

Overview of RPM Cost Allocation

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- LSEs are charged for their Daily Unforced Capacity Obligation in a zone priced at the applicable Final Zonal Capacity Price for the Delivery Year
- Charges are calculated daily and billed weekly

Daily Zonal UCAP Obligation MW

- Each zone with RPM load receives a share of the RTO-procured UCAP based on its share of forecasted peak load
- LSEs receive share of Zonal UCAP based on EDC allocation



Final Zonal Capacity Price

Weighted average price of capacity in zone (weighted by UCAP cleared across RPM auctions):

- Marginal value of system capacity
- Locational Price Adders, if any, for zones in constrained LDAs
- Any required adjustments (e.g., make-whole payments)

Zonal UCAP Obligation MW

Total RTO-procured UCAP MW across all RPM auctions for the Delivery Year is allocated to each zone based on its share of forecasted peak load

Example (for RPM load):

- RTO procured UCAP MW in RPM Auctions = 140,000 MW
- RTO forecasted peak load for Delivery Year = 150,000 MW
- Zone A forecasted peak load = 15,000 MW (10% of total)
- Zone A UCAP Obligation = 14,000 MW (140,000 MW * 10%)

LSE Share of Zonal UCAP Obligations

Zonal UCAP Obligation MW are allocated to customers and LSEs in the zone based on EDC-defined methodologies

- EDCs are responsible for allocating prior summer weather normalized peak load of zone to customers and determining obligation peak loads (typically based on 5 CPs)
 - [THEO, PLC & NSPL Methodology Inventory](#)
- EDCs are also responsible for uploading Obligation Peak Load data into Capacity Exchange system for each LSE serving load within the zone
- Obligation Peak Loads are multiplied by zonal scaling factors and FPR to determine each LSE's Daily Zonal UCAP Obligation MW

CTR Credit: Capacity Transfer Rights (CTRs) are used to allocate the economic value of transmission import capability in constrained LDAs, and help provide an offset to RPM Locational Reliability Charges for LSEs in zones of a constrained LDA

CTR MW: Set to the difference between the Final UCAP Obligation for an LDA and the amount of internal cleared capacity from RPM auctions for such LDA (i.e., imported MW to meet UCAP obligation)

- CTR MW are first allocated to holders of ICTRs or cleared QTUs, as applicable
- Remaining CTR MW allocated to LSEs based on Daily UCAP Obligation MW share

CTR Credit to LSEs: The payment received by LSEs is equal to their allocated CTR MW times the weighted average locational price adder of the LDA

Numerical Example of Capacity Payments for LSEs in Constrained LDA

Locational Reliability Charges for Zone A (constrained LDA):

- Total RTO Procured UCAP = 140,000 MW
- RTO Forecasted Peak Load = 150,000 MW
- Zone A Forecasted Peak Load = 15,000 MW (10% of total)
- Zone A UCAP Obligation = 14,000 MW
- Zone A Final Zonal Capacity Price = \$200/MW-day (constrained in RPM auctions)

Locational Reliability Charges for Zone A (\$/day) = \$2.8 million (14,000 MW * \$200/MW-day)

Key Takeaway: Zonal capacity charges in constrained regions are based on Locational Reliability Charges and offsetting CTR Credits, representing the economic value of imported capacity to meet the zone's UCAP obligation.

CTR Credits for Zone A:

- Zone A Internal Cleared MW = 10,000 MW
- Zone A CTR MW = 4,000 MW (14,000 MW – 10,000 MW); Assume all 4,000 CTR MW allocated to LSEs in zone
- CTR Credit Rate = \$50 (RTO clearing price of \$150, locational price adder for LDA of \$50)

Offsetting CTR Credits for Zone A (\$/day) = \$200,000 (4,000 MW * \$50/MW-day)

Net Load Capacity Payments (\$/day) = \$2.6 million (Locational Reliability Charges net of CTR Credits)

- Effectively paying for internal cleared UCAP (10,000 MW) * constrained price (\$200) + imported UCAP (4,000) * RTO price (\$150)

- LSEs may choose to self-supply or bilaterally contract for capacity to help offset and hedge against their Locational Reliability Charges under RPM
 - RPM supports a “financial” offset, where owned or contracted supply of an LSE to meet its load obligation is offered and cleared in the RPM auctions and receives capacity revenues, and those revenues help offset the LSE’s Locational Reliability Charges
 - Note: The capacity revenues received by an LSE for a resource (based on the resource’s cleared UCAP and clearing price in the auction) may differ from the LSE’s capacity charges for the corresponding amount of UCAP obligation
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- This is distinct from the FRR Alternative, where the full UCAP Obligation MW of the FRR load is carved out from the RPM auctions and the FRR entity must self-supply or contract for capacity to meet their UCAP obligations, demonstrated through an FRR Plan submitted to PJM

Simple Numerical Example

Load Charges	LSE UCAP Obligation (MW)	100
	Final Zonal Capacity Price (\$/MW-day)	\$200
	Daily Locational Reliability Charge (\$/day)	\$20,000
Auction Revenues	LSE Self-Supply UCAP (MW)	100
	Auction Clearing Price (\$/MW-day)	\$200
	Daily Auction Revenues (\$/day)	\$20,000
Net Charges	Net RPM Daily Capacity Charge (\$/day)	\$0

- This example shows the RPM charges and credits for an LSE self-supplying 100 MW UCAP
- Assumes the zonal capacity price applied to the LSE's UCAP obligation equals the resource's auction clearing price
- The net \$0 charge reflects the hedge against the RPM auction price (revenues offsetting the charges), and the LSE ultimately pays the cost of self-supplying for the 100 MW

The following table provides an overview of bilateral transactions for capacity specified in the Tariff (Attachment DD, section 4.6) and tracked through the Capacity Exchange system.

Note: There are other forms of bilateral transactions (e.g., contracts for differences) that parties may execute outside PJM

Transaction Type	Transaction Scope	Performance Risk
Unit-Specific	<p>Transfers the capacity MW and performance obligations of a specific resource. May specify a transfer of “Available” or “Cleared” capacity.</p> <p>Available: Transfers uncommitted capacity of resource to buyer, who may then offer the resource in the RPM auctions.</p> <p>Cleared: Transfers the capacity of resource that has already cleared an RPM auction for the Delivery Year to buyer (and associated revenues).</p>	Buyer assumes risk
Auction-Specific	Transfers the capacity MW and revenues of resources cleared in an RPM auction without the performance obligation	Seller retains risk
Locational UCAP	Transfers location-specific Available (uncommitted) capacity of a resource to buyer to serve as replacement capacity	Seller retains risk

Detailed overview of RPM system transactions (must be signed into PJM.com to view): [capacity-transactions.pdf](https://www.pjm.com/capacity-transactions.pdf)

Appendix: Capacity Obligations and Large Load Adjustments for Zone/Areas

- Certain zones have separate identifiable wholesale areas for which the relevant EDC specifies a separate Obligation Peak Load for the Delivery Year (“zone/area”)
 - E.g., A zone/area may be defined within the zone to reflect the service territory of an operating company of a TO or the service territory of a Muni / Coop
- When an EDC or LSE proposes a Large Load Adjustment (LLA) during the Load Forecast process, they must specify the zone/area where the LLA is applied
- The LLAs are then accounted for when determining the Obligation Peak Load and final capacity obligation for the relevant zone/area
 - LLAs incremental to embedded forecast are published in Table B-9 of the forecast report ([forecast webpage](#))
 - Load Adjustments that modify Capacity Obligations for a zone/area are published on the webpage link above in a separate file (Load Adjustment breakdown for Capacity Obligation.xls)





RPM Zonal Capacity Obligation

				A	B	C	D	E	F	G		
Zone	LDA1	LDA2	LDA3	2024 W/N Coincident Peak Load [MW]	Zonal Forecast Peak Load Scaling Factor	3rd IA 2025/2026 Zonal Peak Load Forecast [MW]	2025 RPM Load Adjustments	Obligation Peak Load Scaling Factor	Final Zonal RPM Scaling Factor	Final Zonal UCAP Obligation [MW]	Adjusted Zonal Capacity Price [\$/MW-day]	Adjusted Final Zonal Capacity Price** [\$/MW-day]
AE	MAAC	EMAAC		2,370.0	0.99747	2,364.0	-	1.01453	1.01196	2,249.6	\$270.01	\$270.43
AEP				11,683.0	0.96652	12,155.3	863.5	1.01453	0.98055	11,567.3	\$270.01	\$270.43
APS				8,790.0	0.97577	8,585.0	8.0	1.01453	0.98994	8,169.7	\$270.01	\$270.43
ATSI			ATSI	12,207.6	1.01071	12,392.0	53.6	1.01453	1.02540	11,792.5	\$270.01	\$270.43
BGE	MAAC	SWMAAC	BGE	6,310.0	0.99826	6,311.0	12.0	1.01453	1.01276	6,005.7	\$466.62	\$471.33
COMED			COMED	19,040.0	0.99270	19,091.0	190.0	1.01453	1.00712	18,167.5	\$270.01	\$270.43
DAYTON			DAYTON	3,190.0	0.99122	3,162.0	-	1.01453	1.00562	3,009.0	\$270.01	\$270.43
DEOK			DEOK	4,244.1	1.00752	4,276.0	-	1.01453	1.02215	4,069.1	\$270.01	\$270.43
DLCO				2,640.0	0.99470	2,626.0	-	1.01453	1.00915	2,499.0	\$270.01	\$270.43
DOM			DOM	22,356.1	0.93875	22,667.0	1,680.1	1.01453	0.95239	21,570.5	\$446.39	\$446.81
DPL	MAAC	EMAAC	DPL	3,760.0	1.00266	3,770.0	-	1.01453	1.01722	3,587.6	\$270.01	\$270.43
EKPC				2,369.7	1.00198	2,374.4	-	1.01453	1.01654	2,259.5	\$270.01	\$270.43
JCPL	MAAC	EMAAC		5,810.0	0.98916	5,747.0	-	1.01453	1.00352	5,469.0	\$270.01	\$270.43
METED	MAAC			2,960.0	1.01047	2,991.0	-	1.01453	1.02515	2,846.3	\$270.01	\$270.43
OVEC				60.0	1.00000	60.0	-	1.01453	1.01453	57.1	\$270.01	\$270.43
PECO	MAAC	EMAAC		8,120.0	1.00296	8,144.0	-	1.01453	1.01752	7,750.0	\$270.01	\$270.43
PENLC	MAAC			2,760.0	1.01449	2,800.0	-	1.01453	1.02923	2,664.6	\$270.01	\$270.43
PEPCO	MAAC	SWMAAC	PEPCO	5,810.0	1.00482	5,838.0	-	1.01453	1.01941	5,555.6	\$270.01	\$270.43
PL	MAAC		PL	7,100.0	1.00887	7,256.0	93.0	1.01453	1.02353	6,905.0	\$270.01	\$270.43
PS	MAAC	EMAAC	PS	9,700.0	0.99701	9,813.0	142.0	1.01453	1.01149	9,338.3	\$270.01	\$270.43
RECO	MAAC	EMAAC		390.0	1.00256	391.0	-	1.01453	1.01713	372.1	\$270.01	\$270.43

- Zonal Peak Load Scaling Factor: $B=(C-D)/A$
 - Adjusts OPL by forecast, excluding RPM Load Adjustments
- Final Zonal Scaling Factor: $F=B*E$
 - Includes forecast and OPL Scaling Factors
 - OPL Scaling Factor scaled procurement to reported values
- Final Zonal UCAP Obligation: $G=(A*F*FPR)+(D*E*FPR)$
 - Scaled Peak Load + Load Adjustments



Allocation prior and during the Delivery Year

1. Obligation Peak Load (OPL)

Zone	Area	Load Responsible Party	Allocation MW	Scaled LA MW	Total OPL
Z	A	Q	100	0	100
Z	B	Q	120	20	140
Z	C	R	140	10	150
Z	D	S	150	0	150

2. Peak Load Summary (PLC)

LSE	Area	Zone	Upload MW	Scaling Factor	OPL MW
1	B	Z	40	1.1667	46.66667
2	B	Z	40	1.1667	46.66667
3	B	Z	40	1.1667	46.66667
			120		140

3. Daily UCAP Obligation

LSE	Zone	Area	OPL	Daily UCAP Obligation
1	Z	B	46.667	42.90255
2	Z	B	46.667	42.90255
3	Z	B	46.667	42.90255

1. Obligation Peak Load

- New column in Capacity Exchange: Scaled LA MW
- Located in Load & Obligations->Wholesale Area Load
- OPL associated with Load Adjustments assigned to zone/area
- Adjusted OPL=(LLAMW/Final Zonal Scaling Factor) + OPL

2. PLCs are entered by EDC prior to DY (and updated daily, as necessary) and Scaling Factor calculated for each zone/area

- Scaling Factor = Total OPL/Upload MW
- OPL MW = Upload MW * Scaling Factor
- Captures impact of LA on OPL of specific zone/area through the Scaling Factor
- EDC may allocate LA to specific LSE, otherwise LA is allocated pro-rata across all LSEs in zone/area (as shown in example)

3. Daily UCAP Obligation calculated from OPL in Step 2

- Daily UCAP Obligation = OPL * FPR * RPM Zonal Scaling Factor

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Education: Overview of RPM Capacity Cost Allocation



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