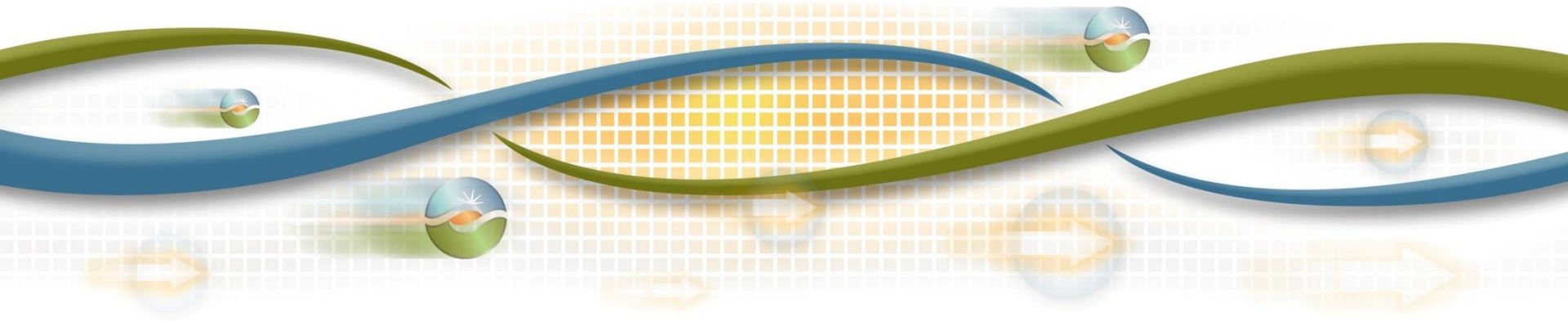




Regional Resource Adequacy Third Revised Straw Proposal

Stakeholder Meeting
October 6, 2016



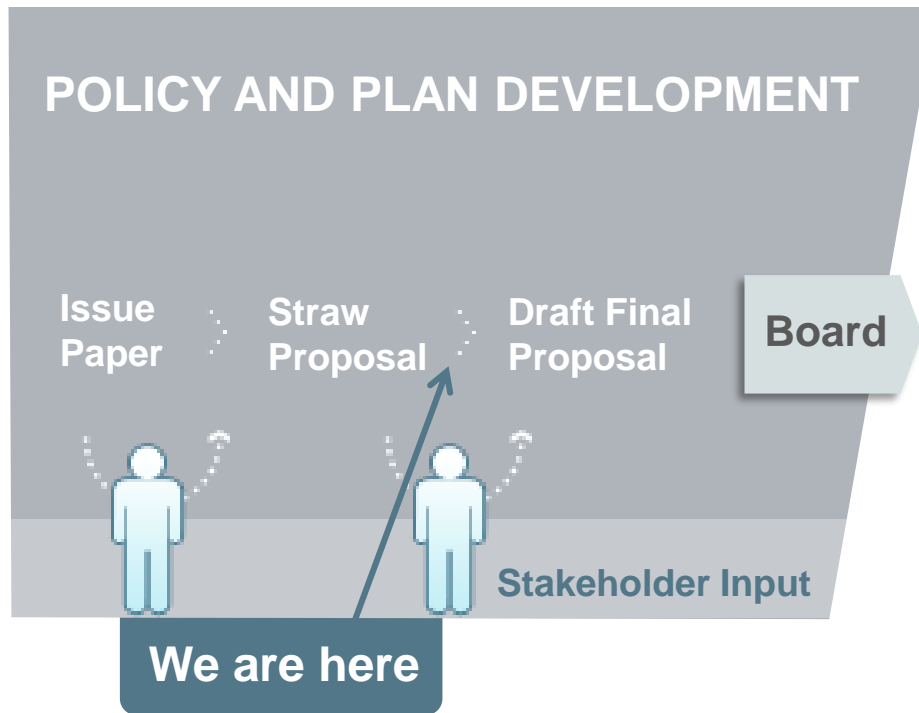
Acronyms

- ADR – Alternative Dispute Resolution
- BAA – Balancing Authority Area
- BPM – Business Practice Manual
- CEC – California Energy Commission
- CPM – Capacity Procurement Mechanism
- DR – Demand Response
- DG – Distributed Generation
- EE – Energy Efficiency
- ELCC – Effective Load Carrying Capability
- ETC – Existing Transmission Contract
- LOLE – Loss of Load Expectation
- LSE – Load Serving Entity
- LRA – Local Regulatory Authority
- NGR – Non-generating Resource
- MIC – Maximum Import Capability
- PDR – Proxy Demand Resource
- PRM – Planning Reserve Margin
- PTO – Participating Transmission Owner
- RA – Resource Adequacy
- RAAIM – Resource Adequacy Availability Incentive Mechanism
- RDRR – Reliability Demand Response Resources
- RTO – Regional Transmission Operator
- TAC – Transmission Access Charge
- TOR – Transmission Ownership Rights
- TPP – Transmission Planning Process
- UDC – Utility Distribution Company
- WECC – Western Electricity Coordinating Council
- WSC – Western State Committee

Agenda

| Time (PST) | Topic | Presenter |
|---------------------|---|------------------|
| 10:00 – 10:10 am | Welcome and Introduction | Kristina Osborne |
| 10:10 – 11:00 am | Load Forecasting | Chris Devon |
| 11:00 – 11:30 am | Planning Reserve Margin | |
| 11:30 am – 12:00 pm | Uniform Counting Rules | Karl Meeusen |
| 12:00 – 1:00 pm | Lunch | |
| 1:00 – 1:30 pm | Uniform Counting Rules (continued) | Karl Meeusen |
| 1:30 – 2:15 pm | Showings/validations & backstop procurement (CPM) | Chris Devon |
| 2:15 – 2:45 pm | Maximum Import Capability | |
| 2:45 – 3:15 pm | Imports for RA | |
| 3:15 – 3:30 pm | Allocation of RA requirements to LSEs/LRAs | |
| 3:30 – 3:45 pm | External resource substitution for internal resources | |
| 3:45 – 3:55 pm | Other issues | |
| 3:55 – 4:00 pm | Next steps | Kristina Osborne |
| 4:00 pm | Adjourn | |

Stakeholder Process



Updated Initiative Schedule

| Date | Milestone |
|----------------|--|
| September 29 | Third revised straw proposal posted |
| October 6 | Stakeholder meeting on third revised straw proposal - (Folsom, CA) |
| October 27 | Stakeholder written comments on third revised straw proposal due |
| Early December | Draft final proposal posted |
| Mid December | Stakeholder meeting on draft final proposal - (Folsom, CA) |
| Late December | Stakeholder written comments on draft final proposal due |

Load Forecasting

Proposed monthly peak load forecasting

- ISO proposes a monthly peak load forecasting aggregation approach
 - Allows LSEs (or forecasting agencies) to determine how to conduct individual LSE coincident peak forecasting
 - ISO will consolidate individual LSE level load forecasting data
- This approach leverages individual LSE load forecast submittals to identify:
 - Individual LSE level resource adequacy requirements
 - Determine system-wide resource adequacy, *i.e.*, total System RA needs

Load forecasting proposal allows various approaches

- ISO will require monthly coincident peak forecast submittals for all LSEs
 - Either LSEs themselves, or a forecasting agency, such as CEC, must submit these individual LSE level load forecasts to ISO
- CEC can continue conducting load forecasting for its jurisdictional California LSEs with minimal impact to current processes
- Similar flexibility is provided for all LSEs and/or load forecasting agencies to continue conducting load forecasting with minimal impact to current processes

Accommodating different coincidence factor approaches

- Load forecast submittals need to apply a coincidence adjustment to non-coincident peak forecasts based on contribution to expanded BAA observed system peaks
 - ISO will provide historical monthly system peak data for use in this process and will post information on ISO public website
- Allows individual LSEs/forecasting agencies to make their own determination how to apply coincidence factor to determine their coincident peak load forecasts
 - Not necessary for ISO to develop a uniform coincidence factor methodology under this proposal
 - Provides flexibility for individual LSEs and forecasting agencies to use their preferred methods

Load forecast submittal components

- Primary load forecast submittal components:
 - Non-Coincident Peak Demand Forecast
 - Peak Demand Forecast, Coincident with ISO System Monthly Peak Demand
- Supporting load forecast submittal components:
 - Narrative summary of coincident peak forecast methodology
 - Narrative summary of non-coincident peak forecast methodology
 - Descriptions of all forecast models used in the forecast process, including example calculations
 - List of load modifiers and other load modifying resources such as demand response programs

ISO load forecast submittal review process

- ISO proposes to have the ability to review a subset of any of the individual LSE forecast submittals each year
 - ISO will utilize load forecasting methodology support document in this process
- ISO review will help to deter inaccurate submittals and unreasonable forecasting methodologies
 - ISO will also publish all LSE specific load forecast error (%) for previous years once that data is available to provide transparency
- ISO alternative dispute resolution (ADR) process is available as an additional avenue for potential recourse if entities do not agree with the ISO's determination

ISO load forecast submittal review process (cont.)

- If ISO review reveals an improper statistical method or other issues with individual LSE load forecast submittal:
 - ISO will discuss issues identified in its review with **ALL** relevant entities, includes the LSE, LRA, and any involved forecasting agency
 - ISO will not seek adjusted LSE forecast if LSEs and involved entities provide adequate explanation or justification for issues raised by ISO
 - If entities have not adequately explained issues raised; ISO retains right to request an adjusted load forecast addressing identified concerns to be resubmitted by forecasting entity
 - If LSE/forecasting entity declines to resubmit adjusted forecast addressing concerns, ISO will conduct a load forecast for LSE in question and will use the ISO forecast

ISO will conduct system wide load forecast benchmark

- Because the ISO proposes allowing great flexibility under this aspect of the proposal the ISO will also conduct a top down forecast to compare to aggregation forecasting results
- Proposed as a benchmarking exercise
 - ISO will perform a system-wide load forecast based similar to year-ahead forecasts performed annually for ISO Summer Load and Resources Assessment
- System coincidence peak forecast would be compared to the sum of all LSE's individual coincidence peak forecasts
 - If significant discrepancy between forecast results the ISO would investigate to determine whether further evaluation of individual LSE forecasts are warranted

ISO guidance on forecasting methodologies

- Because proposed approach provides opportunity for different forecasting methodologies the ISO will provide guidance to LSEs and forecasting agencies regarding acceptable statistical methodologies for load forecasting
 - ISO intends to develop and publish a document that outlines the various statistical methodologies that are acceptable
- ISO will develop this load forecasting methodology document prior to any new participants joining an expanded ISO balancing area
 - Document will help guide forecasters in producing reasonable forecast submittals and be used in the ISO forecasting review

Load migration intra-year LF updates

- ISO proposes to allow LSEs to update load forecasts intra-year for load migration due to retail choice only
 - Only monthly load forecast adjustments based on quantifiable and demonstrated load migrations, *i.e.*, changes in customer base due to direct access would be allowed
- ISO will accept load migration updates to load forecasts for retail choice that may be submitted by LSEs or load forecasting agencies
- Some stakeholders requested ISO allow intra-year updates to load forecasts for other reasons outside of LSE's control
 - ISO disagrees with allowing that level of flexibility for intra-year load forecast updates because it would allow for significant manipulation potential

Planning Reserve Margin

Planning Reserve Margin

- ISO proposes to establish a system-wide PRM target to evaluate reliability levels and ensure adequate capacity will be made available to the ISO markets
- One item under the governance proposal is creation of a Western States Committee (WSC):
 - WSC will have some authority over certain aspects of resource adequacy and TAC cost allocation issues
 - ISO envisions WSC playing a role in determining the PRM
 - ISO is currently working on issue paper to discuss proposed role of WSC (to be posted in near future)

ISO default PRM target: Loss of Load study approach

- Proposing to use a probabilistic study to determine a default system-wide PRM target
 - Probabilistic PRM targets generally considered industry best practice used in many other regions
 - Specified level of reliability can be measured using an established reliability criterion, such as 1-in-10 Loss of Load Expectation (LOLE)
- No current WECC standard and other regions commonly utilize a 1-in-10 LOLE standard
 - ISO proposes to conduct default PRM analysis using the 1-in-10 LOLE level of generation reliability criterion in order to establish the system-wide PRM target

Frequency of System-Wide PRM Target Analysis

- Propose to conduct an LOLE study to determine the system-wide PRM target on a periodic basis
 - System-wide PRM target would be refreshed, at a minimum, when significant changes to the ISO system, such as when a new PTO joins ISO BAA
- PRM target would remain fixed between LOLE study updates
 - Changes to system-wide PRM would be made only once a new PRM value is established by a new study with stakeholder input

Uniform Counting Rules

The ISO proposes to develop uniform counting methodologies for capacity resources

- Ensures that all resources' capacity contributions reflect the capacity contribution to an expanded ISO, not just to a particular LRA
- Standard counting methodologies allows the ISO to consistently determine the maximum capacity value for purposes of the ISO system reliability assessment
- Counting methodologies will be determined through a transparent and open stakeholder process
- LRAs may develop their own counting rules for state procurement/policy objectives
 - Proposed counting rule apply only to ISO assessments
- All capacity values will be subject to an ISO deliverability assessment

The ISO proposes to use the following capacity counting methodologies

1. P_{max}: The maximum power output a resource can reach as established by an ISO conducted P_{max} test.
2. Effective Load Carrying Capability (ELCC): A probabilistic assessment to determine the likelihood that the ISO would be unable to serve load
3. Historical Data: The monthly historic performance during that same month using a three-year rolling average.
4. Registered Capacity Value: A process by which supply-side demand response or load based resources inform the ISO the amount of capacity it will provide
5. Sustainable Energy Output Test: A test to ensure energy limited resources are able to provide a sustained output for a defined period of time
6. Ancillary Service Testing: 30 minute energy test to determine the capacity values for resources not providing energy bids

Eligibility to use Pmax for capacity value

- An evaluation of a resource's maximum output which is verified by the ISO
 - Resource must sustain output at Pmax for one hour
 - Can also demonstrate using actual market dispatch
- ISO proposed to use this option for:
 - Thermal: Nuclear, natural gas, oil, coal, geothermal, biomass, and biogas
 - Excludes Qualifying Facilities
 - Participating hydro
- New resources of these types must conduct a Pmax test prior to receiving a capacity value

The ISO proposes to utilize an ELCC methodology for solar and wind resources

- ISO will develop an ELCC methodology to determine uniform counting rules for wind and solar resources
 - Specific methodology established in a subsequent stakeholder process
- ELCC values will be established based on an assessment of entire ISO footprint
- May consider ELCC for other resource types in the future
- ISO will utilize exceedance methodology if ELCC methodology is not completed prior to annual reliability assessment

Historical methodology

- The historical methodology is a resource's monthly historic performance during that same month during the Availability Assessment Hours, using a three-year rolling average
- The ISO proposes to use the historical methodology for
 - Run-of-the-river hydro
 - Qualifying facilities including Combine Heat and Power
- Resources with missing data due to outages occurring during the availability assessment hours will use average values for the same hours on the same calendar day but from other years

Registered capacity value

- The ISO proposes to use registered capacity value for load based capacity products such as:
 - Proxy Demand Response (PDR)
 - Reliability Demand Response Resource (RDRR)
- Scheduling coordinator for resource submits the capacity value
- Capacity value should be based on a resource ability sustain output (i.e. load reduction) for four hours
- ISO will accept and establish as the resource's capacity value subject to resource performance audit or resource testing

Performance audit and unannounced compliance testing for registered capacity value resources

- The ISO may conduct random compliance testing for all resources with a registered capacity
 - Audits
 - Seasonal tests
- The ISO may conduct performance audits
 - i.e. Review of actual performance relative to dispatch instruction and registered capacity value
- The ISO may conduct audits for any months the resource has
 - Been shown as a capacity resource and
 - Received an ISO dispatch

Registered capacity value performance audit

- The ISO will perform audits of
 - Actual dispatches of the resource.
 - Bid-in capacity quantity and frequency
 - Bid-in capacity compared to the performance of the resource.
- If the resource fails the audit, the resource will be deemed unavailable in the RAIM calculation

Registered capacity value Seasonal tests

- The ISO may test resources with registered capacity values once seasonally
 - Pre-summer (January – April),
 - Summer (May – September),
 - Post-summer (October – December)
- The ISO will only have the ability to issue a test event in situations meeting these following criteria:
 - Resource has not already demonstrated its registered capacity value for that season,
 - It is a non-holiday weekday, and;
 - It is during the applicable availability assessment hours for the month

Registered capacity value seasonal tests (cont.)

- If the resource fails the test
 - ISO will assess the resource as unavailable under the RAIM for the number of MWs by which the resource fell short of the registered capacity value
- Resource would be eligible for retesting by submitting a retesting request to the ISO
 - The ISO would administer an unannounced retest within seven days of the request
 - If resource fails second test, the ISO would consider unavailable for RA for the lower testing shortfall MW quantity for the remainder of the season

Sustained Energy Output Test

- Evaluate capacity value of an energy-limited resource by testing the resource's sustained output over a four-hour period
 - Non-generator Resource (NGR)
 - Pumped Hydro
- Resource could substitute an actual four-hour dispatch from the previous 12 months as a demonstration of capacity value
- The test would require the resource to provide four hours of continuous output to determine its maximum sustainable discharge capability in order to establish the capacity value
 - Ensures ISO has sufficient energy output to cover peak load conditions plus uncertainty range

Ancillary Service Testing

- Participating load resources will be tested through the Resource Performance Verification process which
 - test resources providing ancillary services
- Applies to participating load and Regulation Energy Management (REM) NGRs
- 30 minute energy test to determine the capacity values
- ISO will assess the need to apply a limit on the amount of RA capacity these resources can provide

RA Showings and Validation

RA Showings and Validation Process Modifications

- ISO requires LSEs and suppliers to participate in a resource “showing” process
- This resource adequacy showing process requires LSEs to demonstrate that they have procured and made available to the ISO adequate resources
 - System, Local, and Flexible
 - cross validates these demonstrations against supplier’s similar showings in their supply plans
- ISO validates showings during each annual and monthly assessments to determine whether any potential deficiencies exist

Reliability Assessment changes to validation process

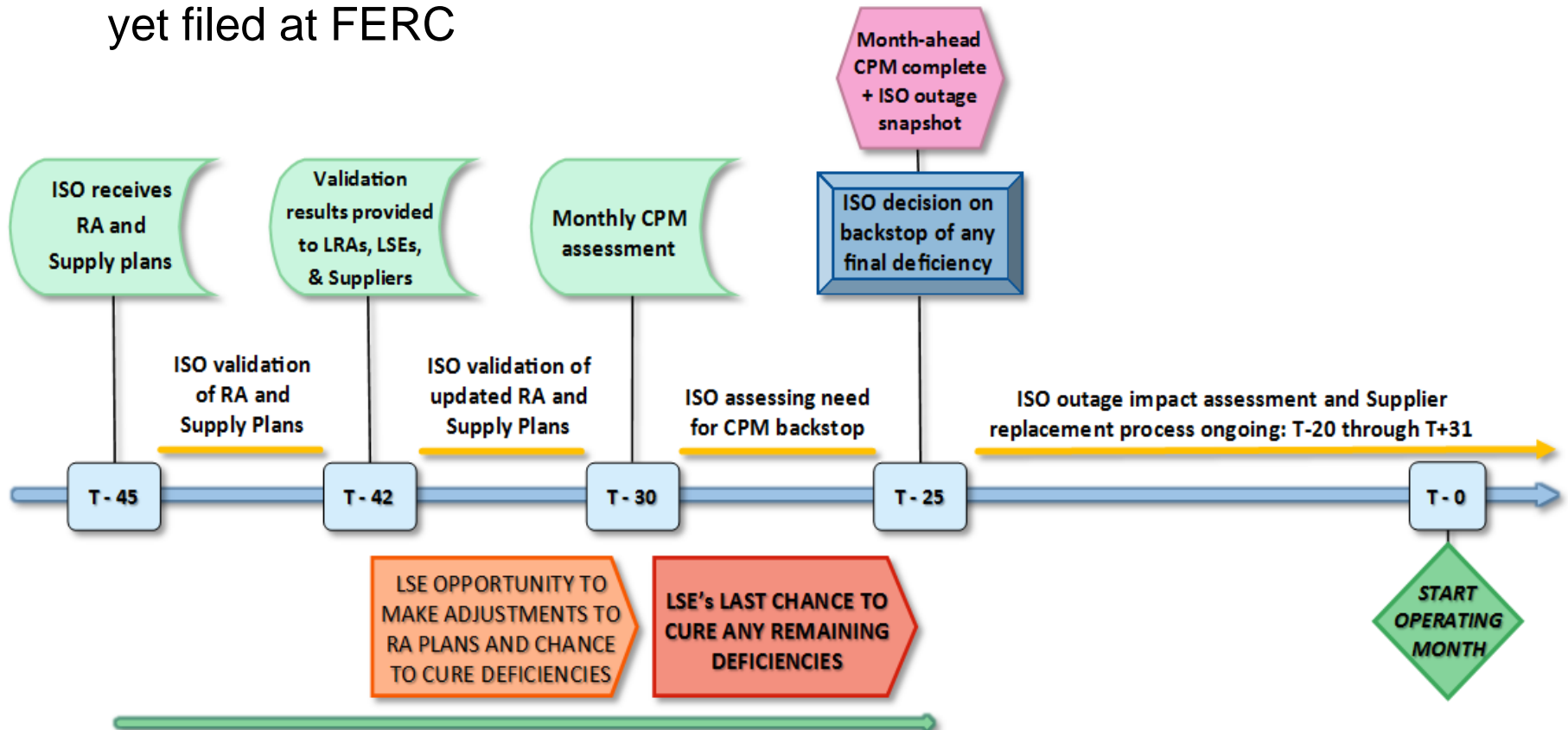
- ISO will conduct a reliability assessment similar to current practice.....With some important modifications:
 - ISO will utilize system-wide PRM target for the System RA assessment - no longer using individual LRA PRMs for this assessment
 - ISO will utilize the uniform capacity values for resources - no longer using individual LRA counting rules for assessment
- What does this mean?
 - ISO reliability assessment will only use the system-wide PRM for PRM requirement in the assessment of individual LSE and system wide resource adequacy
 - All resources will be provided a uniform counting rules maximum capacity valuation through ISO process each year

Showings and Validation Modifications

- RA showings and validation process allows ISO to identify any potential deficiencies for:
 - Individual LSEs
 - System-wide basis
- Cross validation is the first step
 - ISO matches LSE records to supplier records
 - ISO will confirm total MW value for each resource ID **does not exceed** each resource's maximum deliverable MW capacity value (determined through ISO uniform counting rules process)
- ISO will notify any potentially deficient LSEs and provide opportunities to cure potential deficiencies

RA Showings and Validation Timeline

- The diagram illustrates the timeline for ISO showings and validation process approved by the ISO Board under the RSI 1 initiative, but not yet filed at FERC



MONTH-AHEAD RELIABILITY ASSESSMENT TIMELINE: T-45 THROUGH T-25

Please note: Diagram reflects changes that will be implemented in accordance with approved RSI process and dates indicated in diagram are not yet in affect

Backstop procurement and CPM process and changes

- If ISO determines capacity shortage requires backstop procurement exists based on reliability assessment:
 - ISO will inform LSEs and evaluate need for potentially exercising backstop procurement authority
 - When identified reliability needs are found ISO will follow process defined in tariff Section 43A
- Current tariff does not expressly contemplate ISO performing a reliability assessment as proposed
 - ISO proposes revisions to recognize reliability assessment may identify a shortage the ISO needs to cure and authorize the ISO to procure backstop capacity as a last resort to cure shortage

CPM tariff changes necessary to recognize reliability assessment

- ISO proposes revisions for four categories of CPM:
 - Insufficient RA resources in a LSE's annual or monthly RA plan
 - Deficiency in local capacity area resources in a LSE's annual or monthly RA plan
 - Collective deficiency in a local capacity area after accounting for all procured RA resources
 - Cumulative deficiency in the total flexible RA capacity in the annual or monthly flexible RA capacity plans or in a flexible capacity category in the monthly RA plans of LSEs
- Only these categories of CPM designation are affected
 - Other CPM provisions for reporting requirements, transparency, opportunities to cure, duration of designation, etc. would not change

System RA backstop procurement need identification

- ISO will evaluate overall system-wide level of procurement provided through cross-validated RA showings against the system-wide PRM target
 - Cumulative deficiency occurs when sum total of all RA capacity shown is less than approved system-wide RA requirement
 - Possible for an individual LSE to be deficient and not have a resulting cumulative deficiency if another LSE has shown capacity in excess of its requirement
 - Not possible to have a cumulative system deficiency if all LSEs show their required quantity of RA capacity

System RA backstop procurement cost allocation

- ISO may decide to engage backstop procurement only if identified cumulative deficiency remains uncured
 - If ISO procures backstop capacity to fill an uncured cumulative deficiency the ISO will only procure up to amount needed to eliminate cumulative deficiency (will not cure full amount of each individual LSE deficiency)
 - Associated costs will be allocated first to LSEs that have not met individual system RA requirements

System RA backstop procurement cost allocation (cont.)

- Consistent with current cost allocation rules
 - Cost allocation for any backstop procurement will continue to be based on short LSEs' proportional share of any backstopped cumulative shortage:

$$\text{Total cost allocation to a deficient LSE} = \frac{\text{Backstop MW procured} \times (\text{LSE showing deficiency})}{\text{Sum of all deficiencies of deficient LSEs}}$$

Please note: Examples of how this cost allocation will be applied were presented at the August 10, 2016 working group meeting: <http://www.caiso.com/Documents/AgendaandPresentation-RegionalResourceAdequacyWorkingGroup-Aug102016.pdf>

Maximum Import Capability

Maximum Import Capability

- ISO will make adjustments to MIC calculation method
 - Intended to capture true maximum and reliable MIC when peak load of a new region in an expanded BAA occurs non-simultaneously with the peak load of rest of ISO and there are no simultaneous constraints between that area of an expanded BAA
- ISO will also make adjustments to MIC allocation process
 - Intended to reflect proposed TAC options policy
 - Splits MIC allocation proportionally based upon TAC options sub-regions that are paying for parts of underlying transmission of overall system

MIC calculation

- Current MIC calculation methodology without proposed adjustment would needlessly restrict the MW amount that can actually be reliably achieved for certain branch groups
 - Affected branch groups are mainly used to serve peak load in new areas where peak is not simultaneous with rest of system
 - Only would be used when that area is identified to have no simultaneous constraints with rest of the system
- Non-simultaneous analysis of historic import observations works without causing reliability issues
 - Once MIC levels are determined under this approach they are used as input assumptions in generation interconnection and annual TPP to ensure MIC levels are deliverable to aggregate of load and there are no simultaneous import constraints

MIC calculation (cont.)

- ISO intends to evaluate simultaneous constraints for any expanded areas of the ISO balancing area:
 - Simultaneous deliverability constraints can be identified among imports and/or internal generation
 - Constraints are resolved by a least squares algorithm where internal generation and/or imports with highest impact on constraint is curtailed more than those with a smaller impact, as described in generation interconnection BPM
 - If over time, simultaneous constraints are identified between MIC intertie points, then a similar approach could be utilized
- If ISO finds simultaneous import constraints during planning or operating studies, ISO will calculate MIC for new area of system simultaneously with existing part of ISO that has same simultaneous constraint

MIC allocation

- ISO proposes to limit initial allocations of MIC capability only to those ISO sub-regions that are defined by TAC options proposal sub-regions
 - Allocations based on a load ratio share basis of only the LSEs serving load within each sub-regional TAC areas
 - Consistent with proposed TAC options policy
- Ensures LSEs in the current BAA will still receive similar allocations of MIC capability that are made available by current BAA interties today
- LSEs serving load within new areas of expanded BAA (identified as one of the sub-regional TAC areas) will receive MIC capability that is provided by that area's current capability

MIC allocation (cont.)

- Proposed change will limit entities in a particular TAC sub-region to nominate only on interties into that sub-region area in the initial steps of MIC allocation process
- Will still allow LSEs to utilize MIC in other sub-regions of the ISO through the bilateral trading
 - Under Step 8 (Transfer of Import Capability) of MIC allocation process
 - Also Step 13 (Requests for Balance of Year Unassigned Available Import Capability) of MIC allocation process will allow for all remaining MIC capability that has yet to be assigned on all interties would be open for nomination by all LSEs in all areas of the entire expanded ISO BAA

MIC allocation (cont.)

- MIC process modifications will allow the ISO to track and validate different sub-area allocations during the process in order to accomplish the proposed split of MIC allocations among sub-regions to align with TAC options proposal
 - Description of all steps included in proposal under Section 5.3.2 (Pages 31-32)
 - Detailed sub regional MIC allocation example also included in proposal Section 5.3.2 (Pages 35-34)

Allocation of MIC capability created by new regionally cost-shared transmission projects

- For new regionally cost-shared transmission projects that create additional MIC capability:
 - ISO proposes to allocate new and/or additional MIC capability created by new cost-shared transmission projects proportionally based on the associated cost allocation to TAC sub-regions of the new lines.
 - ISO will calculate MIC created by new regionally cost-shared projects using forward looking MIC calculation process that is already established for evaluating MIC for public policy needs
 - ISO would make MIC allocation on an intertie basis for any new regionally cost-shared projects creating a new intertie

Requirements for RA Imports

Requirements for RA Imports

- ISO proposes clarifications to imports for RA tariff language to remove ambiguity in current provisions for imports qualifying for RA
- Proposal is focused on ensuring the provisions clearly state all import resources shown on RA showings are required to be secured prior to month-ahead showings due date time frame
 - *RA showings that designate import MWs to meet RA obligations across interties are considered to be a firm monthly commitment to deliver those MWs to the ISO at the specified interconnection point with the ISO system*

Requirements for RA Imports

- Concern current tariff ambiguity could be interpreted as allowing LSEs to demonstrate meeting RA requirements and move into operating month without securing these resources or contractual obligations prior to month-ahead timeframe
 - ISO could then be relying on unsecured resources that may have been double counted as available for use by other BAAs
- ISO proposes to clarify the tariff provisions for RA imports to clearly state that all import resources shown on RA showings will be required to be secured prior to the month-ahead showings due date (T-45)
 - Non-resource specific contractual obligations for capacity or firm energy delivery must be secured prior to month-ahead showings due date

Requirements for RA Imports

- ISO will not allow contractual arrangements that have not been executed or otherwise secured prior to the due date for RA showings to be eligible for purposes of meeting RA requirements
 - Only contractual arrangements for import resources that have been secured prior to RA showing deadlines for the month-ahead time frame (T-45 days) would qualify for use in meeting RA requirements
 - No short-term/intra-month contracting will be eligible for RA
- ISO will continue validation of RA showings by cross-validation of LSE and supplier showings to verify matching LSE and Supplier Resource ID numbers
 - ISO believes that this proposal is appropriate to ensure reliability and avoid potential gaming/manipulation and capacity leaning

Allocating RA requirements to LRAs and LSEs

Allocating RA requirements to LRAs and LSEs

- ISO proposes to create a mechanism for allocating RA requirements directly to LSEs with LRAs that do not wish to assume the role of receiving RA requirements from ISO and allocating requirements to respective LSEs
- ISO also must address circumstances where more than one regulatory entity oversees a multi-jurisdictional LSE's procurement decisions in an expanded BAA
- ISO proposes to allocate resource adequacy requirements directly to all multi-jurisdictional LSEs

Allocating RA requirements to LRAs and LSEs

- Due to complexity of calculations and LRA-specific need determinations that would be required for each individual LRA area of a multi-jurisdictional LSE, ISO determined it is appropriate to allocate all RA requirements directly to multi-jurisdictional LSEs
- Allocating resource adequacy requirements directly to multi-jurisdictional LSEs is a more straightforward approach for calculating and allocating overall resource adequacy requirements of such LSEs
- This approach is consistent with the practice in other ISO/RTO regions that have had to deal with multi-jurisdictional LSEs

External resource substitution for internal resources

External resource substitution for internal resources

- ISO considered removing current restriction that disallows external resources from being used as substitute for internal resources shown for RA
- ISO believes complexity associated with implementation outweigh the potential benefits of making modifications to these provisions at this time

External resource substitution for internal resources (cont.)

- Changes to this exclusion of external resources from substitution for internal resources would require significant implementation changes
- ISO would need to ensure the ability to track the requirement that similar must offer obligations were met and proper bid insertion was performed if necessary
- Includes potential need for changes to master file information associated with substitution resource

Other items

Monitoring locational resource adequacy needs and procurement

- ISO proposes to monitor the locational resource adequacy needs across an expanded balancing area.
- ISO also will continue to monitor any internal constraints under the current ISO study processes in place today and will inform stakeholders about these locational needs
- NOT proposing any additional RA requirements

Monitoring locational resource adequacy needs and procurement (cont.)

- Monitored zonal boundaries will be determined by known major transmission constraints, such as WECC Paths that limit power transfers between the regions
 - For example, should PacifiCorp join the expanded ISO BAA there would be three WECC paths that would create four candidate zones:
 1. Path 26 between Northern California and Southern California
 2. Path 66 (COI) between PACW and Northern California
 3. Path 17 (Borah West) between PACE and PACW
- Resulting zones for proposed monitoring:
 - PACE, PACW, Northern California and Southern California

Updating ISO tariff language to be more generic

- This element addresses need for tariff provisions related to resource adequacy to be more generic
- Current tariff utilizes California-centric language that may not be applicable to entities in an expanded BAA
- ISO believes this aspect of the proposal is necessary to avoid any unintended barriers associated with current tariff language as the ISO BAA expands
- Specific tariff changes will be provided during tariff language development with opportunities for stakeholder input

Next Steps

- Stakeholders are requested to submit their written comments by October 27 to initiativecomments@caiso.com
- Please use the template to submit comments on the initiative webpage at:
<http://www.caiso.com/Documents/CommentsTemplate-RegionalResourceAdequacy-ThirdRevisedStrawProposal.doc>
- Initiative contact: Chris Devon (cdevon@caiso.com)