2028/2029 Base Residual Auction Report

July 14, 2026

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Contents

Introduction

This document provides information for PJM stakeholders regarding the results of the 2028/2029 Reliability Pricing Model (RPM) Base Residual Auction (BRA).

In each BRA, PJM seeks to procure a target capacity reserve level for the RTO in a least-cost manner while recognizing the following reliability-based constraints on the location and type of capacity that can be committed:

- Internal PJM locational constraints are established by setting up Locational Deliverability Areas (LDAs) with each LDA having a separate target capacity reserve level and a maximum limit on the amount of capacity that it can import from resources located outside of the LDA.
- Summer and winter seasonal sell offers must be matched to clear in order to meet the required annual commitment.

The clearing solution may be required to commit capacity resources in out-of-merit order, but still in a least-cost manner, to ensure that all of these constraints are respected. In those cases where one or more of the constraints result in an out-of-merit commitment in the auction solution, resource clearing prices will be reflective of the price of resources selected in out-of-merit order to meet the necessary requirements.

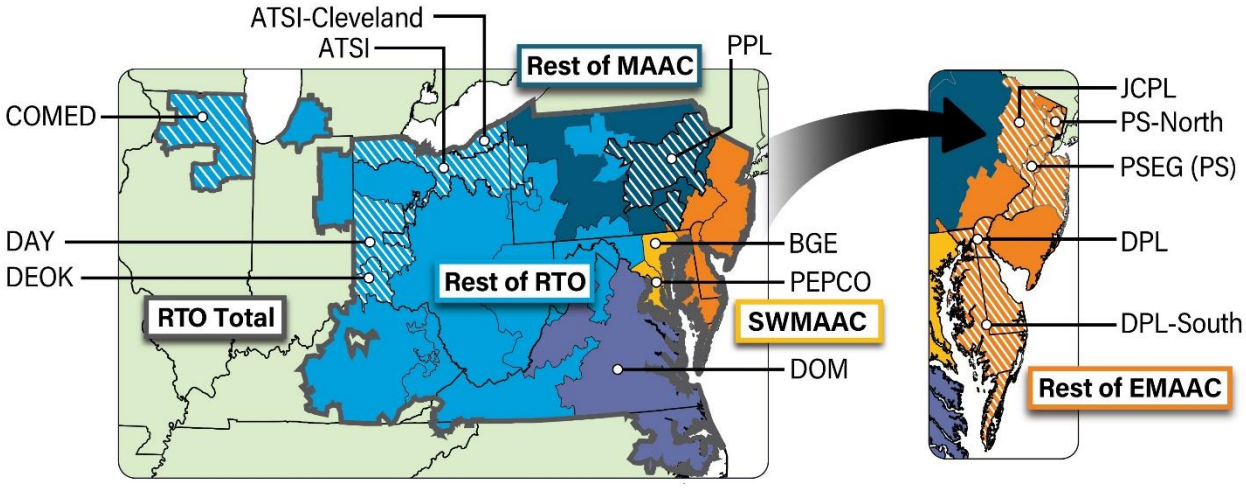
An LDA was modeled in the BRA and had a separate VRR Curve if: (1) the LDA has a CETO/CETL margin that is less than 115%; or (2) the LDA had a Locational Price Adder in any of the three immediately preceding BRAs; or (3) the LDA is EMAAC, SWMAAC and MAAC. An LDA not otherwise qualifying under the above three tests may also be modeled if PJM finds that the LDA is determined to be likely to have a Locational Price Adder based on historic offer price levels or if such LDA is required to achieve an acceptable level of reliability consistent with the Reliability Principles and Standards.

As a result of the above criteria, MAAC, EMAAC, SWMAAC, PSEG, PS-NORTH, DPL-SOUTH, PEPCO, ATSI, ATSI-Cleveland, COMED, BGE, PPL, DAY, DOM, DEOK and JCPL were modeled as LDAs in the 2028/2029 RPM BRA. A Locational Price Adder represents the difference in Resource Clearing Prices for the Capacity Performance product between a resource in a constrained LDA and the immediate higher-level LDA.

Locational Deliverability Area Definition

Locational Deliverability Areas (LDAs) defined as "(rest of)" do not include figures from modeled child LDAs contained within the parent LDA. For example, the PS (rest of) LDA does not include PS-NORTH within its totals.	• **EMAAC** total includes DPL-SOUTH, PS-NORTH, PS (rest of), JCPL, EMAAC (rest of). • **SWMAAC** total includes PEPCO, BGE, SWMAAC (rest of). • **MAAC** total includes EMAAC total, SWMAAC total, PPL, MAAC (rest of).	**RTO total** includes MAAC total, ATSI (rest of), ATSI-Cleveland, COMED, DAY, DEOK, DOM, RTO (rest of). See **Map 1.**

Map 1. PJM LDAs



Executive Summary

The 2028/2029 Reliability Pricing Model (RPM) Base Residual Auction (BRA) cleared 138,317.8 MW of Unforced Capacity (UCAP) in the RTO from annual and summer-period and winter-period matched resources. A price cap below the established VRR Curve can reduce the amount of investment, and therefore supply, in the PJM region. The Fixed Resource Requirement (FRR) committed 10,863.8 MW UCAP to meet the FRR commitment. The total procured capacity in the RTO, which includes RPM and FRR, is 149,181.6 MW UCAP or 6,831.3 MW UCAP below the RTO Reliability Requirement. This is very similar to the prior BRA where the shortage was 6,516 MW UCAP. Such a shortage does not necessarily mean that the PJM system will be unable to serve load reliably in the delivery year; it means that PJM would have to operate with slimmer reserves and greater level of risk.

RPM cleared at a 14.4% Installed Reserve Margin (IRM) or 5.6 percentage points below the 20% IRM. The IRM is the reserve margin determined to be necessary to maintain a one-day-in-10-year Loss of Load Expectation (LOLE). This is the second BRA in a row where PJM has cleared more than one percentage point below the IRM. PJM is proactively working through the stakeholder process on a variety of changes that include an update to the existing Reliability Backstop Auction[1] rules to address the current and future expected shortfalls. Please see Critical Issue Fast Path – Large Load Additions and Critical Issue Fast Path – Reliability Backstop Procurement / Connect & Manage on PJM.com for additional details on the process.

Supply offered into the RPM capacity market increased 3,447 MW (UCAP) from 136,147.6 MW in the 2027/2028 BRA to 139,594.6 MW in the 2028/2029 BRA. The total amount of new generation and generation uprates was 524.7 MW UCAP. The number of constrained LDAs remained at zero in the 2028/2029 BRA since the total amount cleared was less than the RTO Reliability Requirement. The total amount of capacity in RPM (annual plus matched seasonal, inclusive of Demand Response (DR) and Price Responsive Demand ("PRD")) that cleared increased by 3,733.2 MW (UCAP) from 134,584.6 MW (UCAP) in the 2027/2028 BRA to 138,317.8 MW (UCAP) in the 2028/2029 BRA. The increase was primarily from an increase in Accredited UCAP factors and a reduction in the unoffered megawatts.

The RTO, as a whole, failed the Market Structure Test (i.e., the Three-Pivotal Supplier Test), resulting in the application of market power mitigation to all Existing Generation Capacity Resources. Mitigation was applied to a supplier's existing generation resources, resulting in utilizing the lesser of the supplier's approved Market Seller Offer Cap for such resource or the supplier's submitted offer price for such resource in the RPM Auction clearing.

Table 1 summarizes the prices ($/MW-day UCAP) from the previous BRA and this BRA. For the 2028/2029 BRA, all prices cleared at the cap ($325.00). In the 2027/2028 BRA, the RTO cleared at the price cap of $333.44.

[1] See OATT Attachment DD, section 16 – The current Tariff provision requires a Reliability Backstop Auction to be conducted if three consecutive BRAs clear more than one percentage point below the IRM or if the Base Load Generation Resources committed are less the forecast minimum hourly load in three consecutive BRAs.

The sum of the product of total cleared supply by LDA and the associated clearing price in the 2028/2029 BRA was $16.4 billion, which was unchanged from the $16.4 billion value in the 2027/2028 BRA. Since the RPM Auction cleared 6,831.3 MW UCAP less than the Reliability Requirement, the product of cleared supply and the associated clearing price is estimated to be $0.8 billion less than it would have been if the RPM cleared enough capacity to meet the IRM. Note that the $16.4 billion value does not equate to a total cost to load because load that is hedged through self-supply or bilateral contracts is not exposed to the clearing prices in the auction.

Table 1. Comparison of BRA Clearing Prices by Delivery Year by LDA

		BRA Resource Clearing Prices ($/UCAP MW-day)
Capacity Type	**BRA**	**RTO**
Capacity	2028/29**	***$325.00***
Performance	2027/28*	***$333.44***

*Cap of $333.44; **Cap of $325.00

The following is a list of significant planning parameter and market rule changes that impacted the auction results:

- Key planning parameters changes [please see the Planning Parameters Report (PDF)], which include:
  - RTO Reliability Requirement increase from 152,400 MW to 156,013 MW (UCAP)
    - 1,374.5 MW increase in forecasted load, largely due to additional Large Loads
    - IRM remained at 20.0%
    - FPR increased from 0.926 to 0.9401
- Implemented a cap of $256.75 $/MW-ICAP ($325.00 $/MW-UCAP) and a floor of $138.25 $/MW-ICAP ($175.00 $/MW-UCAP) to the VRR Curve.[2] This cap and floor were also in effect for the 2026/2027 and 2027/2028 BRAs. All offers below the floor were cleared, and all offers above the cap were not cleared.
- Distributed Energy Resources (DER) under Order 2222 were eligible to participate for first time, but PJM received no offers.
- First year for VRR Curve was adopted as part of the periodic review but had minimal impact because of cap and floor.
- PJM submitted $0 offers for specific Reliability Must-Run units and will allocate the revenue as a credit to the associated load.
- As a result of delayed in-service dates for transmission upgrades, MAAC, SWMAAC and DOM CETLs were significantly impacted.

[2] Approximate cap/floor price of $325/$175 $/MW-UCAP filed in ER25-1357 was based on preliminary Reference Resource Accredited UCAP Factor. Actual Reference Resource AUCAP Factor resulted in stated $/MW-UCAP values.

Note: *This BRA was conducted under a compressed auction schedule where the auction occurred ~23 months prior to the start of the delivery year. A typical BRA is held more than three years before the start of the delivery year. The prior BRA was conducted under the same compressed auction schedule.*

Detailed Report

Summary of results and associated Installed Reserve Margin

Table 2 contains a summary of the RTO clearing prices, cleared Unforced Capacity (UCAP) and estimated procured installed reserve margins for the 2018/2019 through 2028/2029 RPM BRAs. The estimated reserve margin presented in **Table 2** represents the percentage of installed capacity (ICAP) cleared in the RPM and committed by FRR entities in excess of the RTO load (including load served under the FRR alternative). The estimated reserve margin used a pool-wide EFORd prior to 2025/2026 Delivery Year and a pool-wide Accredited UCAP factor in subsequent delivery years to convert from cleared UCAP to cleared ICAP, which may result in a difference from the actual reserve margin. The reserve margin procured for the entire RTO, which includes FRR and RPM load, is 14.7%, or 5.3 percentage points lower (8,716.1 MW ICAP lower) than the target reserve margin of 20% included in the Reliability Requirement to meet one-day-in-10-year Loss of Load Expection (LOLE) (or 0.1 loss-of-load days per year).

Table 2. RPM Base Residual Auction Resource Clearing Price Results in the RTO

	Auction Results					
Delivery Year	Resource Clearing Price	Cleared UCAP (MW)	Installed Reserve Margin	RPM Reserve Margin[1]	Total Reserve Margin[1,2,6]	Cleared MW Times Clearing Price ($ billion)
2018/19	$164.77	166,836.9	16.1%	20.2%	19.8%	$10.9
2019/20	$100.00	167,305.9	16.0%	22.9%	22.4%	$7.0
2020/21[3]	$76.53	165,109.2	15.5%	23.9%	23.3%	$7.0
2021/22	$140.00	163,627.3	14.7%	22.0%	21.5%	$9.3
2022/23	$50.00	144,477.3	14.9%	21.1%	19.9%	$3.9
2023/24	$34.13	144,870.6	14.9%	21.6%	20.3%	$2.2
2024/25	$28.92	147,478.9	17.7%	21.7%	20.4%	$2.2
2025/26[4]	$269.92	135,684.0	17.8%	18.6%	18.5%	$14.7
2026/27[5]	$329.17	134,205.3	18.6%	18.9%	18.9%	$16.1
2027/28	$333.44	134,478.1	20.0%	14.4%	14.9%	$16.4
2028/29	$325.00	138,317.8	20.0%	14.4%	14.7%	$16.4

[1] Reserve Margins converted to ICAP using Pool-Wide AUCAP Factor or EFORd prior to 2025/26 DY, PRD removed from Reliability Requirement in calculation of RPM Reserve Margin; [2] Total Reserve Margin includes FRR+RPM (Total ICAP/Total Peak-1); [3] Beginning 2020/2021 Cleared UCAP (MW) includes Annual and matched Seasonal Capacity Performance sell offers; [4] DOM zone included in RPM; [5] EE removed from Market; [6] Total Reserve margin does not include FRR commitments to meet the threshold to allow sales into RPM.

Clearing price trend, offered and cleared capacity by LDA, and new/uprate generation

Figure 1 represents the trend in BRA capacity price by delivery year for RTO, EMAAC, SWMAAC and MAAC. For 2028/2029, all four LDAs cleared at $325.00. This clearing price was a decrease from $333.44 in the RTO in the 2027/2028 BRA. The number of constrained LDAs remained at zero.

Figure 1. BRA Clearing Prices by Delivery Year for Major LDAs

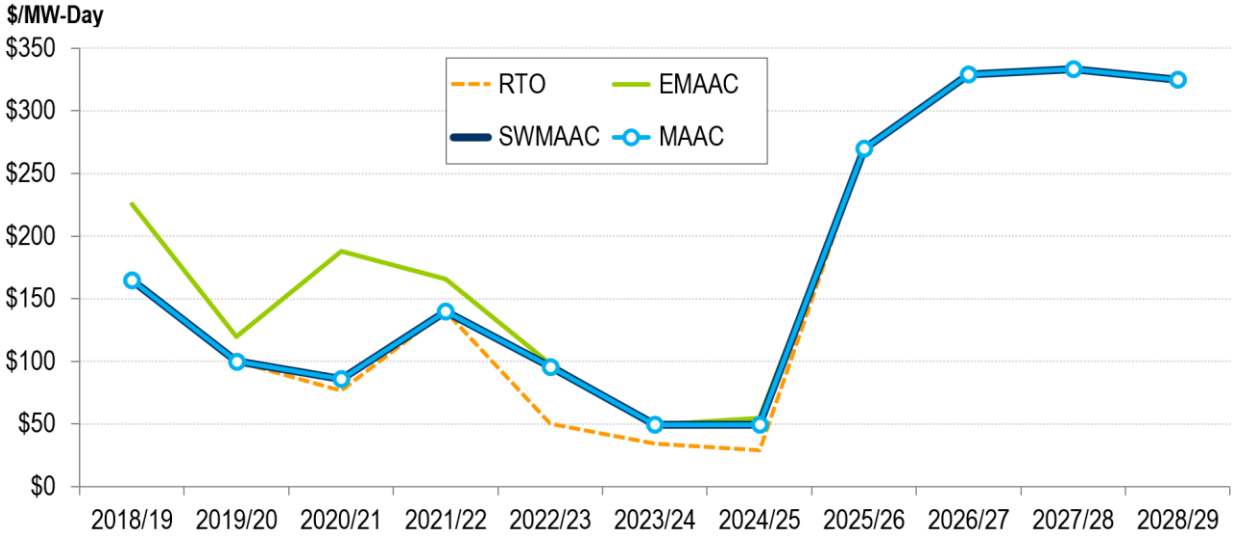


Table 3 provides the total offered and cleared megawatts and associated prices by LDA. This table provides an indication of how much supply did not clear for each LDA.

Since there were no constrained LDAs in the 2028/2029 BRA, Capacity Transfer Rights (CTRs) have no value for the 2028/2029 Delivery Year. CTRs are allocated by load ratio share to all Load Serving Entities (LSEs) in a constrained LDA that has a higher clearing price than the unconstrained region. CTRs serve as a credit back to the LSEs in the constrained LDA for use of the transmission system to import less expensive capacity into that constrained LDA and are valued at the difference in the clearing prices of the constrained and unconstrained regions.

Table 3. Offered and Cleared Megawatt and Associated Prices by LDA

LDA	MW (UCAP)		System Marginal Price	Locational Price Adder***	RCP for Capacity Performance Resources
	Offered MW*	Cleared MW**			
ATSI	7,519.1	7,519.1	$325.00	$0.00	$325.00
ATSI-CLEVELAND	1,267.4	1,267.4	$325.00	$0.00	$325.00
COMED	21,449.9	20,919.3	$325.00	$0.00	$325.00
DAY	972.5	972.5	$325.00	$0.00	$325.00
DEOK	2,403.0	2,401.2	$325.00	$0.00	$325.00
DOM	21,373.0	21,246.4	$325.00	$0.00	$325.00
MAAC	53,841.9	53,457.6	$325.00	$0.00	$325.00
PPL	8,911.5	8,856.9	$325.00	$0.00	$325.00
EMAAC	24,805.1	24,789.4	$325.00	$0.00	$325.00
DPL-SOUTH	1,005.4	1,005.4	$325.00	$0.00	$325.00
PSEG	4,353.4	4,353.4	$325.00	$0.00	$325.00
PS-NORTH	2,495.0	2,495.0	$325.00	$0.00	$325.00
JCPL	2,596.3	2,596.3	$325.00	$0.00	$325.00
SWMAAC	6,953.8	6,717.0	$325.00	$0.00	$325.00
BGE	2,380.8	2,289.3	$325.00	$0.00	$325.00
PEPCO	2,400.8	2,255.5	$325.00	$0.00	$325.00
RTO	**139,594.6**	**138,317.8**	**$325.00**	**$0.00**	**$325.00**

** Offered MW values include sum of Annual, Summer-Period, and Winter-Period Capacity Performance sell offers.*
*** Cleared MW values include sum of Annual and matched Seasonal Capacity Performance sell offers within the LDA.*
**** Locational Price Adder is with respect to the immediate parent LDA*

As seen in **Figure 2**, the 2028/2029 BRA procured 317.1 MW UCAP of capacity from new generation and 207.6 MW UCAP from uprates to existing or planned generation through the RPM Auction. New generation is primarily planned generators that are offered for the first time in this BRA. Uprates include any increase in ICAP for a planned or existing generator that participated in the prior BRA. Reactivated resources represent resources that were retired or mothballed for the prior BRA but now qualify and offer in this BRA. The total quantity of new, uprated and reactivated generation decreased from 774.3 MW in 2027/2028 to 524.7 MW in 2028/2029.

Figure 2. Cleared Megawatts (UCAP) by New Generation/Uprates by Delivery Year

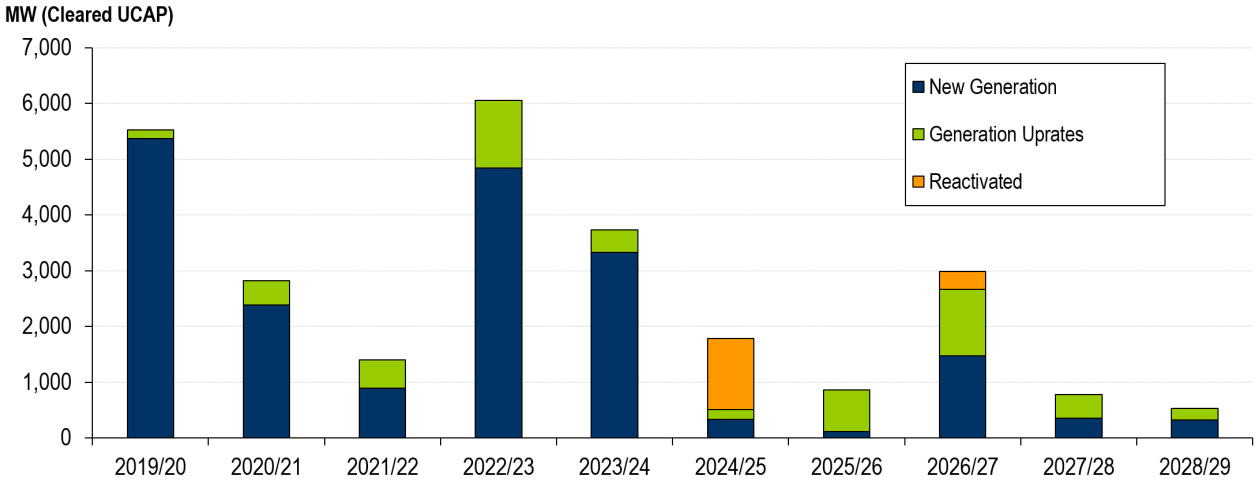


Table 4 contains a summary of the RTO resources for each cleared BRA from 2018/2019 through the 2028/2029 delivery years in terms of ICAP. The summary includes all resources located in the RTO (including FRR Capacity Plans).

A total of 202,288.2 MW of ICAP was eligible to be offered into the 2028/2029 BRA or used in an FRR Capacity Plan. The total amount of supply in the PJM service area increased from 200,993.8 MW ICAP to 202,288.2 MW ICAP, or an increase in the total amount of supply by 1,294.4 MW ICAP.

A total of 179,985.7 MW (ICAP) of Generation Capacity Resources and Demand Response Resources were offered into the Base Residual Auction. This is an increase of 527.6 MW (ICAP) offered when compared to the 2027/2028 BRA. The total Demand Response offered into the auction declined slightly from 7,937.6 MW ICAP to 7,713.7 MW ICAP.

A total of 22,302.5 MW (ICAP) of Generation Capacity Resources were not offered into the auction. This includes resources that received a must-offer exception, participated in FRR, did not offer, or submitted a capacity modification ("capmod") reduction because the resource will not be available for the full Delivery Year.

278.7 MW ICAP (193.4 MW UCAP) were not offered but were required to offer and are included in the 22,302.5 MW ICAP described above. This is a significant decrease from the last BRA where 1,003.8 MW ICAP (809 MW UCAP) did not offer. These values reflect units with a must-offer requirement that did not offer and planned generation resources that submitted an NOI but then did not offer. All megawatts that were unoffered but required to offer are considered "unoffered" and may not be used as capacity in PJM for the delivery year. This means they may not be used to participate in an incremental auction or bilateral transaction or be included in an FRR plan. Any seller with unoffered megawatts is subject to further review by PJM and the Independent Market Monitor ("IMM"). Such review may result in a referral to the FERC Office of Investigation for a comprehensive investigation to ensure the seller did not withhold in order to exercise market power.

25.2 MW ICAP (17.7 MW UCAP) were not allowed to participate because: i) they were subject to both MOPR and MSOC[3] where the MOPR price was greater than the MSOC price and the resource did not request and receive a unit-specific price or ii) they were subject to MOPR, did not have a default MOPR price and did not request and receive a unit-specific price.

[3] MSOC includes Market Seller Offer Cap outlined in OATT 6.4 and Planned Generation offer price cap included in OATT 6.5.

RTO offered and unoffered installed capacity by resource type, trend in offered and cleared unforced capacity

Table 4. Total RTO Resources (RPM + FRR) Offered vs. Unoffered by Resource Type Used To Meet the Reliability Requirement

	Delivery Year *(All values in ICAP)* ****										
Auction Supply	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**	**2025/26***	**2026/27**	**2027/28**,***	**2028/29****
Internal PJM Gen Capacity	191,322.3	195,203.0	197,804.7	198,726.6	193,412.2	189,704.7	191,133.4	186,134.2	187,022.1	191,580.6	193,378.9
Internal PJM DR+PRD Capacity	10,772.8	10,859.2	8,245.5	10,694.8	9,501.2	9,517.2	9,626.1	8,233.7	8,135.1	8,052.6	7,713.7
Imports Offered	5,724.6	4,821.4	5,440.5	4,725.0	1,649.1	1,601.2	1,617.1	1,485.2	1,492.3	1,360.6	1,195.6
Eligible RPM Capacity	207,819.7	210,883.6	211,490.7	214,146.4	204,562.5	200,823.1	202,376.6	195,853.1	196,649.5	200,993.8	202,288.2
Exports/ Delistings	1,313.4	1,318.2	1,319.8	1,319.8	1,525.3	1,518.9	1,522.7	1,525.3	1,426.3	2,441.1	2,334.0
FRR Commitments	15,793.0	15,385.3	13,931.6	13,657.4	33,297.1	33,500.7	34,584.2	13,184.5	14,837.5	14,372.2	13,765.6
Excused/Unoffered	2,348.4	1,454.5	8,384.4	9,433.8	2,190.0	9,949.6	12,207.4	9,819.0	1,984.4	5,736.5	6,202.9
Eligible PJM Capacity Excluded From RPM	21,304.6	19,454.8	18,158.0	24,411.0	37,012.4	44,969.2	48,314.3	24,528.8	18,248.2	21,535.7	22,302.5
Eligible RPM Capacity	186,515.1	191,428.8	193,332.7	189,735.4	167,550.1	155,853.9	154,062.3	171,324.3	178,401.3	179,458.1	179,985.7
Generation Offered	177,592.1	181,866.4	178,807.1	178,823.5	157,872.2	146,571.7	144,741.2	163,314.6	170,381.2	171,520.5	172,272.0
DR Offered	10,772.8	10,859.2	9,047.8	10,911.9	9,677.9	9,282.2	9,321.1	8,009.7	8,020.1	7,937.6	7,713.7
Total Eligible RPM Capacity: Offered	**188,364.9**	**192,725.6**	**187,854.9**	**189,735.4**	**167,550.1**	**155,853.9**	**154,062.3**	**171,324.3**	**178,401.3**	**179,458.1**	**179,985.7**

**includes DOM zone load previously under the FRR Alternative.*

***includes DEOK zone load previously under the FRR Alternative.*

****process changed to recognize exports to approved must-offer exceptions based on external sales*

*****offered MW values include sum of Annual, Summer-Period, and Winter-Period Capacity Performance sell offers.*

Table 5 shows the Generation, DR and EE Resources offered and cleared in the RTO translated into UCAP megawatt amounts. Until the 2025/2026 Delivery Year, participants' sell offers for thermal resources used EFORd values to convert a resource's ICAP values into UCAP values. Effective for 2025/2026, the appropriate Accredited UCAP Factor is used to convert ICAP values into UCAP values. Prior to the 2025/2026 Delivery Year, DR sell offers and EE sell offers were converted into UCAP using the appropriate Forecast Pool Requirement (FPR). Beginning in 2025/2026, DR sell offers are converted into UCAP using the appropriate DR Accredited UCAP Factor, while EE sell offers were calculated by multiplying the EE nominated value by the FPR. Beginning in 2026/2027, EE Resources are not eligible to participate as a capacity resource in PJM.

Total offered Generation and DR (UCAP) used to meet the Reliability Requirement increased from 136,147.6 MW to 139,594.6 MW. Please note that UCAP for delivery years prior to 2025/2026 were not calculated using the marginal ELCC methodology, and changes going forward from 2025/2026 are in part responsible for the subsequent decreases in offered and cleared UCAP.

Table 5. Capacity Resource Offered and Cleared by Type by Delivery Year (UCAP)

		Delivery Year										
	Auction Results (UCAP)	**2018/19**	**2019/20**	**2020/21***	**2021/22**	**2022/23**	**2023/24**	**2024/25**	**2025/26**	**2026/27****	**2027/28****	**2028/29****
Offered	Generation	166,909.6	172,071.2	171,262.3	171,663.2	152,128.6	141,026.7	138,799.3	129,607.5	129,661.2	128,849.0	132,577.2
	DR	11,675.5	11,818.0	9,846.7	11,886.8	10,513.0	10,116.7	10,146.4	6,084.8	5,530.6	7,298.6	7,017.4
	Total GEN/DR Offered	**178,585.1**	**183,889.2**	**181,109.0**	**183,550.0**	**162,641.6**	**151,143.4**	**148,945.7**	**135,692.3**	**135,191.8**	**136,147.6**	**139,594.6**
	EE	1,306.1	1,650.3	2,242.5	2,954.8	5,056.8	5,471.1	8,417.0	1,459.8	0.0	0.0	0.0
Cleared	Generation	154,506.0	155,442.8	155,976.5	150,385.0	131,541.6	131,777.4	132,423.1	128,607.5	128,845.5	127,448.1	131,630.3
	DR	11,084.4	10,348.0	7,820.4	11,125.8	8,811.9	8,096.2	7,992.7	6,064.7	5,530.6	7,298.6	7,017.4
	Total GEN/DR Cleared	**165,590.4**	**165,790.8**	**163,399.0**	**161,510.8**	**140,353.5**	**139,873.6**	**140,415.8**	**134,672.2**	**134,376.1**	**134,478.1**	**138,317.8**
	EE	1,246.5	1,515.1	1,710.2	2,832.0	4,810.6	5,471.1	7,668.7	1,459.8	0.0	0.0	0.0
	Uncleared GEN/DR	12,994.7	18,098.4	17,312.1	22,039.2	22,288.1	11,269.8	8,529.9	1,020.1	815.7	1,400.9	1,276.8

Note: RTO numbers include all LDAs. UCAP calculated using ELCC values for Generation Resources. DR and EE UCAP values include appropriate DR AUCAP Factor and FPR.
**Starting 2020/2021:Offered values include sum of Annual, Summer-Period, and Winter-Period CP sell offers. Cleared values include sum of Annual and matched Seasonal cleared offers*
***EE Eliminated*

RTO offered and cleared unforced capacity by fuel type trend

Table 6 shows the offered and cleared megawatts by resource type for RPM plus FRR commitments over the last four delivery years. Intermittent and Capacity Storage Resources (solar, wind, water, battery/hybrid) offered increased by 1,078 MW UCAP, while coal megawatts offered decreased by 3,541 MW UCAP, primarily due to planned deactivations. Natural gas offered increased substantially in the 2028/2029 BRA from the 2027/2028 BRA by 5,550 MW UCAP largely as a result of: i) an increase in Accredited UCAP factor, ii) resource fuel type changes to natural gas, and iii) units that received a must-offer exception in a prior BRA but offered and cleared in the 2028/2029 BRA. Demand Response offers decreased modestly by 277 MW UCAP.

Table 6. Offered and Cleared MWs by Type for RPM and Committed FRR for Previous BRAs

	Offered and Cleared UCAP									
	2025/26		2026/27		2027/28		2028/29		2028/29 - 2027/28 Change	
Type	Offered	Cleared	Offered	Cleared	Offered	Cleared	Offered	Cleared	Offered	Cleared
Coal	30,081	30,081	30,948	30,948	30,366	29,766	26,825.4	26,825.4	(3,541)	(2,941)
Distillate Oil (No.2)	2,408	2,408	2,608	2,608	2,421	2,421	2,515.2	2,515.2	94	94
Gas	66,354	66,354	63,377	63,377	62,800	62,634	68,349.7	68,272.9	5,550	5,639
Nuclear	30,549	30,549	30,562	30,562	30,552	30,552	30,677.6	30,677.6	125	125
Oil	578	578	1,155	1,155	1,167	1,167	1,140.8	1,140.8	(26)	(26)
Solar	1,337	1,337	1,584	1,567	1,481	1,465	2,115.8	2,115.8	635	651
Water	5,365	5,361	5,597	5,597	6,002	6,002	6,033.9	6,033.9	32	32
Wind	2,618	1,676	4,507	3,717	4,144	3,526	4,282.7	3,412.6	139	(114)
Battery/Hybrid	14	14	35	35	205	205	478.3	478.3	273	273
Other	911	911	899	899	1,005	1,005	1,005.5	1,005.5	0	0
Demand Response	6,363	6,342	5,795	5,795	7,641	7,641	7,364.7	7,364.7	(277)	(277)
Aggregate Resource	327	273	58	49	-	-	-	-	-	-
Total (without EE)	**146,905**	**145,883**	**147,125**	**146,309**	**147,786**	**146,385**	**150,790**	**149,843**	**3,004**	**3,458**
Energy Efficiency	1,460	1,460	-	-	-	-	-	-	NA	NA

The table shows the UCAP MW quantities that offered and cleared in the BRA of each DY plus the UCAP MW committed to FRR Capacity Plans. Notes: Offered and Cleared MW quantities include sum of Annual, Summer-Period, and Winter-Period Capacity Performance sell offers. Other consists of: Kerosene, Other Gas, Other Liquid, Other Solid, Wood.

Capacity import participation and seasonal resource participation

Table 7 shows the quantity of capacity imports cleared in the 2028/2029 BRA at 1,040.6 MW (UCAP). Certain external generation capacity that has cleared are Prior CIL Exception External Resources that qualify for an exception for the 2028/2029 Delivery Year to satisfy the enhanced pseudo-tie requirements established by FERC Order ER17-1138.

Table 7. Capacity Imports (UCAP) Offered and Cleared by Region

	External Resource (Imports) Totals*;**				
	2024/25	2025/26	2026/27	2027/28	2028/29
Offered MW (UCAP)	1,527.1	1,268.5	1,281.7	1,144.8	1,040.6
Cleared MW (UCAP)	1,397.6	1,268.5	1,281.7	1,005.9	1,040.6

**Offered and Cleared MW quantities include resources that received CIL Exception and those associated with pre-OATT grandfathered transmission. Attachment G of Manual 14B provides a mapping of outside Balancing Authorities to the External Source Zones. **External Resources receive RTO Clearing Price*

Table 8 provides a breakdown of the offered and cleared megawatts by season by resource type. There were 329.9 MW of summer capability and 1,200.0 MW of winter capability offered in the auction. All 329.9 MW of Summer Resources were matched with Winter Resources to meet the annual Capacity Performance capability requirement.

Table 8. Offered and Cleared (UCAP) by Resource Type by Season

Capacity Performance

	Offered MW (UCAP)			Cleared MW (UCAP)		
Resource Type	**Annual**	**Summer**	**Winter**	**Annual**	**Summer**	**Winter**
GEN	131,377.2	-	1,200.0	131,300.4	-	329.9
DR	6,687.5	329.9	-	6,687.5	329.9	-
PRD	-	-	-	-	-	-
Grand Total	**138,064.7**	**329.9**	**1,200.0**	**137,987.9**	**329.9**	**329.9**

Demand Response, Price Responsive Demand and Distributed Energy Resources

Figure 3 displays the trend in offered and cleared DR and Price Responsive Demand (PRD) and cleared EE prior to 2026/2027 by delivery year. DR offered and cleared amounts decreased for 2028/2029 to approximately 7,000 MW, about 300 MW fewer than in 2027/2028. There were no PRD offers in the 2028/2029 Delivery Year.

Figure 3. DR and PRD Offered and Cleared and EE Cleared MW(UCAP) by Delivery Year

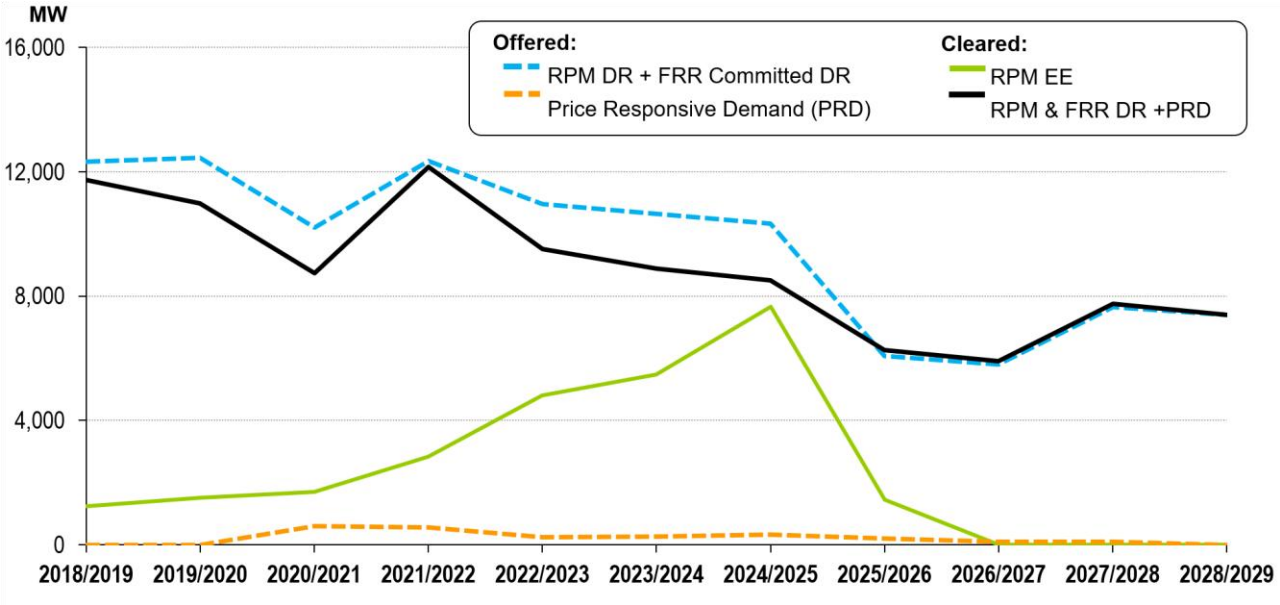


Table 9 provides a breakdown of offered and cleared DR by LDA. AEP cleared the most DR (1,220.1 MW), followed by COMED (1,105.6 MW) and DOM (755.3 MW).

Table 9. DR Offered and Cleared by LDA

LDA	Zone	Offered MW (UCAP)*	Cleared MW (UCAP)*	% Cleared
EMAAC	*AECO*	40.3	40.3	100.0%
EMAAC/DPL-S	*DPL*	138.5	138.5	100.0%
JCPL	*JCPL*	66.4	66.4	100.0%
EMAAC	*PECO*	285.8	285.8	100.0%
PSEG/PS-N	*PSEG*	231.8	231.8	100.0%
EMAAC	*RECO*	2.2	2.2	100.0%
EMAAC Sub Total		**765.0**	**765.0**	**100.0%**
PEPCO	*PEPCO*	284.5	284.5	100.0%
BGE	*BGE*	252.4	252.4	100.0%
MAAC	*METED*	120.4	120.4	100.0%
MAAC	*PENELEC*	180.1	180.1	100.0%
PPL	*PPL*	373.2	373.2	100.0%
MAAC Sub Total**		**1,975.6**	**1,975.6**	**100.0%**
RTO	*AEP*	1,220.1	1,220.1	100.0%
RTO	*APS*	580.7	580.7	100.0%
ATSI/ATSI-C	*ATSI*	663.4	663.4	100.0%
COMED	*COMED*	1,200.3	1,200.3	100.0%
DAY	*DAY*	161.3	161.3	100.0%
DEOK	*DEOK*	156.8	156.8	100.0%
DOM	*DOM*	755.3	755.3	100.0%
RTO	*DUQ*	99.1	99.1	100.0%
RTO	*EKPC*	204.8	204.8	100.0%
Grand Total		**7,017.4**	**7,017.4**	**100.0%**

** MW values include sum of Annual and Summer-Period Capacity Performance DR*

*** MAAC sub-total includes all MAAC Zones*

PRD is provided by a PJM Member that represents retail customers having the ability to predictably reduce consumption in response to energy wholesale prices. In the PJM capacity market, a PRD Provider may voluntarily make a firm commitment of the quantity of PRD that will reduce its consumption in response to real-time energy price during a delivery year. A PRD Provider that is committing PRD in a BRA must also submit a PRD election in the Capacity Exchange system that indicates the Nominal PRD Value in megawatts that the PRD Provider is willing to commit at different reservation prices ($/MW-day). The VRR Curve of the RTO and each affected LDA is shifted leftward along the horizontal axis by the UCAP megawatt quantity of elected PRD where the leftward shift occurs only for the portion of the VRR Curve at or above the PRD Reservation Price. The planning parameters include a breakdown of elected PRD in ICAP, which can be converted to UCAP by taking ICAP * FPR. The VRR Curve of the RTO and each affected LDA is shifted leftward along the horizontal axis by the UCAP megawatt value of these quantities at the PRD Reservation Price. Once committed in a BRA, a PRD commitment cannot be replaced; the commitment can only be satisfied through the registration of price response load in the DR Hub system prior to or during the delivery year.

For the 2028/2029 Delivery Year, zero Price Responsive Demand offers were submitted.

Distributed Energy Resources (“DER”) are comprised of Distributed Generators (“DG”) connected directly to the distribution system and approved by the electric distribution company and DR. DER was eligible to participate in the capacity market for the first time for the 22028/2029 BRA. For the 2028/2029 Delivery Year, zero DER offers were submitted.

Appendix

BRA Clearing Simulation Without Cap and Floor

Table 1 contains a summary of the estimated RTO clearing prices,[4] cleared UCAP and estimated procured reserve margins for the 2028/2029 RPM BRA without the cap and floor applied. Cleared UCAP and estimated reserve margins are both very slightly higher as compared to the actual results with the cap and floor applied, and the estimated resource clearing prices increased substantially, which resulted in the product of the cleared megawatt times the associated prices to increase $13.3 billion over actual results.

Table 1. RPM Auction Resource Clearing Prices Results in the RTO With No Cap or Floor Simulation

	Auction Simulation – Estimated Impact of No Cap or Floor					
Delivery Year	RTO Resource Clearing Price	Cleared UCAP (MW)	Installed Reserve Margin	RPM Reserve Margin	Total Reserve Margin (RPM+FRR)	Cleared MW Times Clearing Price ($ billion)*
2028/29	$554.72	138,394.6	20.0%	14.4%	14.8%	$29.7

** - Estimated total clearing price in $ for this simulation includes the impact of higher clearing prices in LDAs with price separation*

Table 2 summarizes the prices ($/MW-day UCAP) from the previous simulated BRAs with no cap and floor and the 2028/2029 simulated BRA with no cap and floor. For the 2028/2029 simulated BRA, all prices cleared at $554.72 except the COMED LDA, which cleared at $776.69. In the 2027/2028 simulated BRA, all prices cleared at $529.80 except the DOM LDA, which cleared at $542.83.

Table 2. RPM Simulated Base Residual Auction Resource Clearing Price Results

		Resource Clearing Prices ($/MW-day, UCAP)		
Capacity Type	BRA	Rest of RTO	DOM	COMED
Capacity Performance	2026/27	*$388.57*	-	-
	2027/28	*$529.80*	***$542.83***	-
	2028/29	*$554.72*	-	***$776.69***

Note: Clearing prices in bold indicate constrained LDA

[4] The PJM simulation included existing offers provided by Capacity Market Sellers. PJM does not know how offers may have changed if the temporary cap and floor was not implemented.