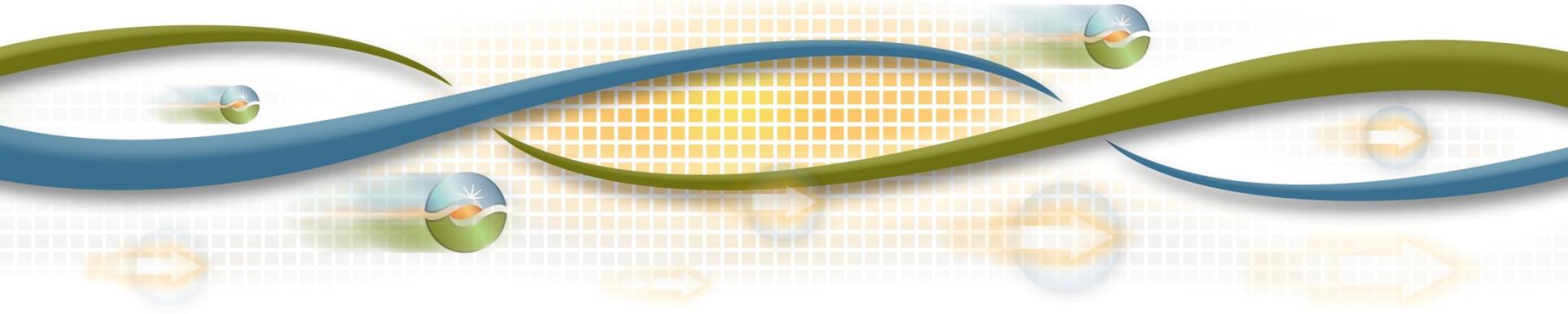


2015 Stakeholder Initiatives Catalog

Stakeholder Conference Call
Kristina Osborne
November 21, 2014



Stakeholder Initiatives Catalog – Agenda 11/21/14

Time	Topic	Presenter
1:00 – 1:20	<ul style="list-style-type: none">• Introduction & meeting objective• Catalog overview• Ranking process overview	Kristina Osborne
1:30 – 2:00	<ul style="list-style-type: none">• Responses to stakeholder comments on draft catalog	Brad Cooper
2:00 – 2:30	<ul style="list-style-type: none">• ISO's discretionary initiative high-level ranks	Brad Cooper
2:30 – 2:45	<ul style="list-style-type: none">• Next steps	Kristina Osborne

Catalog overview

- Catalog includes:
 - Current and proposed policy changes and enhancements that require a stakeholder process
 - Initiatives completed since the ISO published last year's catalog
 - Initiatives proposed to be deleted from the catalog
- Catalog used as the basis for upcoming year's policy development roadmap

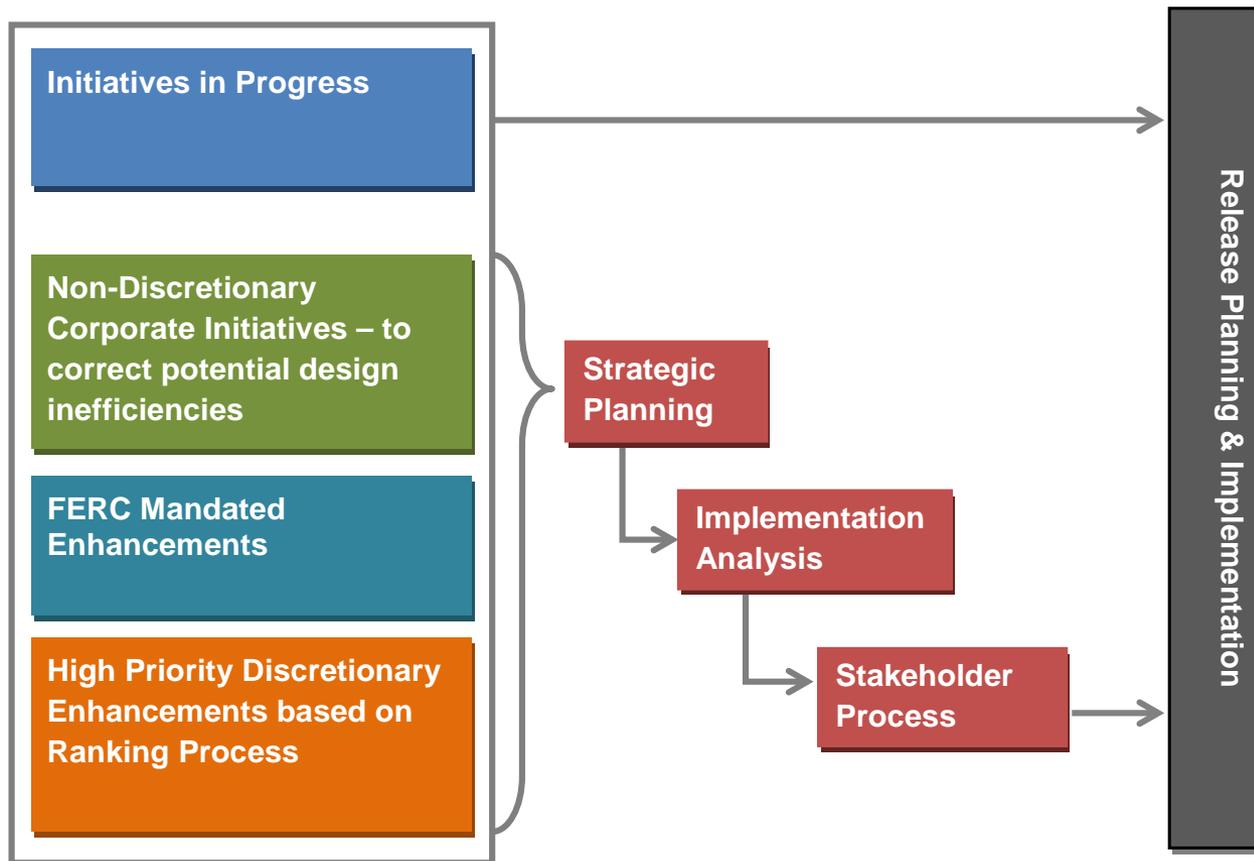
Catalog overview (continued)

- Includes both market design and infrastructure and planning initiatives
- Initiatives can fall into four different categories:
 - In progress (I)
 - Non-discretionary (N)
 - FERC-mandated (F)
 - Discretionary (D)

Catalog organization

Section 1 – Introduction	Section 8 - Resource Adequacy and Long-Term Supply Sufficiency
Section 2 – Day-Ahead Market	Section 9 – Seams and Regional Issues
Section 3 – Real-Time Market	Section 10 – Infrastructure and Planning
Section 4 – Residual Unit Commitment	Section 11 – Other
Section 5 – Ancillary Services	Section 12 – Completed Initiatives
Section 6 – Congestion Revenue Rights	Section 13 – Deleted Initiatives
Section 7 – Convergence Bidding	

Initiative and priority process overview



Ranking Process

- High level prioritization
 - ISO conducts simplified ranking process
 - Criteria
 - Benefits
 - Feasibility
- Detailed ranking process
 - Performed if high level prioritization does not provide sufficient clarity
 - Top-ranked initiatives ranked again using more granular benefit and feasibility measures
 - Based on stakeholder input

Prioritization criteria

		Criteria	HIGH	MEDIUM	LOW	NONE
			10	7	3	0
A	Benefit	Grid Reliability	Significant Improvement	Moderate Improvement	Minimal Improvement	No Improvement
B		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
D	Feasibility	Market Participant Implementation Impact (\$ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant impact
E		ISO Implementation Impact (\$ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant impact

Stakeholder comments requested

Two comment requests-

- Comments on draft catalog were due October 22
 1. Questions or clarifications regarding initiatives listed in catalog
 2. Proposed initiatives not listed in catalog
 3. Suggest deletions to initiatives listed in catalog
 - Additional deletions
 - Remove ISO-proposed deletion from list
- Comments on revised draft due on December 5
 - Comments on ISO's high-level ranking

Initiatives added in response to stakeholder comments

- 2.6 Difference Bidding in Integrated Forward Market for Energy Storage Resources
- 3.13 Price Formation at Interties
- 6.9 Congestion Revenue Rights Allocation
- 8.4 Simplified Reporting of Forced Outages
- 8.6 Multi-Year RA Import Allocation Process
- 8.5 Energy Products Delivered on Interties
- 10.2 Affected Systems
- 11.14 Multiple Resource IDs Per Generation Meter

ISO-proposed deletions with stakeholder objections

- 13.1 30 Minute Operating Reserve
 - Addressed by Contingency Modeling Enhancements
- 13.2 Regulatory Must-Run Pump Load
 - Pending further communications with CDWR
- 13.3 Develop a Process for Enforcement/Un-enforcement of Constraints
 - Process changes that stakeholders can pursue through BPM change management process
- 13.6 Mitigating Transient Price Spikes, Real-Time Imbalance Energy Offset (RTIEO)/Real-Time Congestion Offset (RTCO)
 - Already addressed through several initiatives

ISO-proposed deletions with stakeholder objections (continued)

- 13.7 Preferred Resources Operating Characteristics
 - Addressed in Reliability Services Phase 2
- 13.8 Modify Resource Adequacy Replacement Rules
 - Addressed in Reliability Services Phase 2
- 13.10 Standard Capacity Product for Demand Response
 - Addressed in Reliability Services
- 13.14 Greenhouse Gas Rules
 - Addressed in Commitment Cost Enhancements – Phase 2

ISO-proposed deletions with stakeholder objections (continued)

- 13.15 Improve Transparency
 - Process changes that stakeholders can pursue through BPM change management process
- 13.16 Protocol(s) for Simulation and Testing of New Models, Design Changes, or Products
 - Initiative-specific issue
- 13.17 Eliminate Unpriced Constraints
 - Addressed by Contingency Modeling Enhancements

New deletions

- 3.8 Multi-Stage Generation Transition Costs
 - Scope incorporated into Commitment Cost Enhancements – Phase 2
- 9.1 Make Whole Process for Wheel-through Transactions
 - Will address this issue through a tariff clarification process
- 9.2 Mitigation of Transmission Cost Increases
 - Combined with Transmission Planning Competitive Solicitation Enhancements

ISO's discretionary initiative high-level rankings - high-priority (total rank score 27 – 31)

Generator Contingency Modeling
Extend Look Ahead for Real Time Optimization
Multi-Day Unit Commitment in the Integrated Forward Market (IFM)
Multiple Resource IDs per Generation Meter
Multi-Stage Generator Bid Cost Recovery (BCR)
DLAP-Level Proxy Demand Response
Hourly Bid Cost Recovery Reform
Blackstart and System Restoration
PacifiCorp Related Tariff Changes
Comprehensive Review Methodology for Determining Maximum Import Capability
Reallocation of Maximum Import Capability Between Electrically Adjacent Import Paths to Achieve State Policy Objectives
Allocation of Maximum Import Capability Among Load Serving Entities
Affected Systems

ISO's discretionary initiative high-level rankings – medium priority (total rank score 23 – 26)

Consideration of Non-RA Import Energy in the RUC Process
Active Power Control Interconnection Requirements for Variable Energy Resources
Reactive Power Control Requirements
Combined Demand Response Product
Extended Pricing Mechanisms
Review the CRR Clawback Rule
Full Network Model Expansion - Phase 2
2014 CRR Modifications
Implement Point-to-Point (PTP) Convergence Bids
2015 Interconnection Process Enhancements
Rescheduled Outages
Difference Bidding in Integrated Forward Market for Energy Storage Resources
Multi-Year RA Import Allocation Process
Fractional MW Regulation Awards

ISO's discretionary initiative high-level rankings – low priority (total rank score 16 – 20)

Review of Convergence Bidding Uplift Allocation
Outage Notification Requirements
Allowing Convergence Bidding at CRR Sub-LAPs
Integrated Optimal Outage Coordination
Simplified Reporting of Forced Outages
Price Formation at Interties
Congestion Revenue Rights Allocation
Convergence Bidding Clawback
Aggregated Pumps and Pumped Storage
Regulation Service Real-Time Energy Make Whole Settlement
Transmission Interconnection Process
Storage Generation Plant Modeling
Economic Methodology to Determine if a Transmission Outage Needs to be Scheduled 30 Days Prior to the Outage Month
Flexible Term Lengths of Long Term CRRs
Insufficient CRR Hedging
Long Term CRR Auction Sub-initiative 1: multiple rounds for a given annual auction
Multi-period Optimization Algorithm for Long Term CRRs
Clarify Energy Products Delivered on Interties

Next Steps

Item	Date
Stakeholder comments due on ISO's high-level ranking of initiative	Dec 5
Post draft final 2015 Stakeholder Initiatives Catalog	Dec 19*
Board of Governor briefing on 2015 Policy Development Roadmap	Feb 5-6, 2015

*Dependent on need for detailed ranking process.

Please submit comments to SHcatalog@caiso.com