

IMM EE Package Proposal

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July 10, 2024

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Monitoring Analytics

EE Enters the PJM Capacity Market

- **On March 26, 2009, FERC approved Tariff and RAA changes to allow EE Resources to participate in PJM Capacity Markets beginning with the Base Residual Auction conducted in May 2009 which committed capacity for the 2012/2013 Delivery Year.**
- **FERC approved PJM's request to allow EE Resource participation beginning June 1, 2011, in the remaining 2011/2012 Incremental Auctions by letter order dated January 22, 2010 in Docket No. ER10-366-000.**

EE Originally Not Included in the Load Forecast

- **The requirements for Energy Efficiency Resource participation in PJM Capacity Markets are in Tariff, Attachment DD-1 and RAA, Schedule 6, Section L.**
- **The only reason that EE was included in the capacity market in the first place was that EE was asserted to not be included in the PJM load forecast used in the capacity market.**
- **PJM stated that EE was not fully reflected in the load forecast for four years based on the method in place at the time.**

PJM Filing to Include EE (ER09-412)

- **“An EE Resource is permitted to be offered as a Capacity Resource in the Base Residual or Incremental Auctions for four (4) consecutive Delivery Years. [fn omitted] As discussed above, this ensures that a party contemplating an energy efficiency investment realizes the benefit of the investment’s reduction in the PJM region’s capacity needs before that reduction can be reflected in the load forecast used for RPM’s forward auctions. After that reduction is reflected in the load forecast, the customer’s load obligation, and capacity requirements, are reduced even without the changes proposed in this docket.”**

PJM Filing to Include EE (ER09-412)

- **“However, as explained above, by the fourth Delivery Year the measure is in place, PJM’s load forecast will fully incorporate the measure’s capacity reduction benefits. Continuing to make a capacity payment to the project sponsor under those circumstances would represent a double-payment for the measure’s benefits: once in the form of a foregone capacity payment by the sponsor, and then again the form of an affirmative payment to the sponsor.”**

PJM Filing to Include EE (ER09-412)

- **“This double counting would also have an adverse impact on reliability because the installed reserves provided by energy efficiency would be counted as a resource in the RPM auction and again as a load forecast reduction. This would create the potential for a shortfall in procurement of installed reserves, which would violate reliability criteria.”**
- **PJM filed on 12.28.2008.**

March 2009 FERC Order Approving EE in RPM

- **“To address this gap, PJM has proposed tariff revisions in a new section M to schedule 6 of its Reliability Assurance Agreement, which otherwise deals with the participation of demand resources in RPM. PJM proposes to allow energy efficiency resources that clear in the RPM auction to receive RPM capacity payments for up to four consecutive Delivery Years.” (Order at P121)**
- **“After that reduction is reflected in the load forecast, the customer's load obligation and capacity requirements are reduced to reflect the reduction in the region's capacity needs.” (Order at P122, fn 56)**

EE Incorporated in Load Forecast

- **Revisions to the PJM load forecast to incorporate energy efficiency were endorsed at the November 19, 2015, MRC.**
 - **These revisions included improvements to comprehensively capture energy efficiency impacts through incorporation of projections from the U.S. Energy Information Administration (EIA) Annual Energy Outlook (AEO).**
 - **The AEO forecast is based on a set of end use models for the residential, commercial, and industrial sectors.**
 - **EIA accounts for state and utility efficiency programs by mapping regional EE program expenditures to end uses and tracks the number of units sold and associated efficiency information on an ongoing basis.**

OATT Attachment DD-1

An Energy Efficiency Resource is a project, including installation of more efficient devices or equipment or implementation of more efficient processes or systems, exceeding then-current building codes, appliance standards, or other relevant standards, designed to achieve a continuous (during peak summer and winter periods as described herein) reduction in electric energy consumption at the End-Use Customer's retail site 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. (Approved in March 26, 2009 Order.)

EE Should Have Been Removed at that Time

- **PJM included EE in the peak load forecast for the capacity market in 2016 for delivery years 2016/2017 and forward.**
- **As soon as PJM explicitly included EE in the load forecast used in the capacity market, PJM should have followed its tariff language and logic and eliminated EE from the capacity market construct entirely.**

Rather than EE Removal – Addback Introduced

- **PJM did not eliminate EE from the capacity market construct when EE included in PJM forecasts.**
- **PJM did eliminate EE from the capacity market.**
- **PJM removed EE from capacity resource status.**
- **PJM defined a way to continue to pay EE the capacity market clearing price while excluding EE from the capacity market.**
- **That calculation method (the addback method) was intended to allow payment to EE of the capacity market clearing price but eliminate any price or quantity impact of EE on the capacity auctions.**

Addback

- **PJM documented the addback method in Manual 18 on December 17, 2015, but retained the tariff language that required the complete removal of EE from the capacity market.**
- **PJM implemented the addback method to reflect the inclusion of EE in the peak load forecast for the capacity market in 2016 for delivery years 2016/2017 and forward.**

Issues

- **EE is appropriately incorporated in PJM forecasts, so the original logic for the inclusion of EE in the capacity market is no longer correct.**
- **While EE does not affect the clearing price when the EE addback is done correctly, customers do pay for the cleared quantity of EE at market clearing prices.**
- **EE does not affect the cleared quantity of capacity.**
- **These direct payments to EE in the capacity market are an overpayment by customers for the EE MW at the capacity market clearing prices.**

Issues

- **There is no evidence that the EE programs result in changed behavior or increases in savings.**
 - **EE Providers may repackage the independent actions of customers that have already occurred**
 - **No evidence that EE participation in PJM markets causes end use customers to reduce their energy consumption beyond what they would have otherwise**
- **EE is appropriately and automatically compensated through markets. To the extent that EE actually reduces energy and capacity use, it reduces customer payments for energy and capacity.**

Issues

- **Inconsistent with capacity resources, EE's obligation to perform is only during 4.7 percent of annual hours.**
- **Without a registration system, there is no reliable way to prevent duplicative claims to EE Resources**
 - **EE Providers overlap in territory and project types**
- **No reliable way to authenticate installation period of projects which defines eligibility to receive payments from RPM.**

Recommendation

- **Status quo - Consistent with the existing Tariff and RAA provisions, EE should be removed from RPM construct as it is now reflected in the peak load forecast for the Auction Delivery Year.**
- **The removal of EE from the capacity market mechanism would make it unnecessary to address the multiple outstanding issues related to the almost impossible task of accurately measuring the impact of EE, determining the ownership of the imputed savings, and ensuring that the resources are not paid for more than four years.**

Basic Measurement and Verification Issues

- **Proof of ownership to MW reductions**
 - **No contracts with end use customers for mass market programs**
- **No proof that multiple CSPs are not claiming same MW**
- **No proof that CSP actions cause installation of devices**
- **No proof that statistical methods meet required statistical standards**
- **Reliance on TRMs for final M&V is not adequate.**

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