

Impact of the Revised EE Reconstitution Methodology on the EE Forecast



Energy Efficiency Forecast Working Group

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LOAD FORECASTING, SYSTEM PLANNING



EE Reconstitution in the Gross Load Forecast

- The ISO, joined by NEPOOL*, submitted proposed Tariff changes that reflect a new EE reconstitution methodology to the Federal Energy Regulatory Commission (FERC) on September 11, 2020, with a requested effective date of November 10, 2020
 - FERC order expected on or before November 10, 2020
- Since the net load forecast is a direct product of the interplay between the gross load forecast and the EE forecast, changes in EE reconstitution must be considered as part of the EE forecast to ensure proper accounting
- The new EE reconstitution methodology **will not impact the EE forecast model methodology**, but it will affect the values used for the first few years of the EE forecast horizon

**The NEPOOL Participants Committee supported the Tariff changes with a vote of 68.22% in favor.*

EE Reconstitution in the Gross Load Forecast

- In the Forward Capacity Market (FCM) EE is treated as a supply-side resource, acquiring Capacity Supply Obligations (CSOs) in the same manner as any other supply-side resource
- Accordingly, the gross load forecast is intended to be a forecast of demand *absent* reductions from EE that participates as supply in FCM
- This requires that the ISO reconstitute (i.e. add back) the demand savings achieved by EE supply-side resources into the historical loads used in developing the gross load forecast



Overview of Current EE Reconstitution Methodology

- Since 2010, EE reconstitution values have been based on EE performance
 - EE program administrators submit monthly performance data to ISO via the energy efficiency measures (EEM) database
 - Monthly MW values reflect load reductions during seasonal performance hours
- Concerns with basing EE reconstitution on EE performance
 - In recent years, the ISO has observed that the EE measure installations reported by EE program administrators consistently exceed the CSOs acquired in the FCM
 - Ideally, these quantities should be the same
 - The ISO has no way to differentiate which measures are installed to meet a CSO and which measures are not
 - For this reason, the amount of PDRs reconstituted in developing the gross load forecast has exceeded the amount of CSOs that PDRs have acquired in the FCM
 - EE measures that will expire over the FCM horizon and can no longer participate in the upcoming Forward Capacity Auction (FCA) have not been factored into the reconstitution used to develop the forecast

Overview of New EE Reconstitution Methodology

- Under the new methodology, which will be used for the 2021 gross load forecast, EE reconstitution will be based on the total CSOs acquired by EE resources in the most recent Forward Capacity Auction (FCA)
- By calibrating to the EE CSOs from the most recently completed FCA, the new reconstitution methodology results in improved accounting for:
 - The amount of EE that participates in the FCA, and not EE installations in excess of EE resources' CSOs
 - EE expiring measures that are no longer participating as supply in the FCA
- The new methodology also includes adjustments to account for the difference between EE resources' FCA CSOs and CSOs acquired by EE resources in the annual reconfiguration auctions



Overview of New EE Reconstitution Methodology

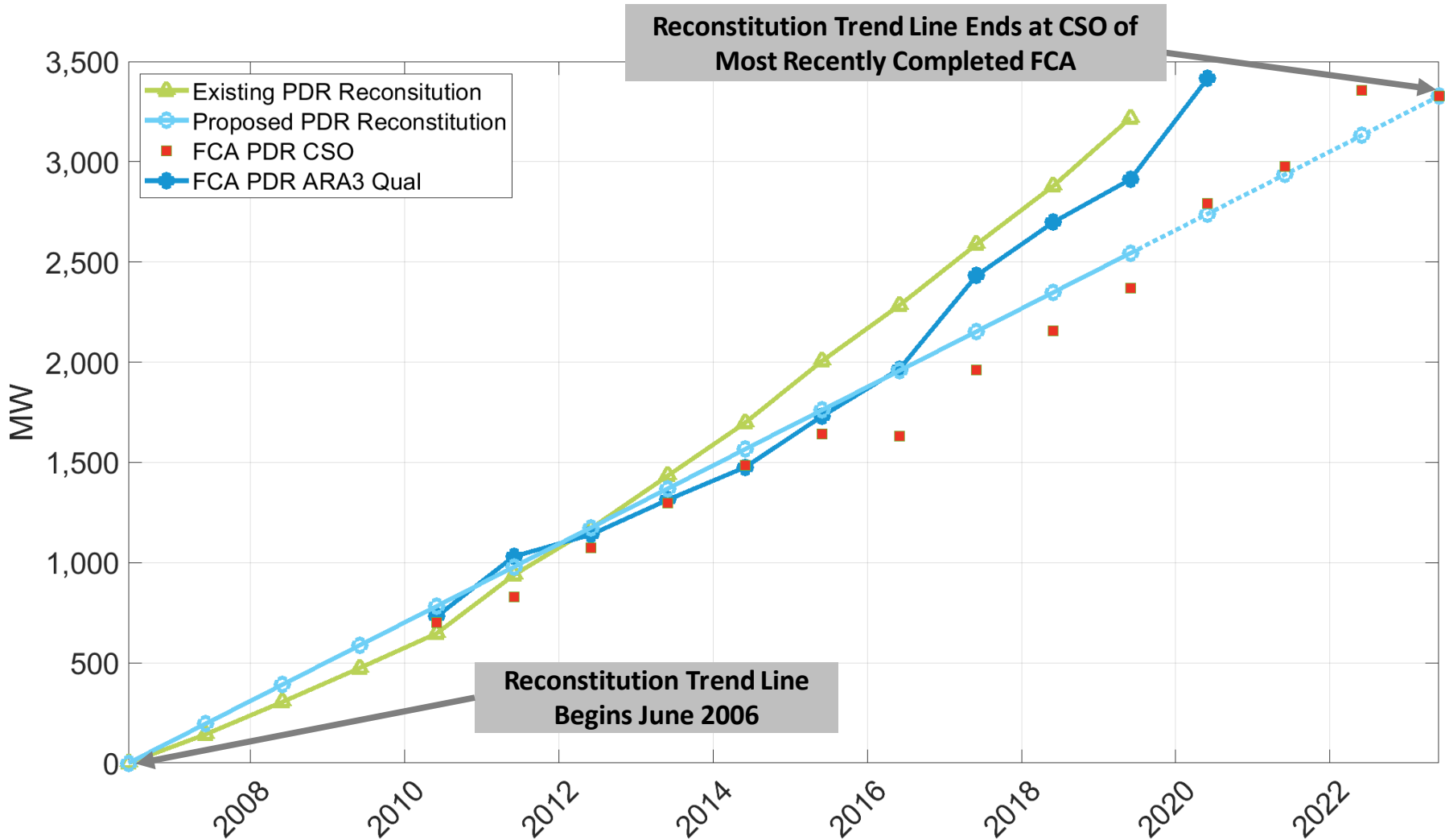
Summer and winter monthly values are determined by the following steps:

1. Applying a linear fit between:
 - a. The time installation of EE participating in FCA 1 began (i.e., when PDR equaled zero)
 - Assumed starting point for Summer is June 1, 2006
 - Assumed starting point for Winter is December 1, 2006
 - b. The total seasonal EE CSOs from the most recent FCA for the corresponding Capacity Commitment Period (CCP)
 - June 1st for summer, December 1st for winter
2. Applying the resulting June and December points in this time series to all the appropriate EE performance months by season



Proposed Summer EE Reconstitution

New England

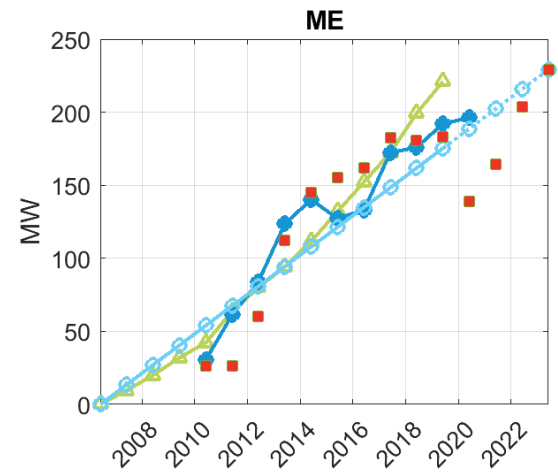
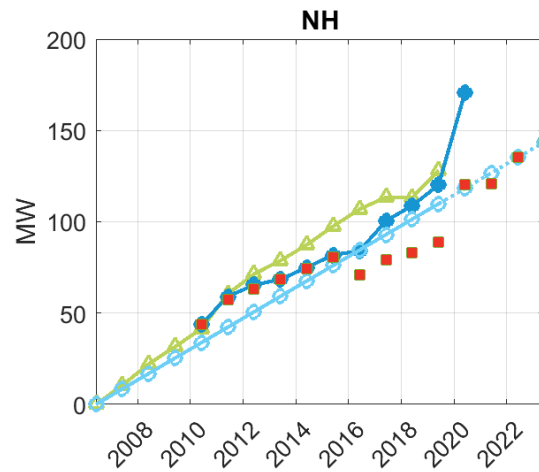
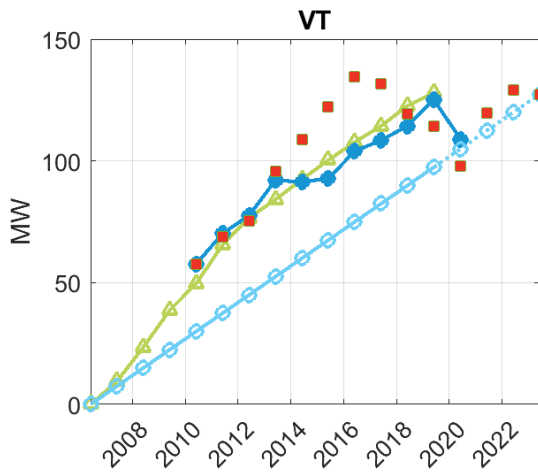
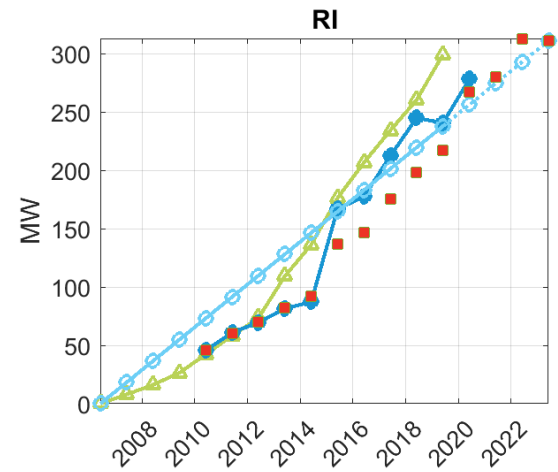
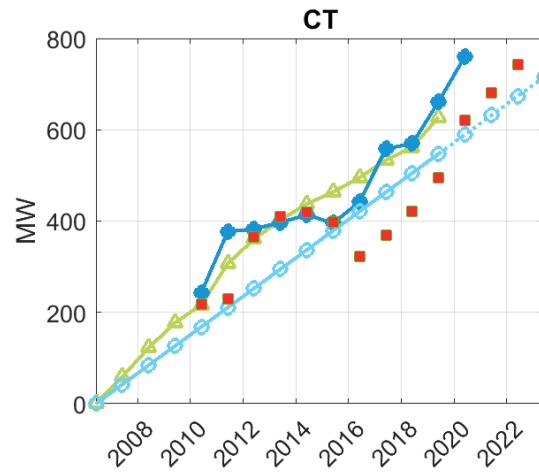
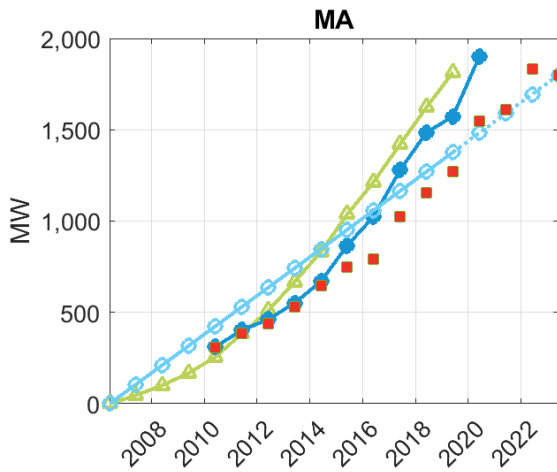


Reconstitution Trend Line Ends at CSO of Most Recently Completed FCA

Reconstitution Trend Line Begins June 2006

Proposed Summer EE Reconstitution

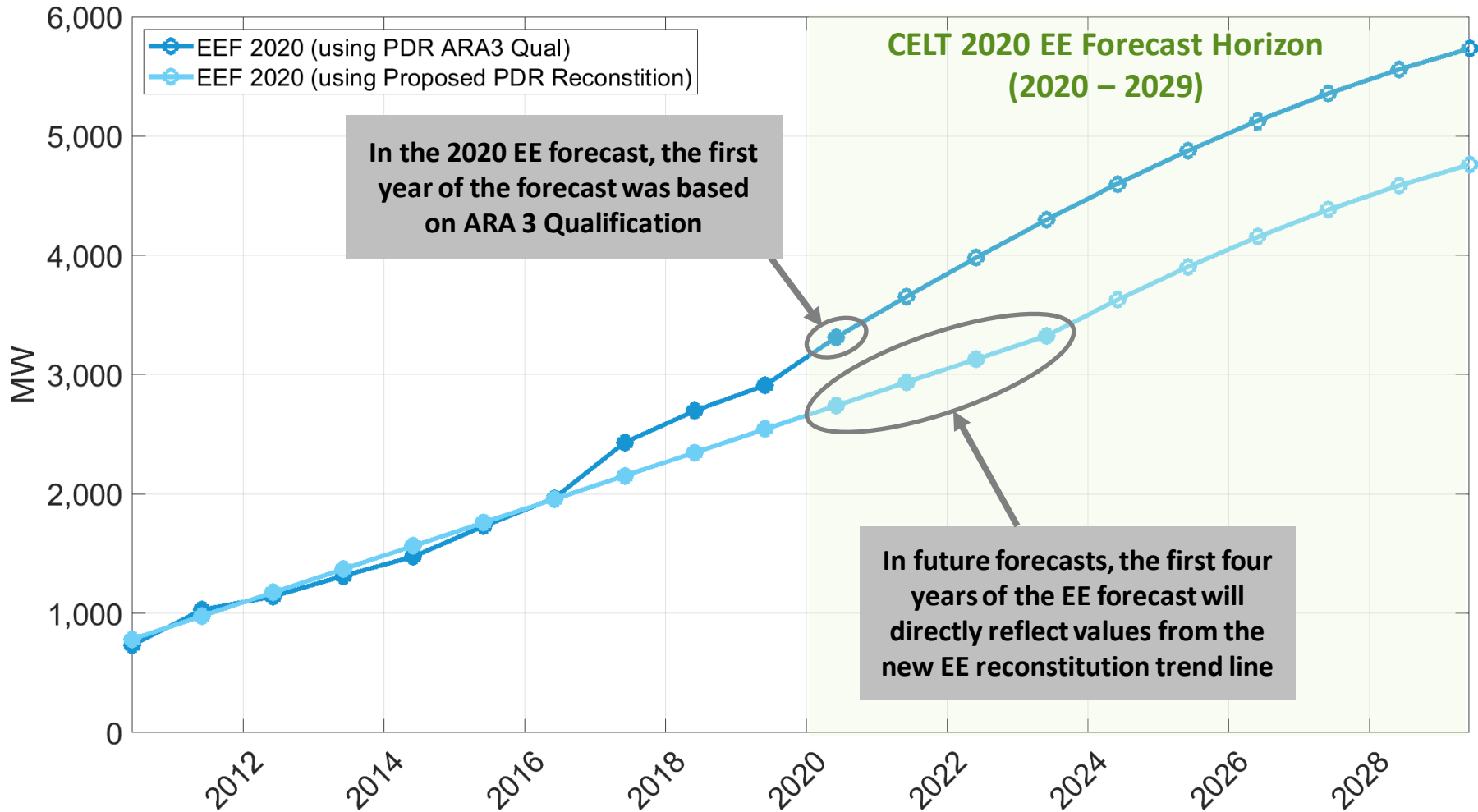
States



▲ Existing PDR Reconstitution
 ○ Proposed PDR Reconstitution
 ■ FCA PDR CSO
 ◆ FCA PDR ARA3 Qual

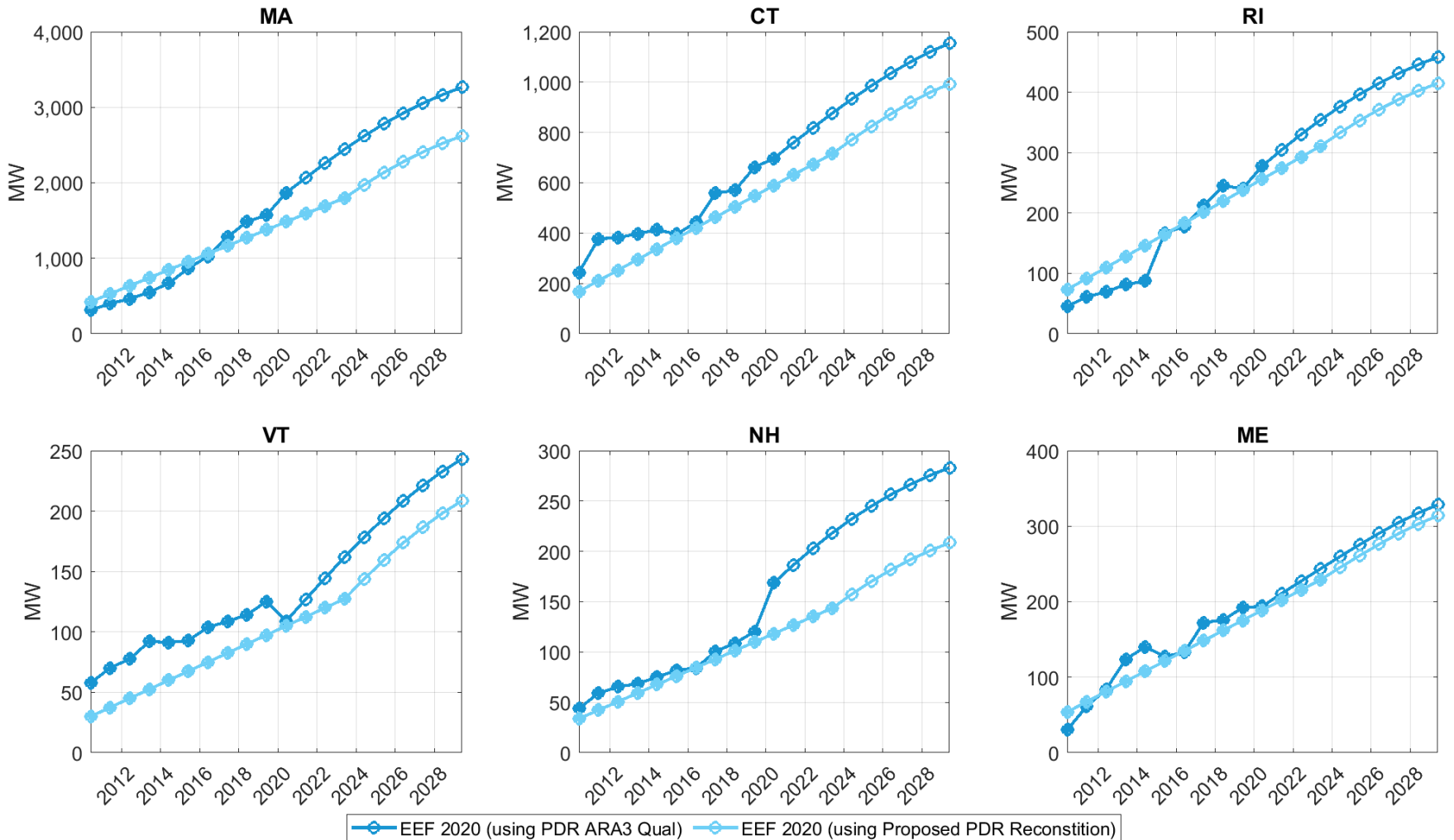
Proposed Summer EE Reconstitution

Applied to the 2020 New England EE Forecast



Proposed Summer EE Reconstitution

Applied to the 2020 State EE Forecasts



Impacts of the New EE Reconstitution Methodology on the EE Forecast

- When implemented, the proposed methodology for reconstituting EE resources in the gross load forecast will inform the first four years of the EE forecast
 - All years through the FCM horizon will reflect EE reconstitution trend line values
 - This will result in a lower EE forecast
 - An example of the impact this methodology *would have had* had it been in place for the 2020 EE forecast is shown
- Decreases in the EE forecast are commensurate with decreases to the load forecast
 - The reconstitution no longer includes EE installations in excess of EE resources' CSOs, and is net of cumulative EE expiring measures that no longer participate as supply in FCM up through the most recently held FCA
 - Both of these factors are reflected as load reductions in the gross load forecast as a result of the proposed methodology

Impacts to CELT 2020 New England Summer Peak EE Forecast	
Year	Change (MW)
2020	-572
2021	-717
2022	-851
2023	-973
2024	-973
2025	-973
2026	-973
2027	-973
2028	-973
2029	-973

Stakeholder Process Regarding Changes to EE Reconstitution

- Discussions regarding changes to the reconstitution methodology have taken place at the ISO's Reliability Committee
 - At the [April 22, 2020 RC meeting](#), the ISO described the purpose of reconstitution and the issue with the existing reconstitution methodology
 - At the [May 19, 2020 RC meeting](#), the ISO provided an overview of the proposed gross load reconstitution methodology modifications for the FCAs, and why it is an improvement
 - At the [June 16, 2020 RC meeting](#) the ISO responded to stakeholder questions, and discussed tariff changes and implications to ICR calculations for the ARAs
 - At the [July 27, 2020 RC meeting](#) the ISO further responded to comments and provided updated tariff revisions

Questions

