



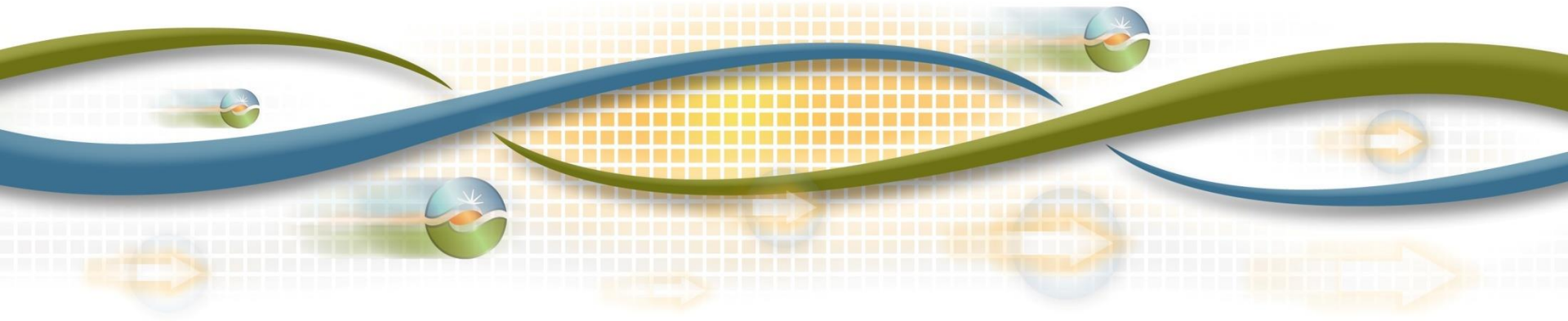
Stepped Constraint Parameters Initiative

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Stakeholder Conference Call

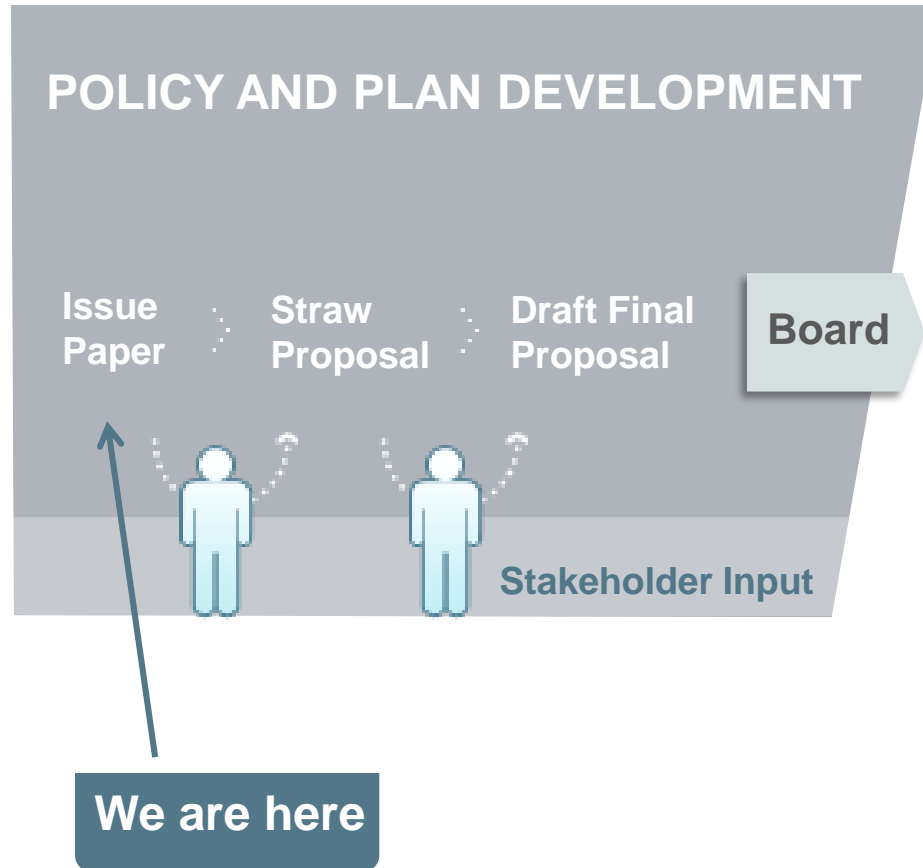
May 12, 2016



Agenda

Time	Topic	Presenter
10:00 – 10:10	Introduction	Kristina Osborne
10:10 – 11:50	Review Issue Paper	Don Tretheway
11:50 – 12:00	Next Steps	Kristina Osborne

ISO Policy Initiative Stakeholder Process



Proposed scope of the stepped constraint parameters initiative

- Transmission constraint relaxation parameter
- Shift factor effectiveness threshold
- Power balance constraint relaxation parameter
- EIM transfer limit
- Lower energy bid floor
- Others

Recognize magnitude of transmission violation in transmission relaxation parameters (1 of 2)

- In 2013, parameter reduced from \$5000 to \$1500 to address high levels of real-time congestion offset
 - Higher relaxation parameter causes more re-dispatch to address congestion increasing RTCO
- In 2014, FMM introduced using the \$1500 parameter
 - 15-minute imbalance settlement further improved RTCO
- ISO proposing to introduce a tier below the bid cap to relax the transmission constraint to minimize excessive re-dispatch

Recognize magnitude of transmission violation in transmission relaxation parameters (2 of 2)

- Propose to relax the transmission constraints based upon the magnitude of the violation and voltage level:
 - 230kV and above
 - \$750 parameter for below 2% in exceeding the original limit
 - \$1500 parameter for 2% or more in exceeding the original limit
 - 115kV and lower
 - \$500 parameter for below 2% in exceeding the original limit
 - \$1000 parameter for 2% or more in exceeding the original limit
- Balance minimizing excessive re-dispatch with appropriate levels of economic re-dispatch and reliability

Lower the shift factor effectiveness threshold from 2% to 0.1%

- 2% threshold ensures market solutions can be calculated and produce results supporting market timeline
- Computational power has increased since MRTU
- 0.1% improves market efficiency without negative impact to market timelines

Recognize that for intervals of small supply & demand differences scarcity pricing at the bid cap/floor not representative of system conditions (1 of 2)

- Other ISOs/RTO recognize that regulation or other reserves can be used for transient power balance violations
- Discussed during design of the EIM available balancing capacity proposal

Recognize that for intervals of small supply & demand differences scarcity pricing at the bid cap/floor not representative of system conditions (2 of 2)

- Define the appropriate MW quantity and price to be included in bid stack
 - For example, historical regulation MW and regulation cost
- Should address both positive and negative power balance constraint violations
- Need to consider interaction with flexible ramping product demand curve

Replace freezing of EIM transfers with a penalty mechanism to address “leaning” (1 of 2)

- Currently, if an EIM BAA fails the hourly resource sufficiency evaluation incremental transfers are not allowed
- This prevents resources in other EIM BAAs meeting imbalance needs
 - Could lead to triggering available balancing capacity or other constraint relaxation discussed above
- Penalty mechanism exists for under/over supply of load
 - The penalty does not impact the LMP


Replace freezing of EIM transfers with a penalty mechanism to address “leaning” (2 of 2)

- ISO believes the penalty approach may be more appropriate
 - Level of penalty determined by SMEC or LMP
 - Penalties collected are allocated to EIM BAAs that pass the hourly resource sufficiency evaluation
- Secondary allocation of costs/revenues is determined by EIM entity according to its OATT
- ISO needs to develop a secondary allocation or we could leverage existing approach for over/under scheduling

Lower bid floor to strengthen disincentive of self-scheduling

- Current floor is (\$150) with anticipation that price would be lowered to (\$300) in renewable integration: Market and product review initiative
- Enhancements to the real-time market are addressing spurious price spikes
 - Flexible ramping down product will be implemented in Fall 2016
 - Stepped power balance constraint relaxation discussed earlier
- Given predicted over-supply and market enhancements, is a (\$1000)/MWh bid floor achievable?

Next Steps



Item	Date
Publish Issue Paper	May 5, 2016
Stakeholder call	May 12, 2016
Issue paper comments due	May 26, 2016
Publish Straw Proposal	June 14, 2016
Stakeholder meeting	June 21, 2016
Stakeholder comments due	July 7, 2016
Publish Draft Final Proposal	July 21, 2016
Stakeholder call	July 28, 2016
Stakeholder comments due	August 4, 2016
Board of Governors Meeting	October 26-27, 2016

Please submit comments to InitiativeComments@caiso.com