

Net CONE Impacts on Black Start Revenues

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MIC
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Acronym	Term & Definition
BFR	Base Formula Rate is a formula used for Black Start resource compensation for resources without capital cost.
BSSC	Black Start Service Cost 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	Cost of New Entry is the calculated cost of building a new resource as utilized in the PJM capacity market.
CRF	Capital Recovery Factor is a factor used in the Capital Recovery Rate used for Black Start resource compensation for resources with capital costs.
RFP	A Request For Proposal 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

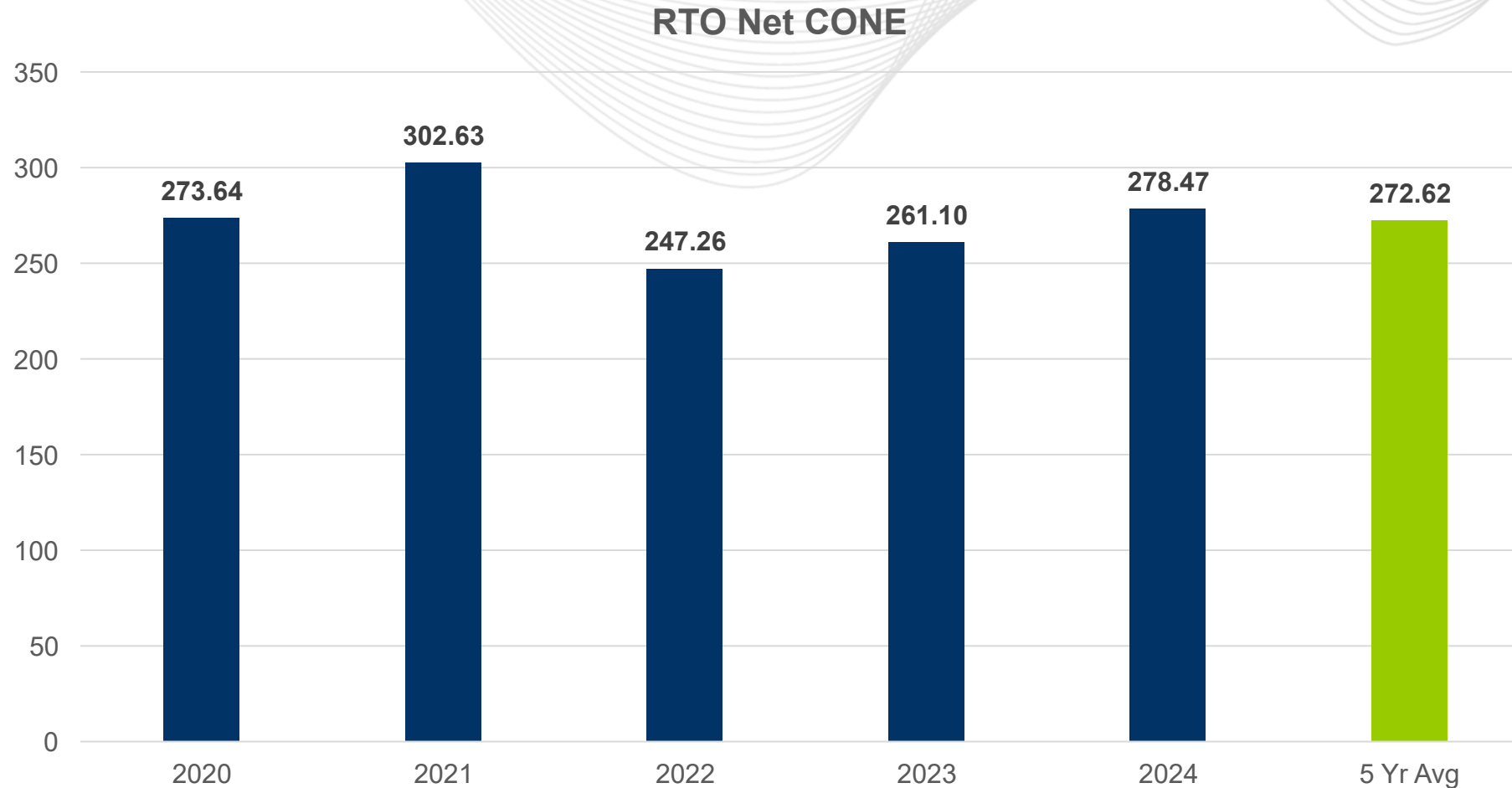
$$FBSSC = Net\ CONE * Black\ Start\ Unit\ Capacity * X$$

- 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

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

* Additional details in OATT Sched 6A Paragraph 18



Five (5) Year Average = 272.62

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

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

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

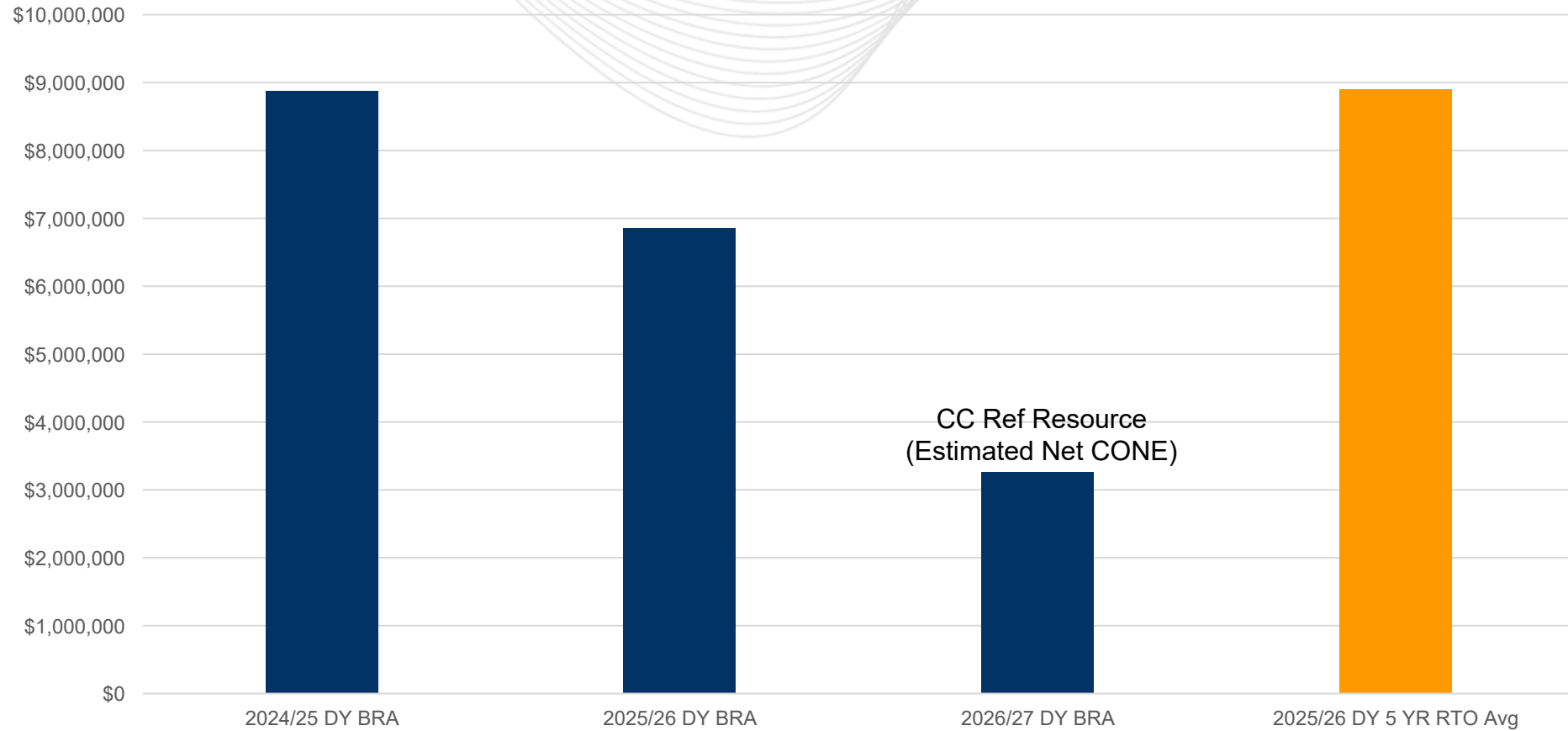
- “Fixed Rate” for 25/26 delivery year will be \$272.62/MW day
 - Calculated based on 5 year average of RTO Net CONE
- Fixed Rate will be adjusted each year by the Handy Whitman index and posted on pjm.com by **March 31** each year.
 - The updated Fixed Rate will be utilized in the Black Start annual 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%
TOTAL	\$8,877,254.45	\$6,687,192.79	-24.67%	\$6,814,392.32	-23.24%	\$8,903,724.75	0.30%	\$9,170,836.49	3.31%

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

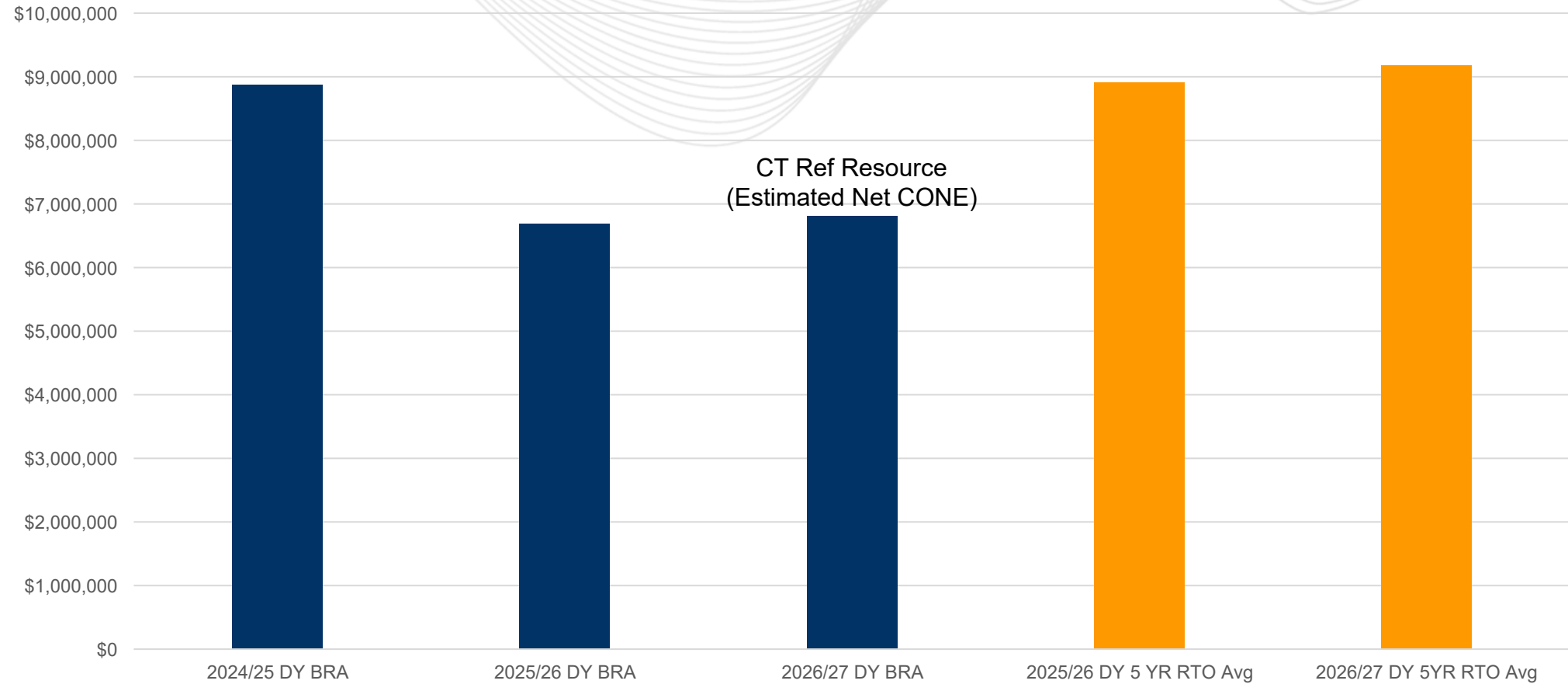
Black Start Service Annual Fixed Costs (BFR Rate)



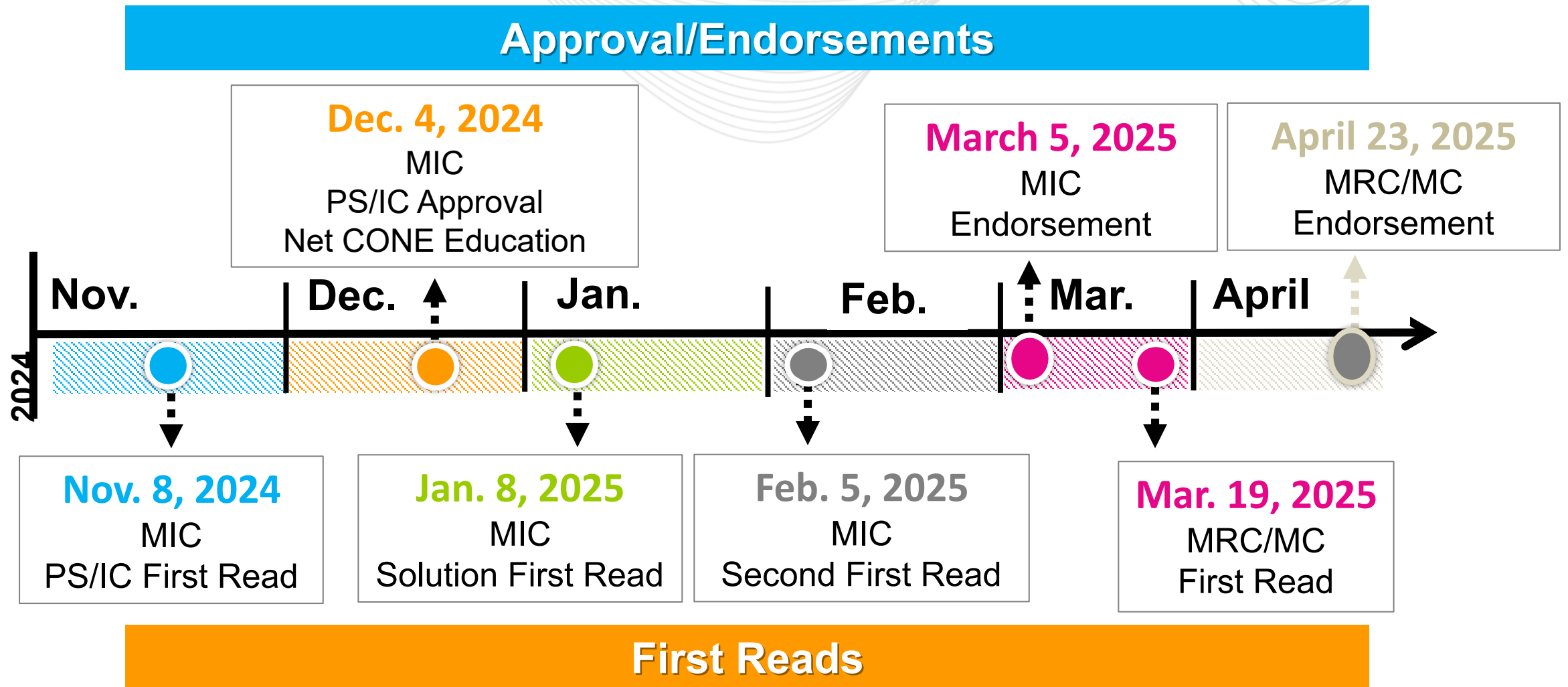
CC Ref Resource
(Estimated Net CONE)



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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**Net CONE Impacts on Black Start
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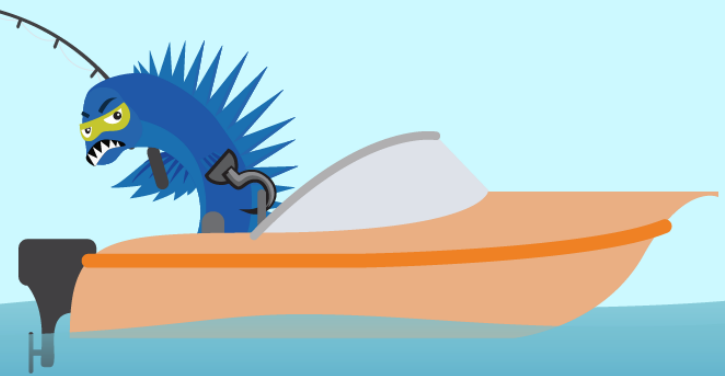
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