FCM Performance Incentives Conforming Changes

Introduction and background discussion on the FCM Performance Incentives design

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Proposed Effective Date: 6/1/2018

- The approved FCM Performance Incentive (or pay-for-performance) design will become effective on 6/1/2018
  - Various elements of the design require clarifying market rule edits to conform with other market designs that become effective prior to 6/1/2018
- Clarifying edits are needed for various elements of the approved design:
  - Balancing Ratio
  - Capacity Performance Bilaterals
  - Demand Resources with mixed measure types
  - Conform to other proposed changes (e.g., sub hourly settlement)

Discussion Overview

1. Review the FCM Performance Incentives design:
   - Balancing Ratio
   - Actual Capacity Provided
   - Capacity Performance Score (or “Score”)
   - Capacity Performance Payments
2. Introduce elements of the FCM Performance Incentives design that require conforming changes

Detailed discussions on the ISO proposal will take place during the November Markets Committee meeting

REVIEW: FCM PERFORMANCE INCENTIVES

Balancing Ratio Overview

$$\text{Balancing Ratio} = \frac{\text{Load}^{*} + \text{Reserve Requirement}}{\text{Total CSO MW}}$$

- The intent of the Balancing Ratio is to determine each resource's share-of-system performance obligation, relative to load, during a Capacity Scarcity Condition (CSC)
- A Balancing Ratio (BR) will be calculated for each 5-minute interval where a CSC occurs
- A Balancing Ratio is calculated at both the system level and zonal level depending on the type of reserve shortage

*Where load is the sum of generation, net imports and demand reductions provided at the time of the CSC

Actual Capacity Provided (ACP) Overview

- A resource's ACP is the amount of energy and reserves provided during a Capacity Scarcity Condition (CSC)
- A resource does not need to have a CSO in order to receive Capacity Performance Payment
  - Whether or not a resource has a CSO, ACP is calculated for the resource
- ACP calculations are specific to the resource type providing energy or reserves during a CSC

Capacity Performance Score (Score) Overview

Score = ACP - BR X CSO

- The product of the BR and a resource's CSO determines the resource's share-of-system performance obligation (i.e., BR adjusted CSO)
- A resource score is calculated by comparing the BR adjusted CSO to its ACP during the interval
  - Those delivering more than their BR adjusted CSO (more than their share) get a positive score and thus a positive Performance Payment
  - Those delivering less than their BR adjusted CSO (less than their share) get a negative score thus a negative Performance Payment

Example: Capacity Performance Score

The below example is done for an hour to help explain concepts; however, actual settlement would be done for each five-minute interval

Parameters

A.	Resource CSO	= 100 MW
B.	Load*	= 25,000 MW
C.	Total CSO	= 35,000 MW
D.	Reserve Requirement	= 2,650 MW
E.	Resource ACP during CSC	= 95 MW
F.	BR = (B+D) / C	= 0.79

Example: Resource Performance Score

BR adjusted CSO = 0.79 x 100 MW = 79 MWh

Score = 95 MWh – 79 MWh = 16 MWh

*Where load is the sum of generation, net imports and demand reductions provided at the time of the CSC

Capacity Performance Payment Overview

- The Capacity Performance Score is multiplied by the Performance Payment Rate (PPR) to determine resource Capacity Performance Payment
- The PPR will be implemented in three phases:
  - $2,000/MWh effective 6/1/2018 through 5/31/2021 (Capacity Commitment Periods nine through eleven)
  - $3,500/MWh effective 6/1/2021 through 5/31/2024 (Capacity Commitment Periods twelve through fourteen)
  - $5,455/MWh effective 6/1/2024 and thereafter (Beginning Capacity Commitment Period fifteen and thereafter)

Example: Capacity Performance Payments

Building upon the example on slide 8, the resource Capacity Performance Payment is:

- Score = 16 MWh
- Effective PPR: 2,000 $/MWh
- Capacity Performance Payment = 16 MWh X $2,000/MWh = $32,000

ELEMENTS REQUIRING CONFORMING CHANGES

Overview of Proposed Changes

- Clarifications to BR calculations for coincident events
  - No changes proposed to the BR methodology
  - Changes center on when a system or zonal calculation is applied
- Capacity Performance Bilaterals
  - Clarifying rules and details added to the Capacity Performance Bilateral design
- Conforming changes to Section III.13 for reserve requirement terminology changes

Project Timeline

Stakeholder Committee and Date	Scheduled Project Milestone
Markets Committee October 3-4, 2017	Project Introduction
Markets Committee November 8-9, 2017	Proposal and Tariff language presentation
Markets Committee December 5-6, 2017	Vote
Participants Committee January 2018	Vote

Questions

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