

M18 and M18B Revisions to Accommodate EE Resource Participation in RPM if EE is reflected in the Peak Load Forecast

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1.20A Energy Efficiency Resource

Energy Efficiency Resource shall mean a project, including installation of more efficient devices or equipment or implementation of more efficient processes or systems, meeting the requirements of Schedule 6 of this Agreement and exceeding then-current building codes, appliance standards, or other relevant standards, designed to achieve a continuous (during the periods described in Schedule 6 and the PJM Manuals) reduction in electric energy consumption **that is not reflected in the peak load forecast prepared for the Delivery Year for which the Energy Efficiency Resource is proposed**, and that is fully implemented at all times during such Delivery Year, without any requirement of notice, dispatch, or operator intervention. Annual Energy Efficiency Resources and Base Capacity Energy Efficiency Resources are types of Energy Efficiency Resources.

- Current forecast model does **not** reflect energy efficiency measures in the peak load forecast
- EE Resource participation in the capacity market effectively “reduces” the forecast peak load (and resultant reliability requirement) by clearing in an RPM auction or by being committed to an FRR capacity plan
- EE Resource commitment quantity displaces procurement of other capacity resources by the amount of peak load reduction that the EE Resource is expected to provide by the start of the delivery year
- Such displacement is appropriate when the peak load reduction associated with the EE Resource was not reflected in the peak load forecast of the delivery year when capacity was procured for that delivery year

- Unlike current model, new peak load forecast model **does** reflect energy efficiency measures in the peak load forecast for each delivery year
- If new peak load forecast model is adopted then an add-back mechanism will be necessary in order to accommodate continued EE Resource participation in the capacity market
- Add-back of the proposed EE Resource MW quantity to the forecasted peak load of the relevant delivery year is necessary to avoid under-procurement of capacity commitments due to double-counting of EE Resource MWs when already reflected in the peak load forecast

- Meeting material includes proposed updates to M18 (RPM) and M18B (EE M&V) to describe the changes necessary to avoid under-procurement due to double-counting of EE Resource impact on peak load forecast
- Proposed updates impact following aspects of EE Resource participation in the PJM capacity market:
 - Clearing of EE Resources in RPM Auctions
 - Auction participation eligibility of EE Resources - installation period of EE measure relative to forecast used in auction
 - Commitment of EE Resources in FRR Capacity Plans

Clearing of EE Resources in RPM Auctions

- Prior to clearing each BRA, the reliability requirement of the RTO and each applicable LDA used in the auction clearing will be increased by the UCAP value of EE Resources as per approved EE M&V Plans submitted for the BRA
 - Planning parameters will be updated just prior to the opening of the BRA to reflect EE Resource participation as per approved EE M&V Plans submitted for the BRA

Clearing of EE Resources in RPM Auctions (Cont.)

- Prior to clearing each IA, the reliability requirement of the RTO and each applicable LDA used to determine PJM buy/sell quantities will be increased by the UCAP value of EE Resources as per approved EE M&V plans submitted for that auction, and will be decreased by any uncleared EE Resource UCAP MW quantities from the prior auction conducted for that delivery year
 - Parameters will be updated just prior to the opening of the BRA to reflect EE Resource participation as per approved EE M&V Plans submitted for that auction

Auction Participation Eligibility of EE Resource

- The time period of an EE installation determines whether an installation is eligible to be offered as an EE Resource into an auction for a given delivery year
- Proposed Manual revisions clarify that an EE installation period that is completely contained in the history of the peak load forecast used to develop the parameters for a given RPM auction is not eligible to offer as an EE Resource into that auction since it already fully reflected in the load history
- The table on following slide uses the 2019/2010 Delivery Year to illustrate the auction participation eligibility of an EE Resource based on the Installation Period of the EE Resource relative to the vintage of the peak load forecast used to develop parameters for that auction

Auction Participation Eligibility of EE Resource (Cont.)

Auction Participation Eligibility of EE Resource Installation Year for 2019/2020 DY Auctions

	Auction	2019/2020 BRA	2019/2020 1st IA	2019/2020 2nd IA	2019/2020 3rd IA
	Conducted in:	May 2016	Sep 2017	July 2018	Feb 2019
	Peak Load Forecast Vintage	Jan 2016	Jan 2017	Jan 2018	Jan 2019
	Most Recent Complete Install Year included in Load History	2014/2015	2015/2016	2016/2017	2017/2018
EE Resource Installation Year	2015/2016	X			
	2016/2017	X	X		
	2017/2018	X	X	X	
	2018/2019	X	X	X	X

X denotes that the indicated EE Resource Installation Year is eligible to offer into that auction

- The UCAP Obligation of an FRR Entity is equal to the forecasted peak load served by the entity times the Forecast Pool Requirement (FPR)
- The FRR Entity must commit sufficient capacity in UCAP terms to meet this obligation
- If the peak load forecast reflects reduction associated with energy efficiency measures and if the FRR Entity intends to commit EE Resource(s) to it's FRR Capacity Plan, then the UCAP Obligation of the FRR Entity will be increased by the EE Resource MW quantity in order to avoid double-counting of the load reduction associated with the EE Resource