
Exceptional Dispatch Decremental Settlement	0	3	3	6	7	7	14	20
FMM Settlements of Non- Participating Resources	0	3	3	6	7	7	14	20



Discretionary initiatives and first-cut ranking (slide 5 of 7)

Initiative Name	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasibility	Total Score
Extending the submission deadline or allow updates for Real- Time Inter-SC trades	0	3	3	6	7	7	14	20
2017 IPE	0	3	3	6	7	7	14	20
GIDAP and Industry Generation Procurement Solicitations Alignment Opportunities	0	3	3	6	7	7	14	20
CRR Revenue Sufficiency	0	7	7	14	3	3	6	20
Implement Point- to-Point Convergence Bids	0	3	3	6	7	7	14	20
Flow Entitlements for Base/Day- ahead Schedules	3	3	3	9	7	3	10	19



Discretionary initiatives and first-cut ranking (slide 6 of 7)

Initiative Name	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasibility	Total Score
Extended Pricing Mechanisms	3	3	3	9	7	3	10	19
Bidding Rules on External EIM Interties	3	3	3	9	7	3	10	19
Multi-Stage Generator Regulation Refinements	3	3	3	9	7	3	10	19
Multi-Year Risk- of-Retirement	3	3	3	9	7	3	10	19
Fractional Megawatt Regulation Awards	0	0	3	3	7	7	14	17
Inter-Scheduling Coordinator Trade Adjustment Symmetry	0	0	3	3	7	7	14	17



Discretionary initiatives and first-cut ranking (slide 7 of 7)

Initiative Name	Grid Reliability	Improving Overall Market Efficiency	Desired by Stakeholders	Total Benefit	Market Participant Implementation (\$ and resources)	ISO Implementation (\$ and resources)	Total Feasibility	Total Score
Economic Methodology for Transmission Outages	0	3	3	6	7	3	10	16
Review of Convergence Bidding Uplift Allocation	0	3	3	6	7	3	10	16
Rescheduled Outages	0	0	3	3	7	3	10	13
Flexible Ramping Product Enhancements **	-	-	-	0	-	-	0	0
Fast Frequency Response***	-	-	-	0	-	-	0	0

This initiative was not ranked because history is needed to determine how the flexible ramping product is working after its implementation. This initiative was not ranked because it's dependent on Frequency Response Phase 2 study to define this initiative. **Stakeholder Comments Requested

- Agreements of the ISO's high level ranking for initiatives; or
- Disagreements of the ISO's high level ranking for initiatives. Stakeholders should include a justification for each ranking they would like to be changed.
- Stakeholders should submit their comments to initiativecomments@caiso.com by the close of business on Thursday, November 17, 2016.



Next Steps

	Stakeholder Process Schedule
Date	Milestones
Nov 17	Stakeholder written comments due regarding the ISO's ranking of initiatives.
Dec 15	Post 2017 Draft Final Policy Initiatives Roadmap
Dec 22	Stakeholder call
Jan 9, 2016	Stakeholder written comments due regarding the 2017 Draft Final Policy Roadmap
Feb 1, 2017	Present 2017 Draft Final Policy Initiatives Roadmap to the EIM Governing Body
Feb 15, 2017	Present 2017 Policy Initiatives Roadmap to the Board of Governors

