

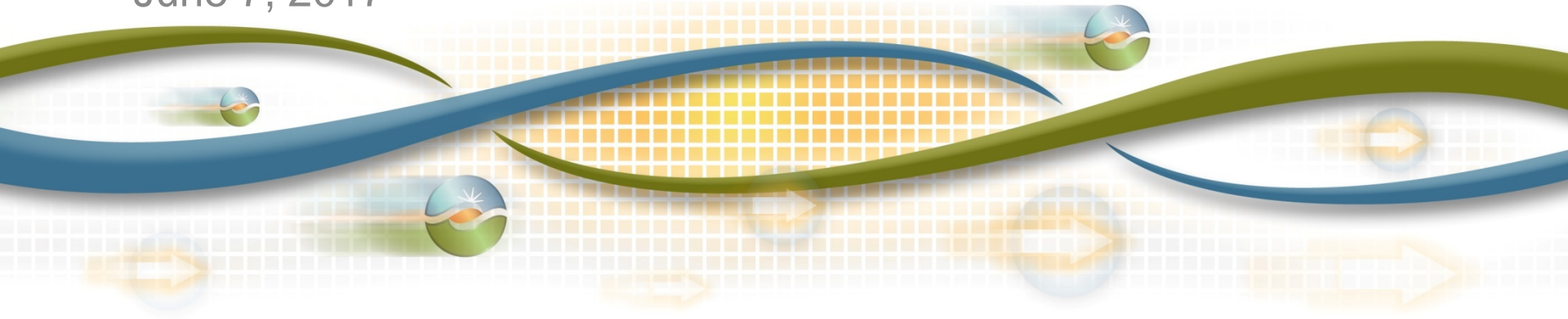


Aliso Canyon Gas-Electric Coordination Phase 3 – Straw Proposal

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EIM Categorization

- This initiative involves the EIM Governing Body Authority's advisory role to the Board of Governors as it involves rules generally applicable to the real-time market
- EIM Governing Body – E2 classification (Advisory)
“For a policy initiative proposing changes to generally applicable real-time market rules or rules that apply to all ISO markets, the matter goes to the Board for approval; however, the EIM Governing Body has the option to provide advisory input.”

<http://www.caiso.com/Documents/GuidanceforHandlingPolicyInitiatives-EIMGoverningBody.pdf>

Agenda

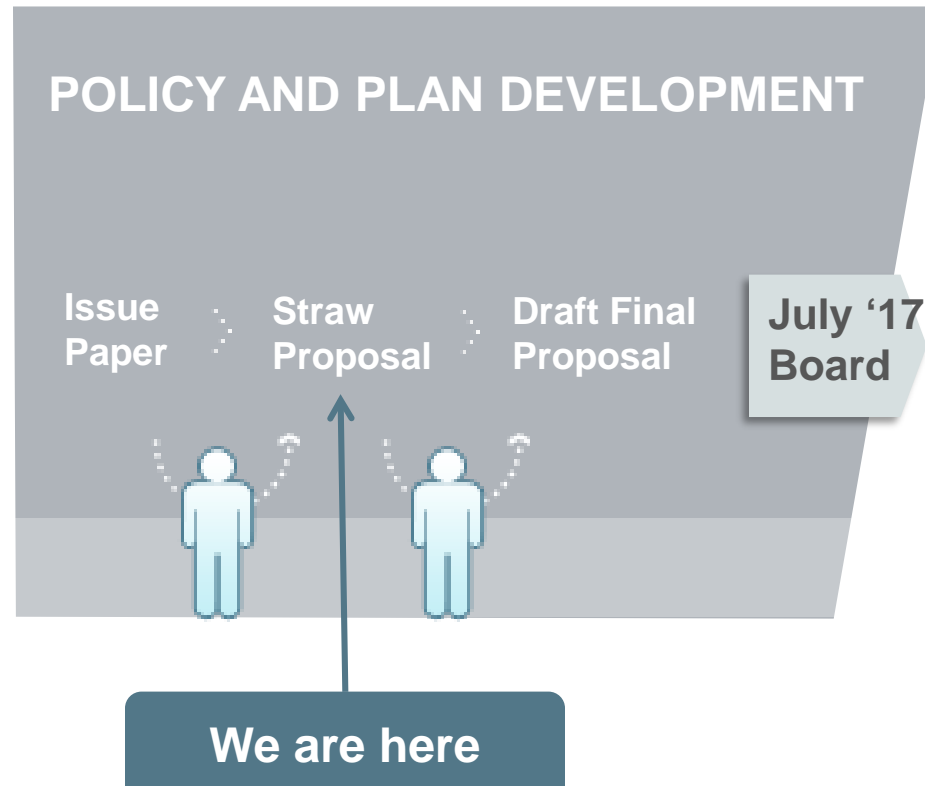
Time	Topic	Presenter
1:00 – 1:10	Introduction	Kim Perez
1:10 – 1:30	Background and Issue Discussion	Cathleen Colbert
1:30 – 2:30	Straw Proposal	Cathleen Colbert
2:30 – 3:00	Next Steps	Kim Perez

INTRODUCTION


Aliso Canyon Gas-Electric Coordination Phase 3

- ISO participates in inter-agency task force to assess reliability risks due to limited operations of Aliso Canyon
- ISO anticipates the limited operability of Aliso Canyon to affect electric operations
- Since summer 2017 assessment continues to identify risk of imbalance limitations with the limited operability of Aliso Canyon, ISO will propose to:
 - Make permanent the natural gas constraint and its accompanying measures
 - Make permanent the publication of D+2 results
 - Extend temporary provisions affecting cost estimates

ISO Policy Initiative Stakeholder Process



Plan for stakeholder engagement



Milestone	Date
Issue and Straw Proposal Posted	06/02/2017
Stakeholder Call	06/07/2017
Stakeholder Written Comments Due	06/14/2017
Draft Final Proposal Posted	06/21/2017
Stakeholder Call	06/23/2017
Stakeholder Written Comments Due	06/30/2017
EIM Governing Body Meeting	07/13/2017
July Board Meeting	07/26/2017

BACKGROUND AND ISSUE DISCUSSION

Background

- Inter-agency task force release technical assessments on gas-electric reliability and found operational concerns due to reliability risks
- FERC approved 11 temporary measures on June 1, 2016 (Phase 1 measures) to address these operational concerns that would sunset November 30, 2016
- FERC approved to make 3 of these measures permanent on November 21, 2016
- FERC approved to allow extension of seven measures on November 28, 2016 to a later sunset date of November 30, 2017

Operational risks

- Aliso Canyon Risk Assessment Technical Report Summer 2017 Assessment found risks to electrical system reliability due to Aliso Canyon's limited operability
- CAISO and the LADWP's ability to meet the 1-in-10-year peak summer electric load is dependent on the amount of SoCalGas/SDG&E's system receipt point utilization and withdrawal capability from storage facilities other than Aliso Canyon
- At 90% flowing pipeline supplies (POR utilization) and max storage withdrawal rate of 1.47 Bcf/d excluding Aliso Canyon, LADWP/CAISO can meet minimum requirements

Operational risks

- Summer electric reliability risks arise from expectation of imbalance limitations on gas system when gas-fired generation needed to meet incremental needs in ISO real-time operations
- During peak summer load conditions and historical electric usage, ISO expects that incremental gas-fired generation may be required to meet electric reliability
- If gas supply is insufficient to meet demand then the ISO may need to seek emergency assistance from neighboring balancing authorities or shed load in Southern California

STRAW PROPOSAL

Propose to make permanent or extend temporarily operational tools and market mechanisms implemented to mitigate ongoing reliability risks

- Proposal provides important functionality to mitigate the ongoing reliability impacts of the limited operability of the Aliso Canyon natural gas storage facility
- Proposal includes flexibility that allows the ISO to adjust the use of the new tools to align with market and reliability needs throughout its entire footprint
- Proposal will extend sunset date on temporary measures Request effective date November 30, 2017 until long-term changes contemplated in *Commitment Cost and Default Energy Bid Enhancements* are implemented

Propose to make permanent operational tools and D+2 publication

Ability to enforce gas constraints for either capacity or imbalance limitations

- Mitigation measure – Can override assessment of competitive paths (dynamic/default)
- Mitigation measure – Can suspend virtual bidding for market inefficiencies

**Make
Permanent**

Publish 2 day-ahead (TD-2) RUC schedules to Scheduling Coordinators

**Make
Permanent**

Propose to extend temporarily market measures

Improve DAM gas price index using an approximation of next day gas index

Extend

Adjust the RTM gas price index to include a scalar on the next day gas index

Extend

Include in after-the-fact cost recovery filing right opportunity to seek energy costs incurred above mitigated price

Extend

OPERATIONAL TOOLS AND D+2 PUBLICATION MADE PERMANENT

Propose to make permanent operational tools and D+2 publication

Ability to enforce gas constraints for either capacity or imbalance limitations

- Mitigation measure – Can override assessment of competitive paths (dynamic/default)
- Mitigation measure – Can suspend virtual bidding for market inefficiencies

**Make
Permanent**

Publish 2 day-ahead (TD-2) RUC schedules to Scheduling Coordinators

**Make
Permanent**

ISO proposes to make permanent natural gas constraints and its accompanying measures

- Propose to make permanent gas constraints and accompanying measures since constraint proved useful
- ISO found natural gas constraint proved effective for recognizing constraints on natural gas systems → enables dispatch solution to not exceed gas limits
- Enforced during constrained system conditions during 4 days from January 23 – January 26, 2017
 - Enforced San Diego Gas & Electric operating zone and Southern California Gas system area nomograms
 - On January 24 and 25 Aliso Canyon inventory needed to support gas-electric reliability

ISO proposes to make permanent natural gas constraints and its accompanying measures

- Propose to make permanent the ability to use constraint as needed through out CAISO balancing authority area
- Propose to extend authority to allow enforcement of natural gas constraint in EIM balancing authority areas as part of their balancing authority role
 - Similar to existing authority for EIM Entities to use manual dispatch at their discretion
 - EIM resources have limited pipeline capacity and their gas burn cannot exceed that limited pipeline capacity as well as limited storage facilities
- Constraint lowers resource-specific prices to ensure necessary supply reduction under the affected area

ISO proposes to make permanent issuing D+2 residual unit commitment schedules

- Propose to make permanent the publication of 2 day-ahead (TD-2) RUC schedules to suppliers as it increases access to information prior to day-ahead
- ISO believes the D+2 information is useful since it can allow suppliers to incorporate the ISO's expectations of gas needs into their gas procurement during the timely gas cycle

MARKET MEASURES TEMPORARILY EXTENDED

Propos to extend temporarily market measures

Improve DAM gas price index using an approximation of next day gas index

Extend

Adjust the RTM gas price index to include a scalar on the next day gas index

Extend

Include in after-the-fact cost recovery filing right opportunity to seek energy costs incurred above mitigated price


Extend

ISO proposes to extend temporary market changes without revisions until long-term changes implemented

- Propose to extend the sunset date for temporary market measures beyond November 30, 2017 until ISO implements *Commitment Costs and Default Energy Bid Enhancements* proposals for long-term changes
- Caveats that it retains authority to adjust scalar levels
- ISO and DMM will continue to evaluate scalar levels and potentially adjust so that they:
 - Result in units dispatched to address system needs
 - Account for differences between DA & RT gas prices
 - Improve ability to manage usage within gas rules

NEXT STEPS

ISO requests written comments by June 14th 2017



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