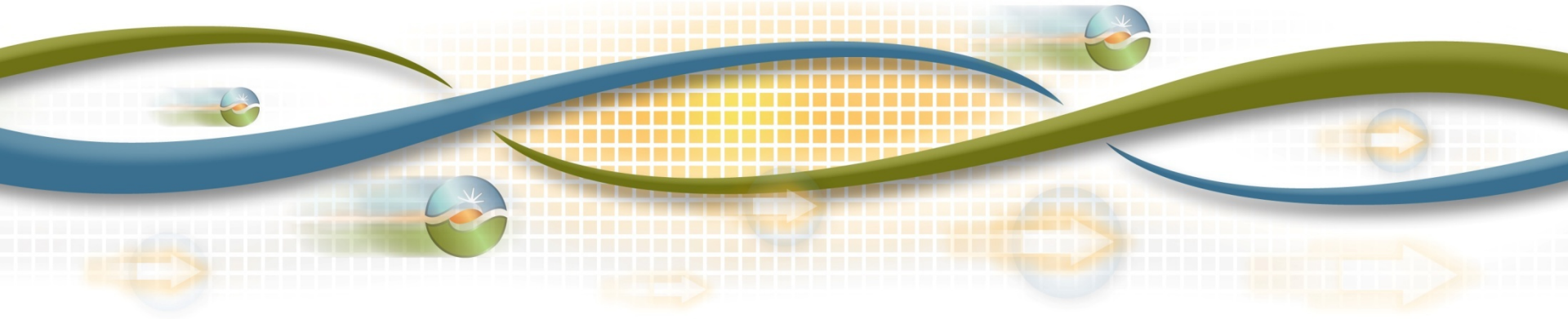


# Revised 2011 Catalog of Market Design Initiatives

October 24, 2011

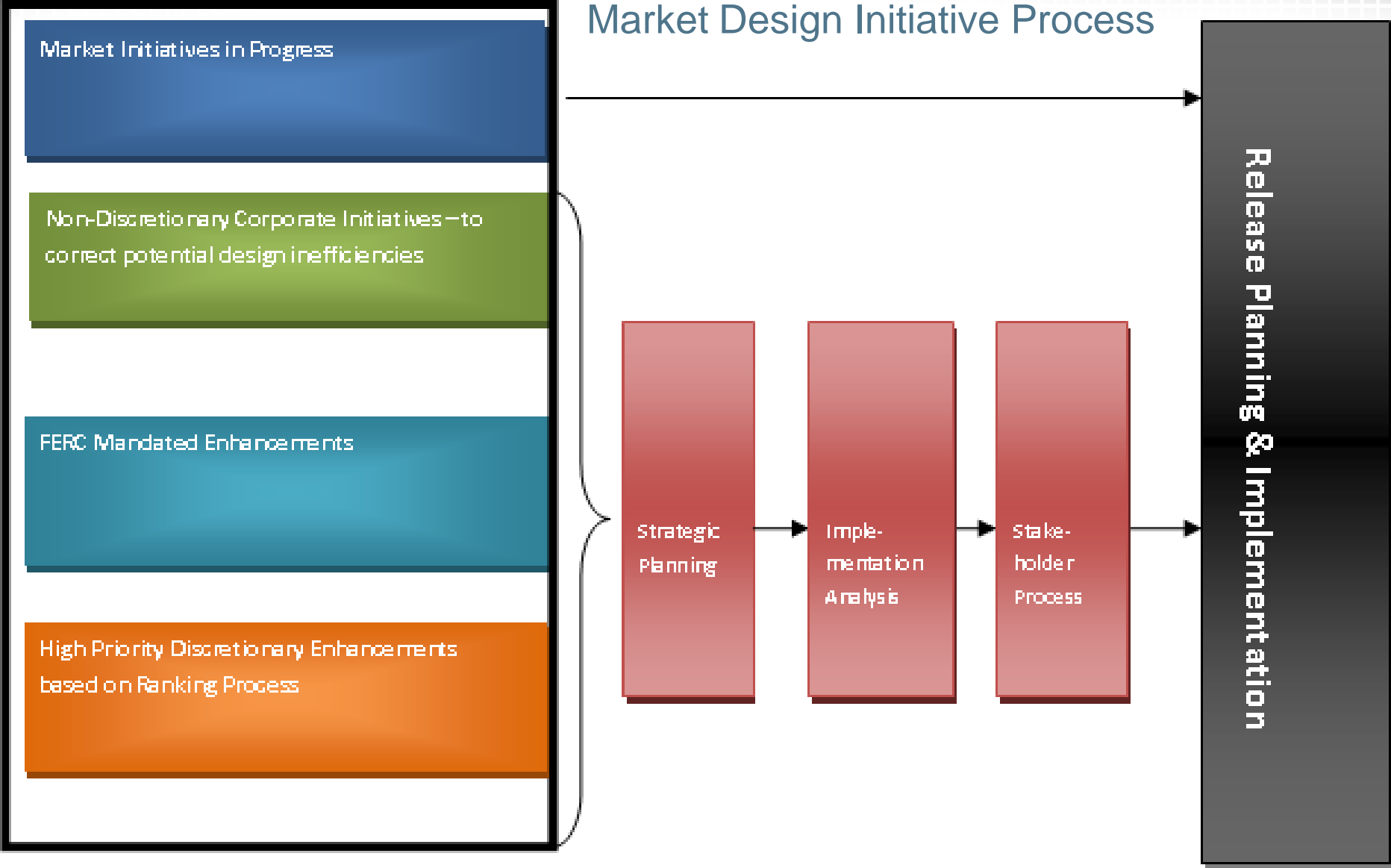
Cynthia Hinman, Sr. Market Design and Policy Specialist



# Agenda for today's call

Topic	Presenter
Introduction	Chris Kirsten
Process Overview	Cynthia Hinman
Status of initiatives	Cynthia Hinman
Next steps	Chris Kirsten

# Market Design Initiative Process



# Market Design Catalog Sections

ISO Markets	Products	Regional Topics	And the rest....
2 - Day Ahead	5 – Ancillary Services	8 – Resource Adequacy	10 - Other
3 - Real Time	6 – Congestion Revenue Rights	9 – Seams and Regional Issues	11 – Completed
4 – Residual Unit Commitment	7 – Convergence Bidding		12 – Proposed Deletions

## Descriptive Codes

- (D) – Discretionary
- (F) – FERC Mandated
- (I) – In Progress
- (N) – Non-Discretionary Items

# “In Progress” Initiatives

Section	Name
2.8	LAP granularity
3.1	Real-time imbalance energy offset (see intertie pricing)
3.5	Lower energy bid floor (RI-MPR 1)
8.3	Seasonal local RA requirement
9.6	Circular scheduling
10.1	PIRP cost allocation (RI-MPR 1)
10.2	Change BCR netting methodology (RI-MPR 1)
10.3	Generation interconnection procedures, phase II
10.6	Lossy vs. lossless shift factors
10.7	MSG enhancements
10.8	Demand response net benefits test

# “Non-Discretionary” Initiatives

Section	Name
2.3	Marginal loss surplus allocation
3.6	Flexi-ramp product (currently in progress)
3.7	Flexi-ramp product cost allocation (currently in progress)
3.8	Decremental bidding for PIRP resources (RI-MPR 2)
5.6	Pay for performance regulation (RI-MPR 2)
9.5	Intertie pricing (RI-MPR 2)
10.6	Lossy vs. lossless shift factors
10.13	Flexible capacity forward procurement (RI-MPR 2)

# “FERC Mandated” Initiatives

Section	Name
2.1	Two-tier rather than single tier real-time BCR allocation
2.2	BCR for units running over multiple days
2.6	LAP Granularity
4.3	RUC self provision
4.4	Multi-hour block constraints in RUC
5.1	Ancillary services substitution
5.8	Multi-segment ancillary services bidding
5.10	Exports of ancillary services
6.2	Long term CRR auction
8.2	Standard Capacity Product for Demand Response
10.8	DR net benefits test

# Items that were part of the September 21, 2006 FERC Order:

- Two-tier rather than single-tier real-time bid cost recovery (paragraph 539)
- Bid cost recovery for units running over multiple operating days (paragraph 533)
- RUC self-provision (paragraph 172)
- Multi-hour block constraints in RUC (paragraph 1280)
- Ancillary services substitution (paragraph 303)
- Multi-segment ancillary service bidding (paragraph 341)
- Exports of ancillary services (paragraph 355)



## “Discretionary” Initiatives (page 1 of 4)

Section	Name
2.4	Multi-day unit commitment in the IFM
2.5	Pricing of Minimum Online Constraints
2.7	Start up, minimum load, and transition cost enhancements
2.8	Unit commitment and price formation improvements
2.9	Uplift treatment to accommodate GHG
2.10	DLAP level proxy demand resource
2.11	Reliability must run pump load
2.12	Enhancements to start up bids to recognize per start costs*
3.2	Consideration of UFE as part of metered demand for cost allocation
3.3	Directional bidding in real-time market
3.4	Extend look ahead for real-time optimization

*\* Added to catalog – included in stakeholder’s recent comments*

## “Discretionary” Initiatives (page 2 of 4)

Section	Name
3.9	Ramp rate enhancements
3.10	Sub-hourly scheduling
4.1	Simultaneous RUC and IFM
4.2	Consideration of non-RA import energy in the RUC process
4.3	RUC self provision
5.2	AS maximum capability operating limits for spin and non-spin
5.3	Voltage support procurement
5.4	Black start procurement
5.5	Fractional MW regulation awards
5.7	Multi-settlement system for ancillary services
5.8	Multi-segment ancillary service bidding

## “Discretionary” Initiatives (page 3 of 4)

Section	Name
5.9	Frequency/inertia procurement
6.1	Economic methodology to determine if a transmission outage needs to be scheduled 30 days prior to the outage month
6.2.1	Flexible term lengths of long term CRRs
6.2.2	Multi-period optimization of long term CRRs
6.3	Release of CRR options
7.1	Allowing convergence bidding at CRR sub-LAPs
7.2	Additional BCR for convergence bidding
7.3	Allow virtual bids on the interties*
8.1	SCP planned outage availability incentive review
8.4	Replacement requirement for scheduled generation outages
9.1	Interchange transactions after the real-time market

*\* Added to catalog – included in stakeholder’s recent comments*

## “Discretionary” Initiatives (page 4 of 4)

Section	Name
9.2	Allocation of inertia capacity
9.3	Import or export bid submissions from multiple scheduling points
9.4	Allocation of dynamic ancillary service costs*
10.4	Storage generation plant modeling
10.5	MSG model for aggregated pumps and pump storage
10.9	Regulatory must take generation
10.10	Enabling bilateral energy excluded from settlements*
10.11	Multi-year forward ISO new generation procurement mechanism*
10.12	Multiple SCs at a single meter
10.14	Forward energy products
10.15	Creation of a full hour ahead settlement market

*\* Added to catalog – included in stakeholder’s recent comments*

## And the good news...

- 21 initiatives from the 2010 catalog were completed
- 13 initiatives from the 2010 catalog were deleted
  - Determined to be implementation not market design
  - Lack of interest
  - No longer pertinent
  - Included within the scope of another initiative

Stakeholder comments are due by  
October 31 to  
[MarketDesign@caiso.com](mailto:MarketDesign@caiso.com).

