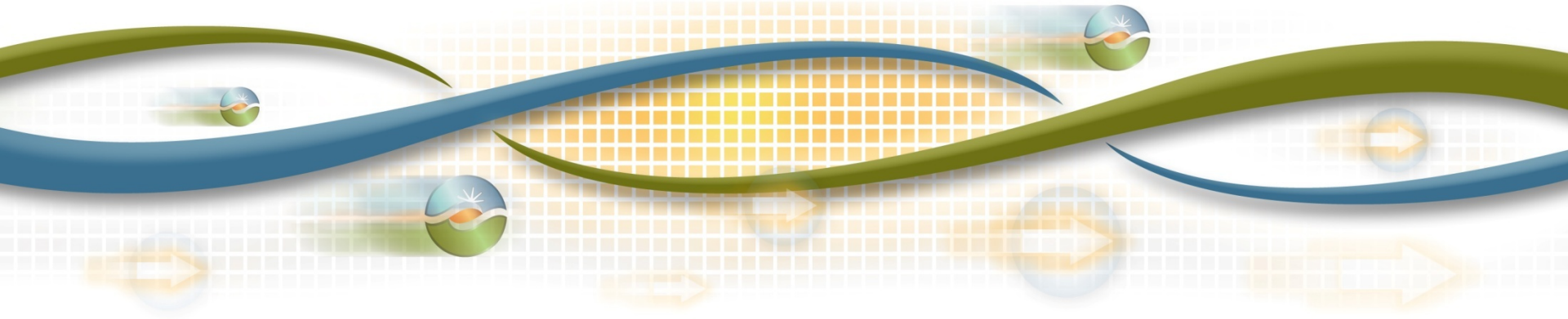




# ISO Stakeholder Meeting - Regional Resource Adequacy

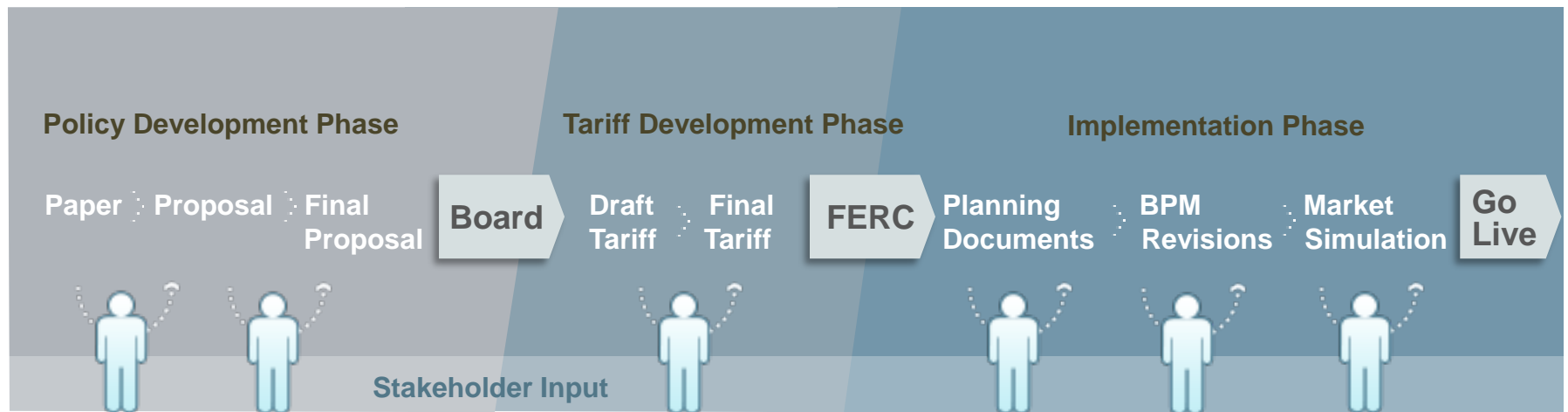
Issue Paper and Briefing on Resource Adequacy in  
ISO Balancing Authority Area

Salt Lake City, Utah  
December 16, 2015

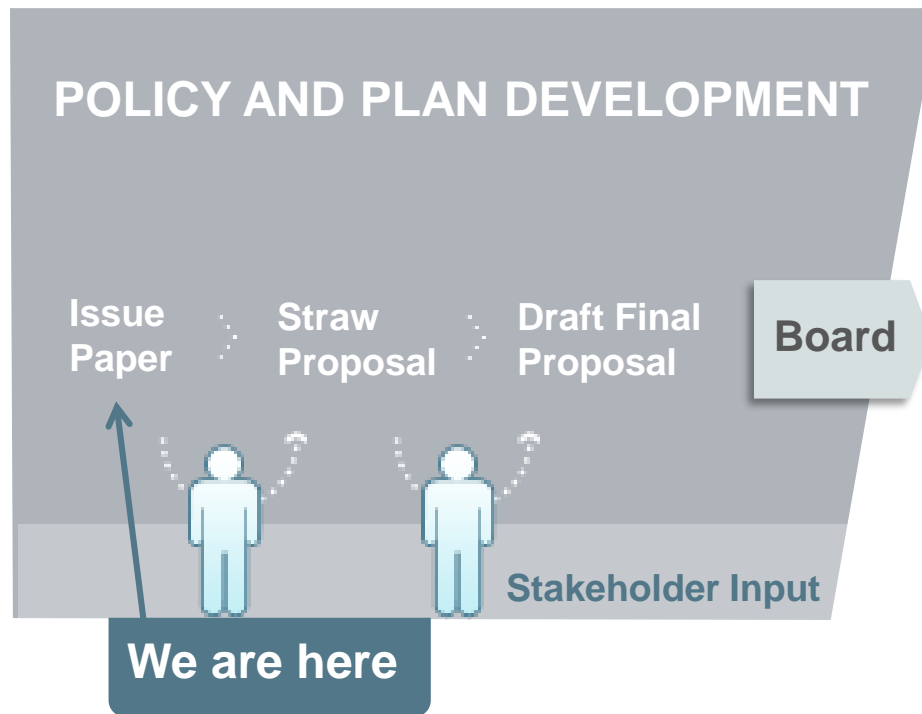


# ISO stakeholder engagement process

This diagram represents the typical process, often phases will run in parallel.



# ISO policy initiative stakeholder process



# Meeting Agenda

| Time (MST)  | Topic                                       | Presenter        |
|-------------|---|------------------|
| 10:00-10:10 | Introduction                                | Kristina Osborne |
| 10:10-10:20 | Stakeholder process                         | Chris Devon      |
| 10:20-12:00 | Briefing on how RA works in current ISO BAA | Keith Johnson    |
| 12:00-12:45 | Lunch                                       |                  |
| 12:45-1:40  | Briefing (continued)                        | Keith Johnson    |
| 1:40-2:55   | Issue paper discussion                      | Chris Devon      |
| 2:55-3:00   | Next steps                                  | Kristina Osborne |
| 3:00        | Meeting adjourned                           |                  |

# MEETING OBJECTIVES AND STAKEHOLDER PROCESS TIMELINE

Chris Devon

Senior Infrastructure Policy Developer

# Objectives of today's meeting

- Explain stakeholder process and timeline
- Brief stakeholders on how resource adequacy (“RA”) works in ISO’s current balancing authority area
- Once stakeholders have working knowledge of RA concepts from today’s briefing
  - Discuss ISO tariff provisions that may need to be changed for a regional organization (from issue paper)
  - Prime stakeholders’ thinking for stakeholders to provide effective written comments (due Jan 7)

# Process and timeline for this initiative

| Milestone  | Date        |
|--|-------------|
| Post issue paper   | Dec 9, 2015 |
| Stakeholder meeting on issue paper (Salt Lake City, UT)  | Dec 16      |
| Stakeholder comments due on issue paper                  | Jan 7, 2016 |
| Working group meeting (outside California - TBD)         | Jan 13      |
| Post straw proposal                                      | Feb 17      |
| Stakeholder meeting on straw proposal (Folsom, CA)       | Feb 25      |
| Stakeholder comments due on straw proposal               | Mar 11      |
| Working group meeting (outside California - TBD)         | Mar 23      |
| Post draft final proposal                                | May 4       |
| Stakeholder meeting on draft final proposal (Folsom, CA) | May 12      |
| Stakeholder comments due on draft final proposal         | May 23      |
| Present proposal to ISO Board of Governors               | Jun 28-29   |

# BRIEFING ON HOW RESOURCE ADEQUACY WORKS IN CURRENT ISO BALANCING AUTHORITY AREA

Keith Johnson

Manager, Infrastructure Policy



# REGIONAL RESOURCE ADEQUACY ISSUE PAPER

Chris Devon

Senior Infrastructure Policy Developer

# This initiative is one of six regional expansion initiatives the ISO is undertaking.

- Initiative was discussed with ISO Board of Governors at their September 17-18, 2015 meeting
- Issue paper provides high-level summary of key elements of an RA program
  - Identifies limited number of tariff provisions that ISO may need to revise to expand regionally
- ISO encourages stakeholders to provide input on tariff provisions they believe ISO needs to evaluate

# The goal is to create tariff provisions that will work for a regional organization.

- Implement forward planning and procurement process that ensures sufficient resources are available to ISO to serve load
- Maintain reliability under stressed and unstressed conditions under a regional organization
- Accommodate different local regulatory authority (“LRA”) resource procurement programs
- **ISO assumes most current RA-related tariff provisions will work under a regional organization**

# Four principles will guide policy development.

- Avoid changes to ISO RA rules that would misalign ISO RA rules with California Public Utility Commission's ("CPUC") and other LRAs current RA programs
- Accommodate different LRA procurement programs
- Ensure load serving entities ("LSEs") provide sufficient capacity to meet their allocation of forecast operating needs to avoid capacity leaning
- Provide incentives for LSEs to provide resources to ISO that are aligned with operational needs that ISO has communicated to stakeholders

# The following items likely need to be revised for a regional organization.

1. Make ISO's RA related tariff language more generic so provisions can apply on regional basis
2. Update default tariff provisions to reflect updated RA conventions and ensure they are sufficiently comprehensive so entities could adopt as an RA program if so desired
3. Decide how to do load forecasting and determine RA requirements under a regional organization

# The following items may need to be revised for regional RA.

4. Revise methodology to determine maximum import capability on transmission branch groups
5. Add tariff provisions to account for transfer capability constraints between large locations on system
6. Possibly add new default tariff provisions to determine how many MWs resources can count toward meeting RA obligations
7. Determine how annual lists will be developed that show qualifying megawatt capacity of resources

# The ISO tariff provisions regarding RA likely need to be made more generic.

- Tariff contains numerous references to CPUC and non-CPUC jurisdictional entities
  - Established to recognize differences between CPUC jurisdictional and non-CPUC jurisdictional entities
- Tariff language likely needs to be revised to be more generic to accommodate additional entities beyond current CPUC jurisdictional entities and non-CPUC jurisdictional entities

# The ISO's default tariff provisions for RA likely need to be revised.

- Section 40.8 of ISO tariff sets forth criteria for determining qualifying capacity (“QC”) that apply only if an LRA has not established rules and provided those rules to ISO
  - Outlines types of resources that may provide QC and methodology for calculating QC for each resource type
- These provisions likely need to be updated to reflect latest counting methodologies currently in use in BAA



# There are several benefits from updating the ISO's default tariff provisions.

- Adding new entities to ISO BAA may increase possibility ISO would need to apply default RA provisions – so important to have most up-to-date provisions
- Expanding scope of these provisions to encompass all of key elements of an RA program would allow LRAs to adopt ISO's default tariff provisions as a comprehensive RA program if they so desire

# Do default tariff provisions still make sense in a regional organization?

- Possible that a regional structure needs a more standardized approach for establishing requirements
- Standardized RA requirements could help ensure all LSEs within BAA provide adequate resources to meet BAA's operational needs and minimize potential for some entities to lean on other entities

# What load forecast will be used for a regional organization?

- Development of accurate and unbiased load forecasts is important
- Currently the load forecast for the ISO's BAA is done by an independent third party: the California Energy Commission
- How would load forecasting work in a regional organization that spans multiple states?

# The methodology to determine the import capability may need to be revised.

- Amount of import deliverability is assessed by ISO using maximum import capability methodology
- Methodology may need to be revised for a regional BAA footprint
  - Limited transmission capability exchange among new ISO “zones” – see slide 21
  - High dependency on imports in certain zones at times different than the ISO peak

# It may be necessary to add tariff provisions to recognize zonal transfer constraints.

- Some transmission paths in ISO's current BAA have limited transfer capability
  - “Path 26 counting constraint” accounts for limited transmission transfer capability across Path 26
- Similar transmission transfer constraints may exist elsewhere in an expanded ISO BAA

# Key takeaways from today's meeting.

- Understand how RA currently works in ISO's BAA to help inform your input on this initiative
- Understand items ISO has identified in issue paper that may need to be changed for a regional organization
- Understand ISO stakeholder process

# Follow-up questions

- Initiative contact: Chris Devon ([cdevon@caiso.com](mailto:cdevon@caiso.com))

# Next steps

- Stakeholders asked to submit written comments by **January 7, 2016** to [InitiativeComments@caiso.com](mailto:InitiativeComments@caiso.com)
- ISO seeks feedback on
  - Items identified in issue paper as possibly needing to be revised for a regional organization
  - Other items to consider
  - Please use comment template at:  
<http://www.caiso.com/Documents/CommentsTemplate-RegionalResourceAdequacyIssuePaper.docx>
- Working group meeting will be held on January 13
- Straw proposal will be posted on February 17



# Resources

## Regional Integration Resources on the ISO Website:

[www.caiso.com](http://www.caiso.com)

Regional Energy Market webpage

<http://www.caiso.com/informed/Pages/RegionalEnergyMarket/BenefitsofaRegionalEnergyMarket.aspx>

Stakeholder Processes webpage



<http://www.caiso.com/informed/Pages/StakeholderProcesses/Default.aspx>

ISO Public Calendar

<http://www.caiso.com/Pages/Calendar.aspx?IsDlg=true>

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Home > Stay Informed > Regional Energy Market > Benefits of a Regional Energy Market

## Benefits of a regional energy market

A regional energy market would better use resources, especially renewables, to reduce greenhouse gas emissions and costs. Enabling the ISO's sophisticated market and grid optimization systems to pick the lowest cost energy to serve demand and give preference to renewable resources across a wide geographic region also means grid planners can build a cleaner, more resilient energy generation and delivery network that will create tangible economic benefits.

### PacifiCorp benefits study (October 13, 2015)

- [Western Grid Integration Could Produce Significant Cost Savings, Environmental Benefits](#) 10/14/2015 14:59
- [FAQ - Benefits Study of PacifiCorp and ISO Integration](#) 10/13/2015 14:12
- [Study: Benefits of PacifiCorp and ISO Integration](#) 10/13/2015 09:52
- [Study: Technical Appendix - Benefits of PacifiCorp and ISO Integration](#) 10/13/2015 09:52
- [What They're Saying - PacifiCorp Integration Study](#) 10/19/2015 14:42
- [Web conference Oct 16, 2015](#)
- [Agenda and Presentation - PacifiCorp Integration Benefits Study Oct 16, 2015](#) 10/19/2015 09:08
- [PacifiCorp Integration Benefits Study Posted, Call 10/16/15](#) 10/13/2015 10:15
- [Stakeholder comments - PacifiCorp and ISO integration benefits study](#)
- [Comments and Responses Matrix - PacifiCorp and ISO Integration Benefits Study](#) 12/03/2015 16:53
- [BAMx Questions - PacifiCorp and ISO Integration Benefits Study](#) 12/03/2015 16:53
- [CDWR Questions - PacifiCorp and ISO Integration Benefits Study](#) 12/03/2015 16:53
- [CPUC Questions - PacifiCorp and ISO Integration Benefits Study](#) 12/03/2015 16:53
- [TURN Comments - PacifiCorp and ISO Integration Benefits Study](#) 12/03/2015 16:53

Recent news releases

Audio recording of the ISO - PacifiCorp benefits study web conference

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## Stakeholder engagement opportunities

Stakeholder input is essential to ISO planning processes and for the success of new initiatives from policy development to implementation. We are committed to providing ample opportunity for stakeholder input into our market design, implementation and infrastructure planning activities. The stakeholder process will shape the market design and policies through a series of proposals, meetings and stakeholder comments.

 [Click icon for RSS Feeds Subscription Page](#)

 [Stakeholder calendar](#)

## Stakeholder initiative timelines and milestones

 [Stakeholder Initiative Milestones](#) 12/02/2015 16:28

[Release planning](#)

[Completed stakeholder processes](#)

## Current initiatives

[Bidding rules enhancements](#)

[Commitment costs](#)

- [Commitment cost enhancements phase 3](#)

[Commodity Futures Trading Commission \(CFTC\) related initiatives](#)

- [Inter-SC trades oversight exemption](#)

[Competitive solicitation process enhancements](#)

[Contingency modeling enhancements](#)

## Energy Imbalance Market Initiatives

[Energy Imbalance Market year 1 enhancements](#)

[Energy Imbalance Market governance development](#)

## Regional integration initiatives

[PacifiCorp participation study](#)

[Regional resource adequacy](#)

[Transmission access charge options](#)

## Recurring stakeholder processes

[2015-2016 Transmission planning process](#)

[2014-2015 Transmission planning process](#)

[2013-2014 Transmission planning process](#)

[Budget and grid management charge](#)

[Flexible capacity needs technical study process](#)

[Generator interconnection procedures](#)

- [Interconnection process enhancements 2015](#)

## Initiatives in implementation phase

[Bid cost recovery and variable energy resource settlements](#)

[Capacity procurement mechanism replacement](#)

[Commitment cost enhancements phase 2](#)

[Contingency reserve cost allocation](#)

[Energy storage interconnection](#)

[FERC order 1000 compliance](#)

- [FERC order 1000 compliance phase 2](#)



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The screenshot shows the California ISO website's navigation menu. The 'STAY INFORMED' tab is circled in red. Underneath it, the 'Notifications' link is also circled in red, with a red arrow pointing to it from the right. The left sidebar contains a list of navigation items, with 'Notifications' selected and highlighted in a green box. Below the navigation menu, the main content area displays various sections including 'Market notices', 'Energy Matters newsletter', and 'System operating messages'. A red arrow points from the 'Notifications' link in the menu to the 'Market notices' section in the main content area.

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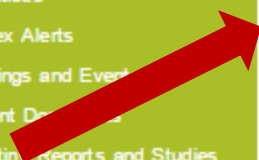
Regional Energy Market Regulatory Filings and Orders

Market notices

Energy Matters newsletter

System operating messages

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## We can notify you about important developments

We send out important notifications regarding ISO operations and markets, alerts and emergencies, and upcoming events. Sign up for the notification lists you prefer or install our app on your mobile device.

### Alerts, warnings, and emergency notices and Flex Alerts

Alerts, warnings and emergency notices are issued when operating reserves or transmission capacity limitations threaten our ability to safely and reliably operate the grid. Flex Alerts are part of an educational and emergency alert program that informs consumers about how and when to conserve electricity during heat waves and other challenging grid conditions.

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Flex Alerts are also available by email and text message upon subscription through [flexalert.org](http://flexalert.org).

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### Market notices

Market notices keep you up to date on meetings, procedure and system changes, stakeholder initiatives and other important information about ISO operations and markets.

Subscribe at  or get them by   or go to the [market notice webpage](#).

### Energy Matters newsletter

Energy Matters is a quarterly newsletter to keep you informed of developments in energy that will impact your community and your business. Many changes are coming to California's energy landscape as the electricity grid of yesterday becomes the energy network of tomorrow.

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### System operating messages

The ISO control room issues messages that describe current operational conditions on the grid and in the market.

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