



# Enhancements to the EIM Resource Sufficiency Evaluation

Don Tretheway  
Senior Advisor, Market Design Policy

Regional Issues Forum  
November 28, 2018

## The ISO has implemented the following resources sufficiency test enhancements:

- Freeze load and VER forecast between T-55 and T-40 test (implemented on 12/12/17)
- Flexible ramp requirements for BAAs are now posted on OASIS (implemented on 12/22/17)
- Resource ramp capability information is now posted on CMRI (implemented on 4/4/18)
- Net import calculation improvement when EIM entity fails flex ramp test for multiple intervals (implemented on 6/12/18)

# The ISO is providing additional metrics regarding the resource sufficiency evaluation in the MPPF

- Per stakeholder request, the ISO has already published data related to the frequency of resource sufficiency evaluation failures for each BAA
  - See August 29, 2018 Market & Performance Planning Forum (MPPF)
- ISO plans to develop additional metrics that will be published and discussed at the MPPF on December 11, 2018

## Introduction of a 1% tolerance band for the flexible ramping test can be implemented by end of 2018

- Currently EIM entities will fail the flexible ramping test even if requirement is not met by an inconsequential MW value (i.e. 0.5 MW)
- ISO proposes a 1% (or 1MW, whichever is greater) absolute tolerance band
  - If ramping capability for one of the four ramping tests is within the tolerance band, EIM transfers will not be limited
- 1% tolerance band aligns with the current balancing test to determine if under/over scheduling penalties apply

# 15-min freeze for flexible ramping test failures can be implemented in Spring 2019 (1 of 2)

- Current test evaluates ramp intervals from last 15-min interval of proceeding operating hour to each 15-min interval of current operating hour
  - If any of the four ramp tests are failed, EIM transfers are limited
- ISO proposes to evaluate each ramp individually
  - If a ramp test is failed, EIM transfers will be held to the previous 15-min interval or base transfers which ever is less restrictive.

## 15-min freeze for flexible ramping test failures can be implemented in Spring 2019 (2 of 2)

- Flexible ramping test caught instances where insufficient economic bids to meet 15-min load forecast
- Corresponding changes are needed to the capacity test
  - Compare hourly bid range to each 15-min load forecast and historical intertie declines
  - If insufficient economic bids, then EIM transfers are limited at the last 15-min interval of previous operating hour
- More complicated implementation. Need new web service to publish applicable transfer limits.

## Use of new approach to calculate flexible ramping requirement can be implemented with a BPM change

- Stakeholders have suggested the flexible ramping requirement be calculated based on forecasted load, wind and solar
- Currently, the ISO uses a histogram to determine the requirement
- ISO is investigating alternate approaches to calculate the requirement

## 15-min granularity for balancing and capacity tests will be implemented with the *DAME* initiative in Fall 2020

- Balance test will be performed for each fifteen-minute interval and corresponding over/under scheduling penalties will be applied to that 15-min interval
- Capacity test will be performed for each 15-min interval and failure will result in limiting EIM transfers to previous fifteen-min interval value



## Holistic review of the resource sufficiency evaluation will occur in the *EDAM* initiative

- Extending the day-ahead market to the EIM (EDAM) will require a day-ahead resource sufficiency evaluation
- A day-ahead resource sufficiency evaluation must align with the real-time evaluation
- Roadmap assumes positive feasibility study. EDAM initiative planned to start mid-2019 and will include a holistic review of the resource efficiency evaluation

# The ISO has appreciated stakeholder engagement to develop these enhancements

- Tolerance band and 15-min freeze for flexible ramping test will be implemented as soon as possible
- Moving capacity and balancing test to 15-minute granularity planned for Fall 2020
- Holistic review within scope of the EDAM initiative