

# Net CONE Impacts on Black Start Revenues

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Markets and Reliability Committee  
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Acronym	Term & Definition
BFR	<b>Base Formula Rate</b> is a formula used for Black Start resource compensation for resources without capital cost.
BSSC	<b>Black Start Service Cost</b> is a component of the Base Formula Rate. There are fixed Black Start Service Cost and variable Black Start Service Cost components in the Base Formula Rate.
CONE	<b>Cost of New Entry</b> is the calculated cost of building a new resource as utilized in the PJM capacity market.
CRF	<b>Capital Recovery Factor</b> is a factor used in the Capital Recovery Rate used for Black Start resource compensation for resources with capital costs.
RFP	A <b>Request For Proposal</b> is the method by which Black Start resources are selected in PJM to provide Black Start Service.

- ***Annual Black Start Service Revenue Requirement =***

$$\{\text{Fixed BSSC} + \text{Variable BSSC} + \text{Training Costs} + \text{Fuel Storage Costs}\} * (1 + Z)$$

Where:

- Fixed BSSC = Fixed Black Start Service Cost
- Variable BSSC = Variable Black Start Service Costs (approved O&M Costs)
- Training Costs = \$3,750 per plant per delivery year (50 staff hours per plant per year multiplied by \$75 per staff hour)
- Fuel Storage Costs are the costs defined in the tariff for oil units with onsite storage
- Z = Incentive Factor that will be one of the following:
  - 10% for Non-Fuel Assured Black Start Units
  - 20% for Fuel Assured Black Start Units
  - Zero (0) for Black Start Units that are recovering new or additional Black Start capital costs or Fuel Assurance capital costs under section 6 of Schedule 6A

- Fixed Black Start Service Costs (FBSSC) are calculated using Net CONE in two (2) Black Start Revenue rates:

- Base Formula

$$\text{FBSSC} = \text{Net CONE} * \text{Black Start Unit Capacity} * X$$

- Net CONE is the then current ICAP net Cost of New Entry (\$/MW day) for the CONE Area where the Black Start Unit is located
- Black Start Unit Capacity is resource's installed capacity\*
- X = 0.01 for hydro; X = 0.02 for CT and Fuel Assured Black Start

- Capital Cost Recovery – NERC CIP Rate

$$\text{FBSSC} = \text{Net CONE} * \text{Black Start NERC CIP Unit Capacity} * X$$

\* Additional details in OATT Sched 6A Paragraph 18

- Remove Net CONE from the FBSSC formula and replace with a “Fixed Rate”

$$FBSSC = \text{Fixed Rate} * \text{Black Start Unit Capacity} * X$$

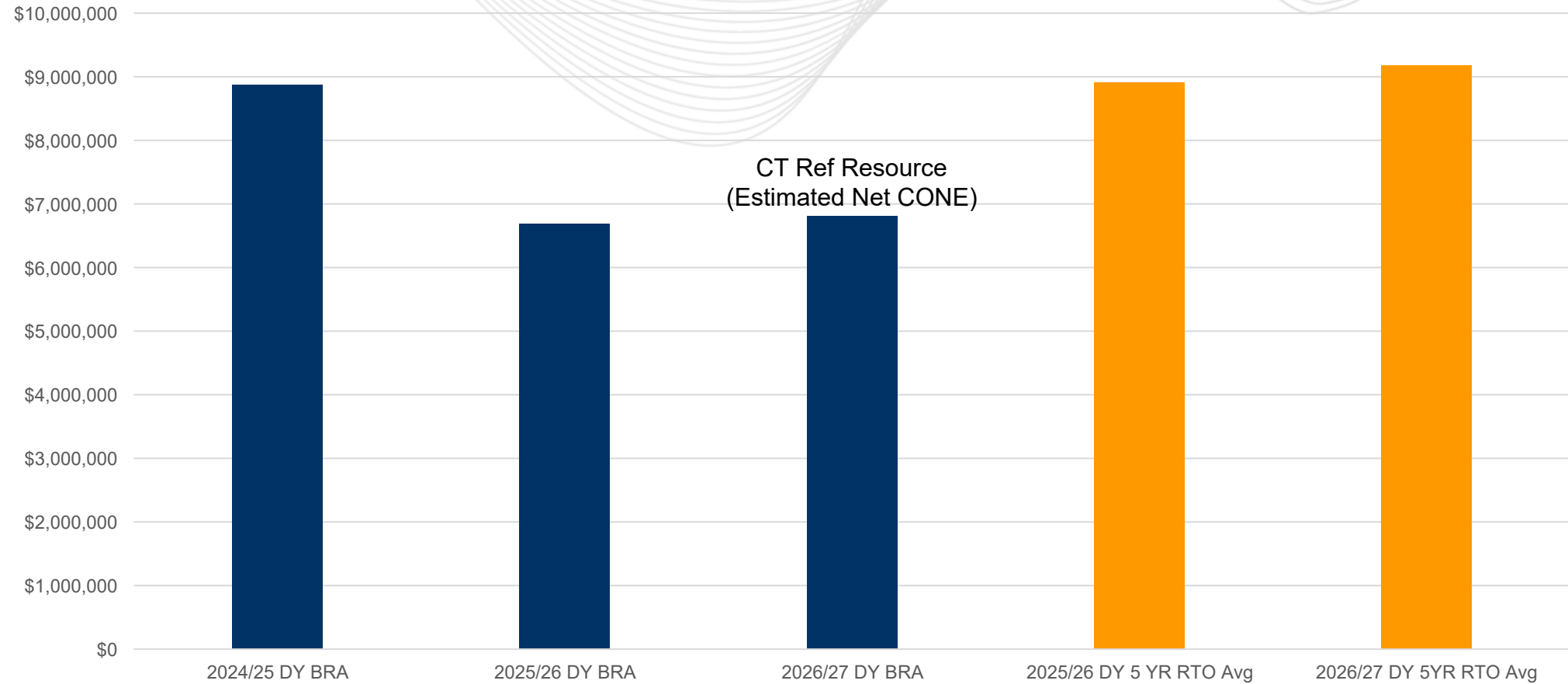
- “Fixed Rate” for 25/26 delivery year will be \$272.62/MW day
  - Calculated based on 5 year average of RTO Net CONE
- Fixed Rate will be adjusted each year by the Handy Whitman index and posted on pjm.com by **March 31** each year.
  - The updated Fixed Rate will be utilized in the Black Start annual revenue review process

- Set fixed rate value used in BS calculation at average of last 5 years of RTO average Net CONE (Calculated at \$272.62 \$/MW Day)
- Use RTO Net CONE values prior to capacity market changes
  - Uses data from 2020-2024
  - Maintains BS revenue at approximately 2024/2025 levels

		2025/26 (BRA) – Status Quo		2026/27 (BRA) – (Est. Net CONE using CT Reference)		2025/26 (RTO 5 Year Avg) \$272.62/MW-Day		26/27 (RTO 5 Year Avg) \$280.80/MW-Day (escalated 3%)	
CONE Area	2024/25	Revenue (Fixed BSSC)	% Change from 2024	Revenue (Fixed BSSC)	% Change from 2024	Revenue (Fixed BSSC)	% Change from 2024	Revenue (Fixed BSSC)	% Change from 2024
1	\$3,172,733.26	\$2,626,193.33	-17.23%	\$2,673,351.25	-15.74%	\$2,915,236.25	-8.12%	\$3,002,693.33	-5.36%
2	\$158,028.80	\$67,750.30	-57.13%	\$73,288.35	-53.62%	\$173,738.01	9.94%	\$178,950.15	13.24%
3 & 5	\$4,434,151.58	\$3,301,792.93	-25.54%	\$3,371,937.16	-23.96%	\$4,672,020.08	5.36%	\$4,812,180.68	8.53%
4	\$1,112,340.81	\$691,456.23	-37.84%	\$695,815.56	-37.45%	\$1,142,730.42	2.73%	\$1,177,012.33	5.81%
<b>TOTAL</b>	<b>\$8,877,254.45</b>	<b>\$6,687,192.79</b>	<b>-24.67%</b>	<b>\$6,814,392.32</b>	<b>-23.24%</b>	<b>\$8,903,724.75</b>	<b>0.30%</b>	<b>\$9,170,836.49</b>	<b>3.31%</b>

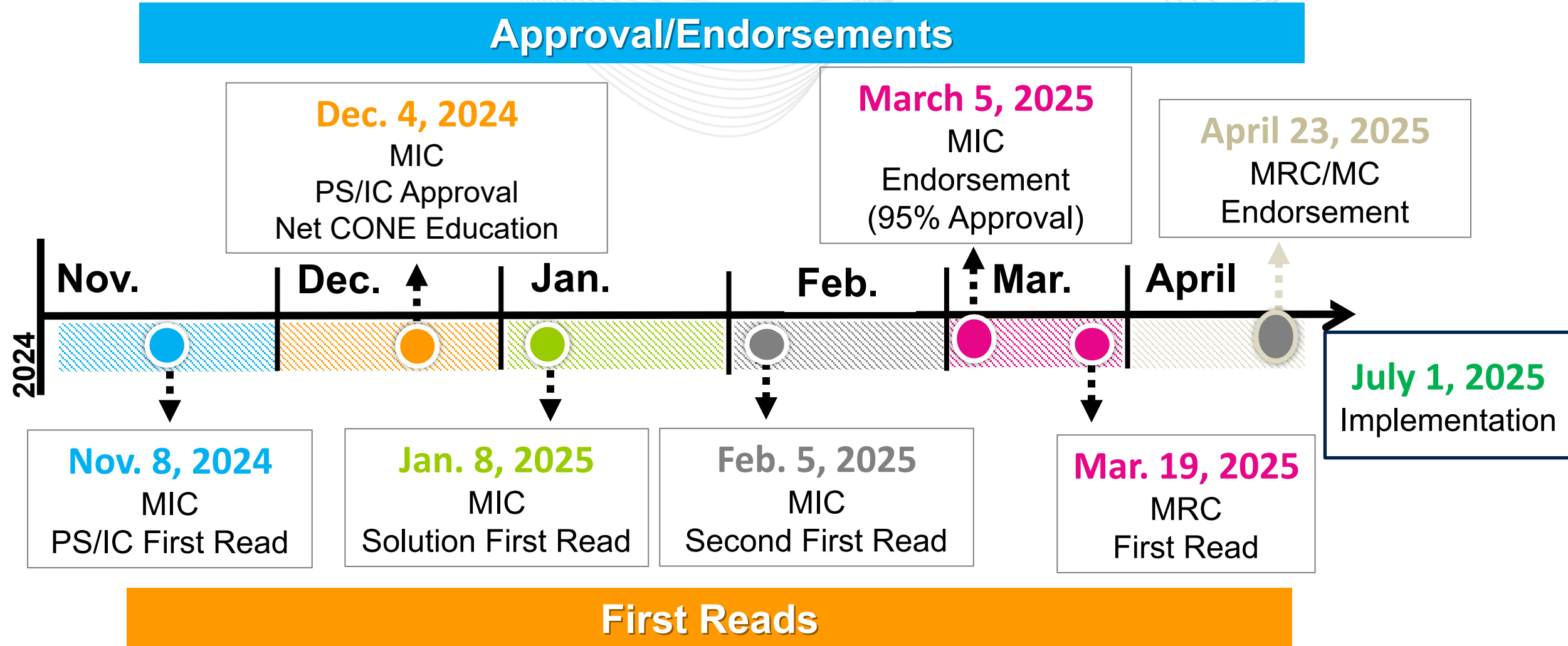
Note: Zone 3 & 5 combined due to changes in CONE area in 25/26 DY

**Black Start Service Annual Fixed Costs (BFR Rate)**



- Breaks tie to Net CONE for future years
  - Reduces volatility and uncertainty in Base Formula Rate
- Ends geographic disparity in revenue for similar Black Start service
- Preserves incentive for existing Black Start fleet on Base Formula Rate to continue to provide service
  - Reduces risk of Black Start shortage and reliability issues
  - Reduces risk of needing significant capital investment to procure new Black Start resources
- Transparent and predictable rate
- Easy to implement
  - Minimal changes to OATT Schedule 6A, Section 18 (No Manual Updates)





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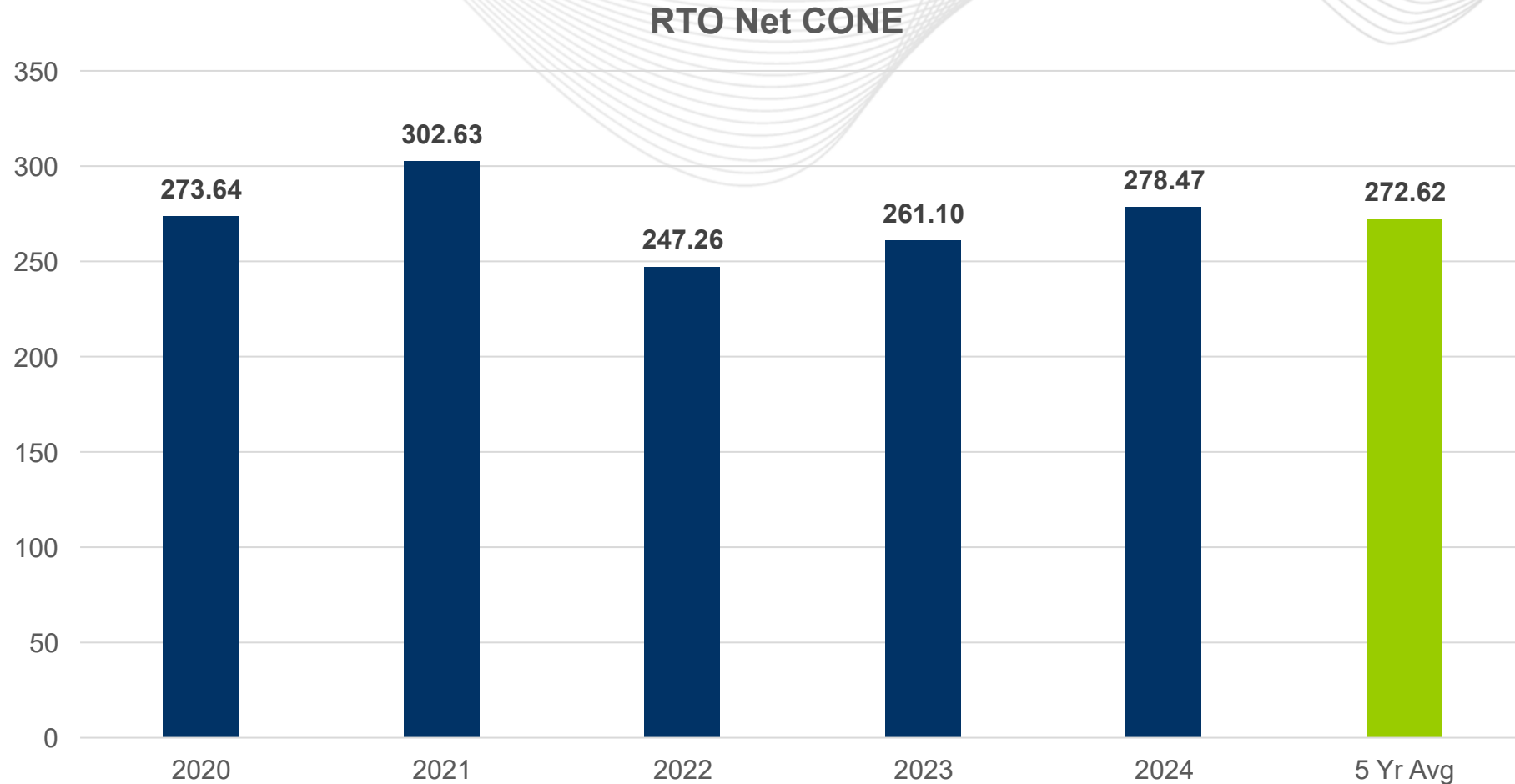


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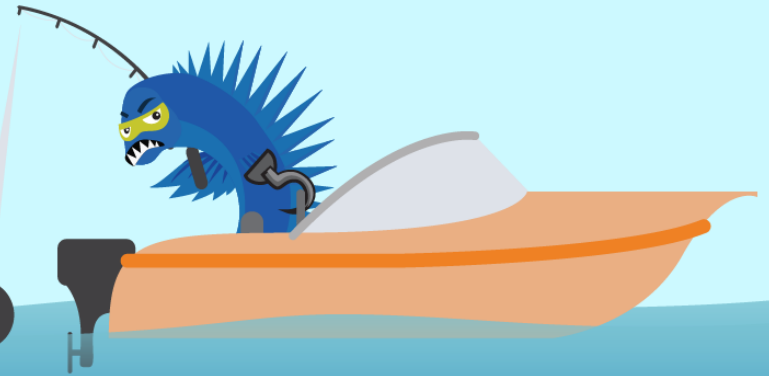
**Five (5) Year Average = 272.62**

<https://www.pjm.com/markets-and-operations/rpm>

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