



# Forward Capacity Auction 12

## Zonal Development: Scope of Work

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*Planning Advisory Committee (PAC)*

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# Topics

- Capacity Zone Formation Methodology
- Forward Capacity Auction 12 (FCA-12, Capacity Commitment Period 2021-2022) Zone Formation – Scope of Work



# METHODOLOGY FOR MODELING CAPACITY ZONES IN FCM

*Background*



# Zone Formation: A Two Step Process

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

# Zonal Modeling Timeline

## Transmission Certifications

Preview  
Boundary  
Expectations  
for Upcoming  
FCA Cycle

Pursuant To Attachment K:

- Conduct Transfer Analysis
- Identify Zones & Boundaries to be evaluated in FCM preparation
- Discuss with PAC
- Present to RC

File New  
Capacity  
Zone  
Boundary at  
FERC – if  
proposed

Pursuant To Tariff Section III.12:

- Calculate whether the zones identified pursuant to Attachment K should be modeled using the objective criteria
- ICR, LSR, MCL & Tie Benefits calculations and Demand Curves
- Discuss with PSPC
- Present to RC for vote

Retirement  
requests that are  
received in this  
time-frame would  
be captured in the  
zone-modeling  
calculation

SOI

File Modeled  
Capacity  
Zones at FERC  
as part of the  
FCA  
Requirements  
Filing

FCA

Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb

# Background

- In November 2015, in preparation for the Capacity Zone formation process for FCA-11, the PAC 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](#)
- In November 2016, the PAC discussed a [preview of the Capacity Zone Determinations for FCA-12](#)



# FCA-12 CAPACITY ZONE FORMATION

*Step One in the Zonal Modeling Timeline*



# Most Major Transmission Projects Already Certified

Major Transmission Projects	Project completion	FCA #8 (2017-2018)	FCA #9 (2018-2019)	FCA #10 (2019-2020)	FCA #11 (2019-2020)
Greater Springfield Reliability Projects (NEEWS)	2013	Certified	Certified	Certified	Certified
Greater Rhode Island Reliability Projects (NEEWS)	2013	Certified	Certified	Certified	Certified
Interstate Reliability Projects (NEEWS)	2015	Only 4 (additional) projects certified	Certified	Certified	Certified
Greater Boston Upgrades	2018	Only 5 (additional) projects certified	9 projects certified	Certified (Most Portions)	Certified (Most Portions)
VT-NH Projects	2020	None certified	Certified	Certified	Certified
Maine Power Reliability Program	2015	Certified	Certified	Certified	Certified
Pittsfield-Greenfield Projects	2017	None certified	Certified (Most portions)	Certified (Most Portions)	Certified (Most Portions)
Central/Western MA Projects	2017	Certified (Most portions)	Certified (Most portions)	Certified (Most portions)	Certified (Most portions)
Long-term Lower SEMA Project	2013	Certified	Certified	Certified	Certified
Greater Hartford/Central Connecticut Projects & Southwest Connecticut	2017	None certified	None certified	None certified	Partially Certified



# Incorporating the Certifications for FCA-12

- Certifications for FCA-12 were announced at the January 2017 Reliability Committee
- Included additional portions of the Greater Hartford/Central Connecticut (GHCC) & Southwest Connecticut projects
  - These will not result in a change in the boundary associated with the Connecticut Load Zone
    - The Connecticut import capability was already updated for FCA-11 (and beyond) because the relevant portions of GHCC were certified for FCA-11
    - There is no further update to the Connecticut import capability as a result of the FCA-12 certifications
  - The Southwest Connecticut area transfer limits will be updated for FCA-12, consistent with the transfer analysis that was presented at the June 2016 PAC meeting
    - This transfer analysis was prepared in anticipation of the certification of all of the GHCC & Southwest Connecticut upgrades

[https://smd.iso-ne.com/operations-services/ceii/pac/2016/06/a3\\_transmission\\_transfer\\_capabilities\\_update.pdf](https://smd.iso-ne.com/operations-services/ceii/pac/2016/06/a3_transmission_transfer_capabilities_update.pdf)



# SEMA/RI Solutions Not Certified for FCA-12

- Solution development activities are continuing in Southeast Massachusetts/Rhode Island (SEMA/RI)
  - Will result in upgrades in the SEMA/RI area
  - Not certified for FCA-12
  - Based on the solutions presented at the December 2016 PAC meeting, these upgrades (once they do become certified in a future FCA) are not expected to change the boundaries of the SEMA/RI or Southeast New England Capacity Zones

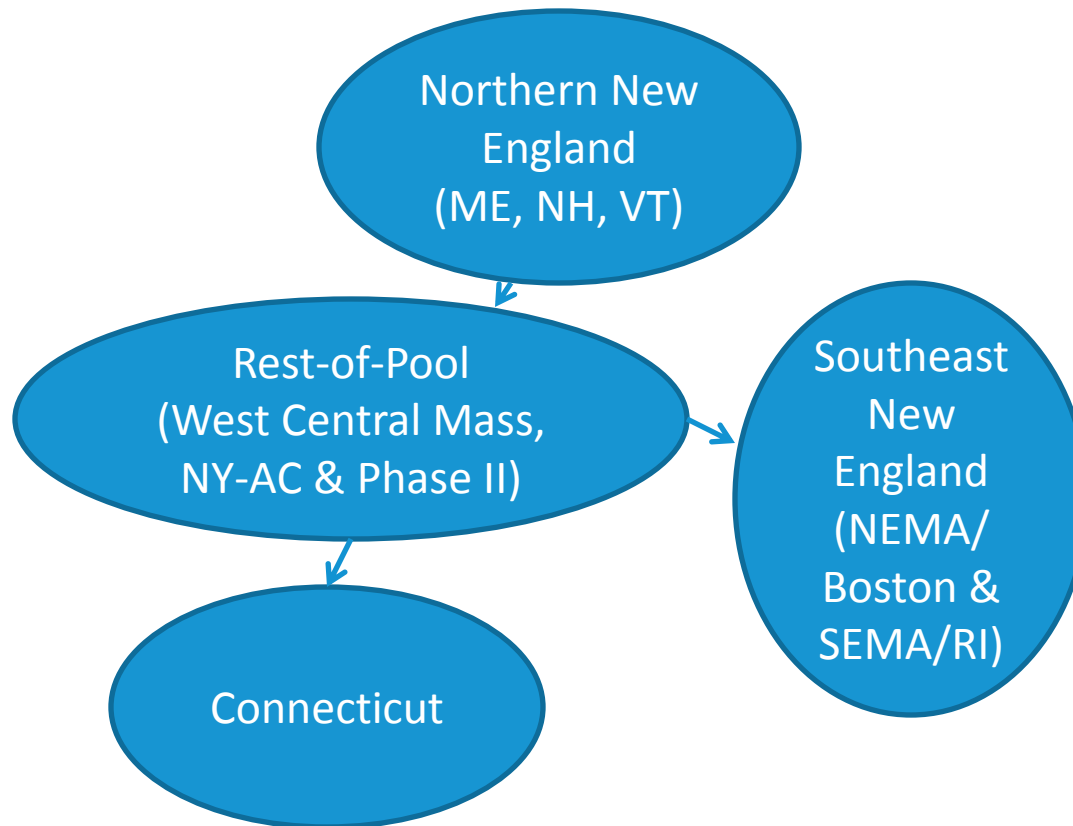


# Resource Retirements

- No major resource retirements were received for FCA-11
- Any major retirements received for the FCA-12 Capacity Commitment Period will be considered in Step 2 of the Capacity Zone development process
- The November 2015 Capacity Zone formation presentations (referenced on slide 6 of this presentation) included scenario analysis of different potential future retirement scenarios
  - Analysis showed no need to consider different Capacity Zone boundaries



# Expected Capacity Zone Construct for FCA-12



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

# Next Steps

- Update relevant transfer capabilities for the newly-accepted certifications for FCA-12
- Present final potential Capacity Zone boundary construct for FCA-12
  - March 2017 Planning Advisory Committee
  - March 2017 Reliability Committee
- The potential Capacity Zone boundaries will then be tested using the Step 2 objective criteria trigger calculations
- Zones that trigger the objective criteria will be modeled in the FCA
- The FCA will determine whether any of the modeled zones bind in the auction and experience price-separation



# Questions

