FCM Enhancements Phase II

FCM Enhancements Phase II Project Scope Review

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Project Title: FCM Enhancements Phase II | WMPP ID: 75

Proposed Effective Date: 6/1/2018 and 6/1/2020

- The initial phase of the FCM Enhancements project focused on changes targeted for an October 2016 effective date
- Today's discussion will provide an overview of the second phase of the FCM Enhancements project
- The second phase was created to evaluate:
  - Participant requests received during the initial FCM Enhancements discussions
  - Elements that were not time sensitive in the initial phase

Phase II Proposed scope

1. Increases to Existing Qualified Capacity
2. Commercial determination modifications
3. Termination of acquiring CSO Bilateral transactions
4. Qualification Deadlines
5. Market Rule “clean-up”

INCREASES TO EXISTING QUALIFIED CAPACITY

Problem statement and overview of ISO proposal

Problem

Participants seeking to qualify incremental capacity as new or existing are required to submit cost-based capacity submissions without knowing final cost threshold levels

- Resources are required to submit cost-based submissions at the Show of Interest (SOI) deadline in April
- Cost thresholds are calculated from the Handy-Whitman Index values published in May, after the SOI deadline

Related Issues

In addition to unknown cost thresholds, there are other elements of capacity submissions that can be improved:

1. Multiple submission windows for similar capacity modifications creates confusion in the Forward Capacity Auction (FCA) qualification process
   - The current rules are not clear as to how a participant can increase its capacity if the five year median does not represent the most recent resource performance
   - Some participants submit increases during the Existing Capacity Challenge Window, others through SOI submission
2. Incremental capacity submissions must meet a minimum size requirement
   - Incremental capacity submissions must be at or above 2% of the resource's summer Qualified Capacity

Proposal: Capacity Increases & Cost Thresholds

- The current Tariff language states that the ISO will use "the most recent Handy-Whitman index value" when determining if a resource meets incremental capacity cost thresholds
  - Handy-Whitman index (HW) values are made available to the ISO in May and November
  - The current interpretation of the existing Market Rule has been to use the value closest to the FCA to meet the "most recent" criteria (*i.e.* the value published after SOI submission deadline in May) despite it not being a know value to participants or the ISO
- Using the data for the period ending January 1 of the year preceding the qualification cycle will provide cost threshold clarity for participants submitting cost-based capacity additions

Proposal: Capacity Increase Size Requirements

- The ISO will remove the current minimum size requirement for significant increase and incremental capacity submissions
  - Currently, both significant increase and increment requests must result, by the start of the Capacity Commitment Period, in an increase in output greater than two percent of the summer Qualified Capacity of the resource at the time of the qualification process
  - Meeting the cost thresholds, which are on a $/kW basis, is relevant in determining if the proposed increase in capacity will participate as new or existing
    - Resources meeting the cost thresholds are given existing resource auction treatments (*i.e.* "increments", defined by Section III.13.1.1.1.3)
    - Resources not meeting the cost thresholds are given existing resource auction treatments (*i.e*. "significant increases", defined by Section III.13.1.2.2.5)

Proposal: Increases to Existing Qualified Capacity

- Requests to increase the amount of Existing Qualified Capacity at a resource will only be accomplished through an SOI submission

COMMERCIAL DETERMINATION MODIFICATIONS: INTERMITTENT RESOURCES

Problem statement and overview of ISO proposal for Intermittent Power Resource commercial determination

Commercial Determination Modifications

Problem: Intermittent Power Resources (IPR's) do not have the ability to demonstrate their commercial capability year round

- Unlike non-intermittent generation resources, IPRs do not have a thermal operation curve that can derive summer seasonal SCC value year-round
  - Wind/solar resources and "other" IPRs have different characteristics and thus require different approaches to determine their commercial capability
- Inability to demonstrate commercial capability during the winter months forces IPR to wait up to ten months to have their Financial Assurance (FA) returned even when the resource is operational

Proposal: Wind and Solar Resources

- Wind and solar participants will select 30 days of operational data for the ISO to use in the commercial determination process
- The ISO qualification tool will calculate an expected MW value for the resource over the same time period
- The commercial percentage will be determined as the quotient of the median value of the participant requested days and the expected value as calculated using the ISO's qualification tool
- The ISO will determine a commercial percentage cap which will limit the amount of MWs that can be marked commercial based on the project's completion of CPS milestones
  - This ensures that over production from limited amounts of panels/turbines does not give commercial credit to elements that are not yet installed

Proposal: Non-solar Non-wind Intermittent Power Resources

- The proposal will enable non-solar, non-wind IPRs to use a winter Seasonal Claimed Capability (SCC)audit in the commercial determination process
  - The applicable commercial percentage will be established by using the resource's winter SCC in the numerator and the total winter proposed MW as the denominator
  - For partially commercial resource's, the winter SCC audit value will be reduced by the resources commercial MW in the commercial percentage calculation
  - Similar to wind and solar intermittent commercial determination, the resource will be limited by its commercial percentage cap

Example: Wind/Solar full commercial operation

Parameters:

- Non-commercial CPS monitored MW = 25MW summer, 40MW winter
- Actual median value of reliability hours = 25 MW
- Expected resource performance (based on ISO qualification tool) = 22 MW
- CPS monitored MW commercial percentage cap = 100%

Commercial MW determination:

- Actual median value / expected performance = 114%
- Min (CPS MW commercial MW percentage cap =114%, 100%)
- 100% x 25MW summer Qualified Capacity
- 25 MW commercial summer MW

- Consistent with current practice, ISO will return FA on the commercial summer MW
- ISO will return all FA associated with all of the CPS monitored MW (25 MW, the summer value); the resource will be completely removed from Critical Path Schedule monitoring (CPS)

Example: Wind/Solar partial commercial determination

Parameters:

- Non-commercial CPS monitored MW = 25MW summer, 40MW winter
- Actual median value of reliability hours = 11 MW
- Expected resource performance (based on ISO qualification tool) = 22 MW
- CPS monitored MW commercial percentage cap = 75%
  - Only 75 % of proposed turbines/panels installed

Commercial MW determination:

- Actual median value / expected performance = 50%
- Min (CPS MW commercial MW percentage cap =75%, 50%)
- 50% x 25MW summer Qualified Capacity
- 12.5 MW commercial summer MW

- Consistent with current practice, ISO will return FA on the commercial summer MW
- ISO will return the FA associated with the 12.5 MW; the resource will be partially removed from CPS monitoring in proportion to the commercially determined MW

Example: Wind/Solar CPS limited commercial operation

Parameters:

- Non-commercial CPS monitored MW = 25MW summer, 40MW winter
- Actual median value of reliability hours = 25 MW
- Expected resource performance (based on ISO qualification tool) = 22 MW
- CPS monitored MW commercial percentage cap = 75%
  - Only 75 % of proposed turbines/panels installed

Commercial MW determination:

- Actual median value / expected performance = 100%
- Min (CPS MW commercial MW percentage cap=75%, 100%)
- 75% x 25MW summer Qualified Capacity
- 18.75 MW commercial summer MW

- Consistent with current practice, ISO will return FA on the commercial summer MW
- ISO will return the FA associated with the 18.75 MW on CPS monitoring; the resource will be partially removed from CPS monitoring in proportion to the commercially determined MW

Example: Non-solar, non-wind IPR

- Resource A has 20MW of summer non-commercial Qualified Capacity and 40MW of winter non-commercial Qualified Capacity and is completely constructed (i.e., the commercial percentage cap = 100%)
- Resource A establishes a winter SCC of 20MW resulting in a commercial percentage of 50%
  - Winter SCC / Winter non-commercial Qualified Capacity
  - 20MW/40MW = 50%
- Resource A's summer commercial capacity is 10MW
  - Summer non-commercial Qualified Capacity x commercial percentage
  - 20MW x 50% = 10MW
- Non-commercial financial assurance returned based on summer Commercial Capacity of 10MW

COMMERCIAL DETERMINATION MODIFICATIONS: ENERGY EFFICIENCY RESOURCES

Problem statement and overview of ISO proposal for Energy Efficient resource commercial determination

Problem: Energy Efficiency (EE) Commercial Determination

Problem: EE resources* that have installed commercial measures for summer months are not given commercial credit during winter audits

- EE resources can submit installed measure MW values for an entire calendar year
- Resources with installed commercial measures, measures that are performing in the winter months, must wait until the summer period to receive commercial credit for the already installed, performing, commercial MWs

* Referred to as On-Peak Demand Resources or Seasonal-Peak Demand Resources in the tariff

Proposal: Energy Efficiency (EE) Resources Commercial Determination

- The proposed commercial MW calculation will automatically capture (*i.e.*, no participant request required) commercial MW at the end of each calendar month
  - The values captured will be for both summer and winter periods regardless of the season of the audit
- The resource will be marked commercial based on its summer commercial MW installed at the time of the audit

TERMINATION OF RESOURCE ON ACQUIRING SIDE OF CSO BILATERAL TRANSACTION

Problem: Allocation of Terminated CSO Bilateral funds

The current provisions of Market Rule 1 lack specific guidance on where dollars associated with the termination of a resource on the acquiring side of a terminated CSO Bilateral are to be distributed.

- Neither the shedding side of the CSO Bilateral, nor the CSO Bilateral contract itself, are terminated coincidently with the termination of the resource on the acquiring side of the CSO Bilateral
- Under this circumstance the ISO receives money from the shedding side of the transaction but does not have Market Rules to address where the received money is to be allocated when the acquiring side of the transaction is terminated

Example: Current practice

Traditional CSO Bilateral Transaction

Terminated CSO Bilateral Transaction

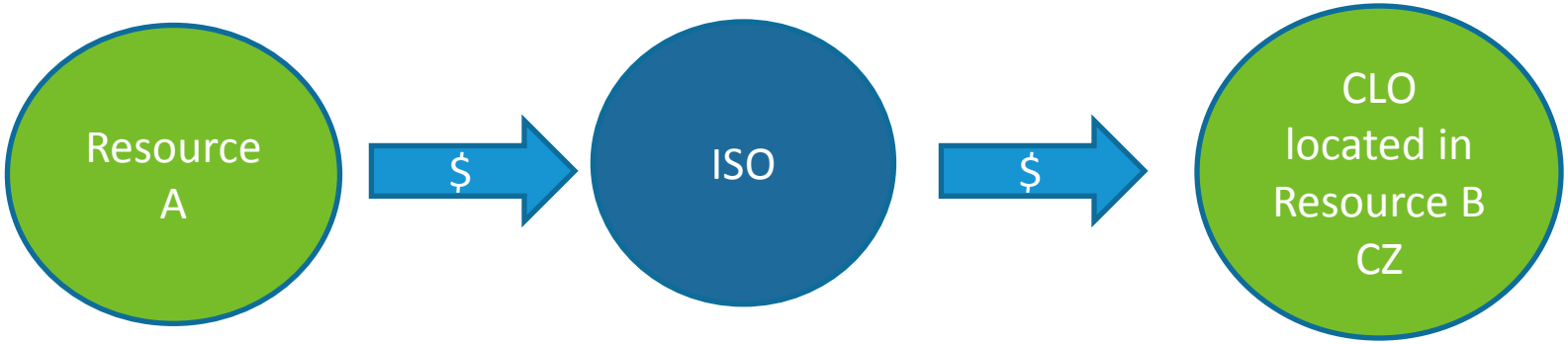
Proposal: Allocation of Terminated CSO Bilateral funds

- When a resource associated with a CSO Bilateral has its CSO terminated, any dollars associated with the acquiring transaction will be allocated back to load in the Capacity Zone where the acquiring side of the resource resides in proportion to its share of Capacity Load Obligation (CLO) in the zone
  - The changes proposed are only applicable until the Annual Reconfiguration Transaction (ART) rules become effective

Example: ISO proposal

Traditional CSO Bilateral Transaction

Proposed CSO Bilateral termination methodology



QUALIFICATION DEADLINES

Minor modifications to FCA deadlines are proposed

Proposal: New Qualification Deadlines

1. Prohibit resource attribute changes during the period between the fifth business day prior to the opening of the Existing Capacity Challenge Window and the FCA
   - The ISO needs to have resource attributes (e.g., intermittent vs. non-intermittent) to accurately provide participants Existing Qualified Capacity values by the Qualified Capacity Notification (QCN) deadline
2. Create a deadline that prohibits Lead Market Participant changes starting 15 days before the Forward Capacity Auction
   - Allowing Lead Market Participant changes after this date could create circumstances where the auction input file is sent to the auctioneer with a different data set than what is on record at the ISO

MARKET RULE "CLEAN-UP"

Proposal overview

- Remove the Settlement Only Resource concept from FCM rules (as they are treated the same as a Generation Resource with the exception of the day-ahead offer and outage coordination requirements)
- Include FA requirement that must be met before a customer is allowed to become a Market Participant in the defined term Market Participant
  - There are no changes to the requirements to become a Market Participant
  - The addition of the FA requirement language is to clarify the existing procedure
- Additional non-substantive items have been identified that will be reviewed when the tariff language is presented

Proposal Summary

- Minor significant increase and incremental capacity changes will result in a more transparent process for resources seeking qualification above assigned Qualified Capacity values
- Commercial determination modifications for Intermittent Power Resources and Energy Efficiency resources will provide for timely return of FA and create symmetry with non-intermittent generation resources
- New qualification deadlines will improve accuracy of FCM related information provided to participants
- Minor Market Rule clean-up

Project Effective Dates

6/1/2018	6/1/2020
Handy-Whitman Index Changes	Energy Efficiency commercial Determination
2% minimum incremental capacity requirement	
Intermittent commercial determinations • Solar and Wind resources • Non-solar non-wind resources	
Market Rule clarifications	
Qualification timeline changes	
CSO Bilateral termination cost allocation (acquiring side)	

Stakeholder Schedule

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

Questions

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