
# Forward Capacity Auction 13 (FCA-13) Capacity Zone Development Preview

*Planning Advisory Committee*

Al McBride

DIRECTOR, TRANSMISSION STRATEGY & SERVICES

# Agenda

- Review the Forward Capacity Market Capacity Zone formation methodology
- Review the Capacity Zone determinations for FCA-12 (Capacity Commitment Period 2021-2022)
- Commence the Capacity Zone formation process and preview the determinations for FCA-13 (Capacity Commitment Period 2022-2023)

# METHODOLOGY FOR DETERMINING CAPACITY ZONES IN FCM

*Background*

# Developing Zonal Boundaries for the FCM

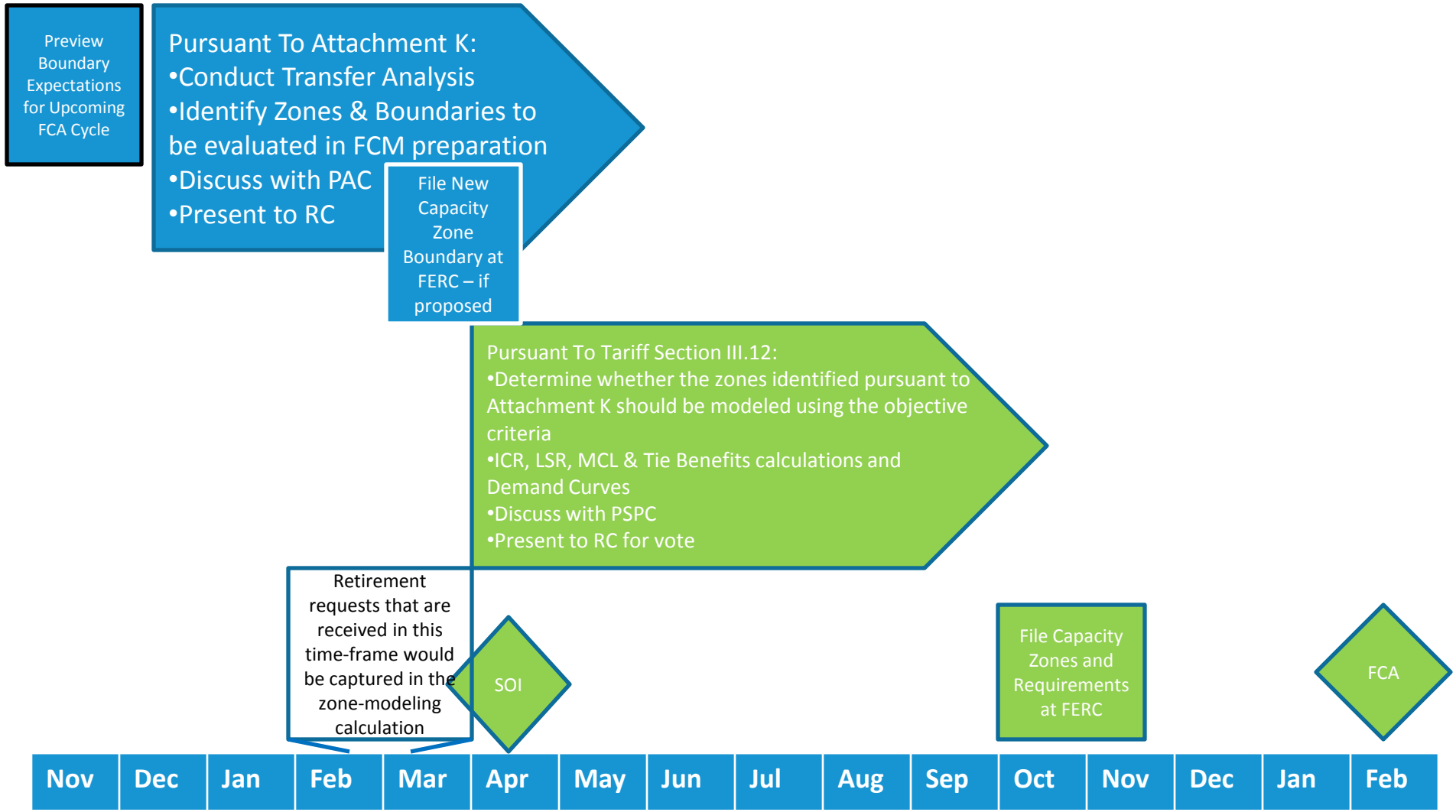
- Included in Attachment K of the Open Access Transmission Tariff:
  - Annual Assessment of Transmission Transfer Capability
    - Each year, the ISO shall issue the results of the annual assessment of transmission transfer capability, conducted pursuant to applicable NERC, NPCC and ISO New England standards and criteria and the identification of potential future transmission system weaknesses and limiting facilities that could impact the transmission system's ability to reliably transfer energy in the planning horizon.
    - Each annual assessment will identify those portions of the New England system, along with the associated interface boundaries, that should be considered in the assessment of Capacity Zones to be modeled in the Forward Capacity Market pursuant to ISO Tariff Section III.12.

# Zone Formation: A Two Step Process

| Step ONE* | Step TWO |
| --- | --- |
| Identify the potential zonal boundaries and associated transfer limits to be tested for modeling in the FCM | Use objective criteria to conduct the test determining whether or not the zone meets the trigger to be modeled for the Capacity Commitment Period |
| | Import-constrained zone<br>Trigger to model the zone is based on the quantity of surplus resources in the zone above the zonal requirement<br>Export-constrained zone:<br>Trigger to model the zone is based on the quantity of existing and proposed new resources compared with the maximum capacity capability in the zone<br><br>Zones that are neither import- or export-constrained are collapsed into the rest-of-pool zone |

*With this presentation, we are beginning Step One of the process for FCA-13

# Zonal Modeling Timeline



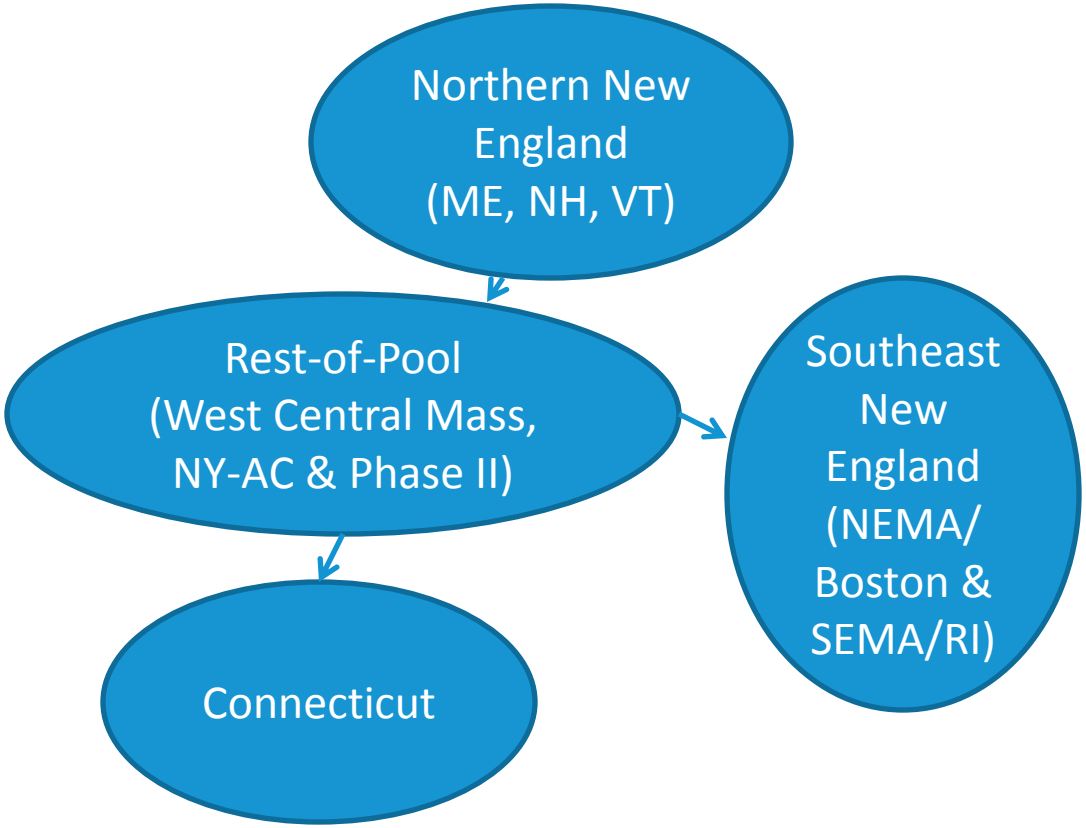
# REVIEW OF CAPACITY ZONE FORMATION DETERMINATIONS FOR FCA-12

# FCA-12 Transmission Transfer Capabilities

- Capacity Zone boundary transfer capabilities

| Key FCA-12 Transfer Capabilities (MW) | |
|---|---|
| Southeast New England Import N-1 | 5,700 |
| Southeast New England Import N-1-1 | 4,600 |
| Connecticut Import N-1 | 3,400 |
| Connecticut Import N-1-1 | 2,200 |
| North-South N-1 | 2,725 |

# Final Potential* Zonal Construct for FCA-12




*The identification of the list of "Potential" Capacity Zones marks the end of the Phase 1 process
Note that zones are modeled in the FCA only if the objective criteria in Market Rule 1, Section 12 is triggered in Phase 2

# PREVIEW OF THE CAPACITY ZONE FORMATION PROCESS FOR FCA-13

*Preview of the New England system for 2022-2023*

# Relevant System Changes

- The following system changes (since last year's Capacity Zone determination effort) are relevant to the formation of Capacity Zone boundaries
  - Transmission
  - Retirements
  - New Resources
- This presentation describes all of the currently known information regarding the relevant system changes

# FCM Transmission Certification Process

- The annual FCM certification process occurs during the fourth quarter of each year
- The process adheres to the requirements in Market Rule 1 and Planning Procedure 10:
  - Section III.12 of Market Rule 1 is available at:
    - https://www.iso-ne.com/participate/rules-procedures/tariff/market-rule-1
    - Planning Procedure 10 is available at:
    - https://www.iso-ne.com/participate/rules-procedures/planning-procedures

# FCM Transmission Certification Timeline

- The certification process is initiated in October
  - The process is coordinated with the October Regional System Plan (RSP) Project List update to ensure consistency between the FCM and RSP updates
- The Transmission Owners are required to provide models and contingency definitions for all projects being certified
- The ISO's review of the information and determination to accept certifications are typically made by January
- The accepted certification will be used in FCM activities
  - Transfer Limits, qualification and De-list/Retirement models
- The list of accepted certified projects is presented at the January Reliability Committee meeting

# Remaining Major Transmission Projects Not Yet Certified

- Solutions have been identified for Southeast Massachusetts/Rhode Island (SEMA/RI)
  - Will result in upgrades in the SEMA/RI area
  - Not expected to change the boundaries of the SEMA/RI or Southeast New England Capacity Zones
  - Not expected to be fully certified for FCA-13
    - Transfer limits will not be updated in time for FCA-13
    - As of November 2017, the I.3.9 process has not yet been completed for these upgrades

# Resource Retirements

- No major resource retirements were received for FCA-12
- Any major retirements received for the FCA-13 Capacity Commitment Period will be considered in the Capacity Zone formation process
- The November 2015 Capacity Zone formation presentations (referenced in the Appendix this presentation) included scenario analysis of different potential future retirement scenarios
  - Analysis showed no need to consider different Capacity Zone boundaries

# Interconnection Queue Activity (11/01/2017)

- New Hampshire/Vermont
  - Over 3,600 MW (nameplate) of capacity interconnection requests
- Maine
  - Over 4,500 MW (nameplate) of capacity interconnection requests
- SEMA/RI
  - Over 7,600 MW (nameplate) of capacity interconnection requests
- Connecticut
  - Over 900 MW of capacity interconnection requests
- West/Central Massachusetts
  - Over 1,300 MW of capacity interconnection requests

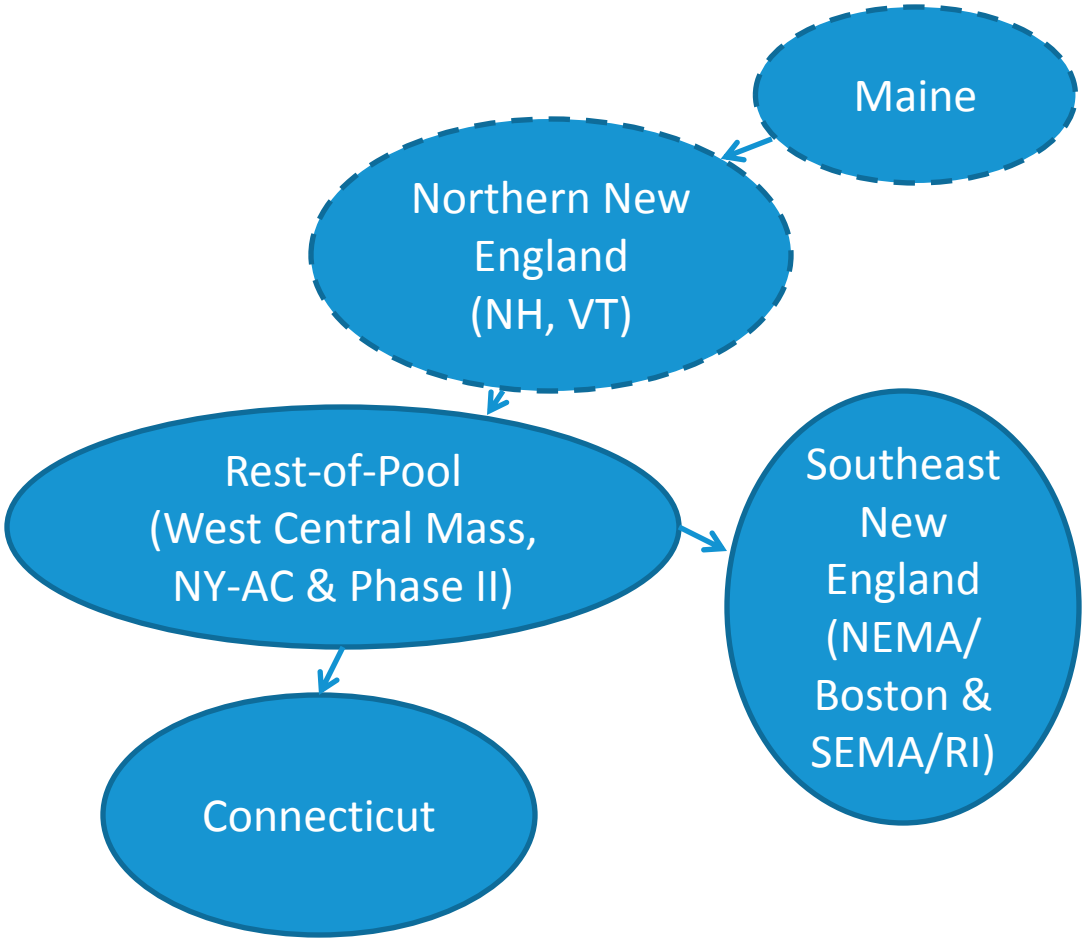
# Significant New Resource Activity in Maine

- There has been a significant backlog of requests in the ISO New England Interconnection Queue in Maine
- November 1 FERC approval of the ISO's Clustering Proposal will enable the queue to move forward in Maine
- The ISO will monitor this progress as part of the zone formation process

# Conclusions Regarding Relevant System Changes

- The following zonal boundaries have been used in the FCM in the past
  - Connecticut Import
  - Maine Export
  - NEMA/Boston Import
  - Northern New England Export
  - SEMA/RI Import
  - Southeast New England Import
- The following boundaries appear adequate for Capacity Zone boundaries for FCA-13
  - Connecticut Import
  - Maine Export
  - Northern New England Export
  - Southeast New England Import

# Potential Capacity Zone Construct for FCA-13




Note that zones are modeled in the FCA only if the objective criteria in Market Rule 1, Section 12 is triggered

# Next Steps

- Review FCM Transmission Certifications for FCA-13 with the Reliability Committee in January 2018
- Further discussion of the potential Capacity Zone boundary construct for FCA-13
  - First Quarter 2018 Planning Advisory Committee

# APPENDIX 1

*Background on the Capacity Zone Formation Process*

# Background

- In November 2015, in preparation for the Capacity Zone formation process for FCA-11, the Planning Advisory Committee engaged in comprehensive discussion of the zone formation process and the expected direction of zone preparations for FCA-11
  - Historical Development — link to presentation
  - Current Process — link to presentation
  - Review of Determinations for FCA 10 — link to presentation
  - New England Power System in 2020 — link to presentation

# Questions