Sixth Review of PJM's RPM VRR Curve Parameters

FINAL RECOMMENDATIONS

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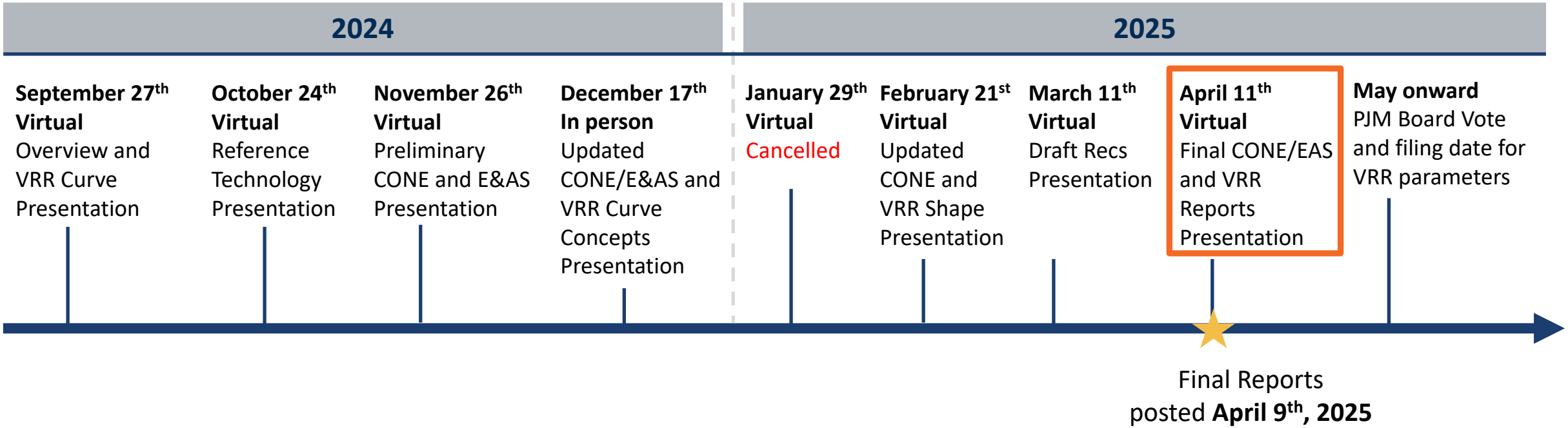
Brattle

Where we are in the CONE and VRR Review



Updated: Primary VRR Study Recommendations

System-Wide Variable Resource Requirement (VRR) Curve

- **Adopt Marginal Reliability Impact (MRI) VRR curve,** with prices reflective of incremental reliability value. We present Curves 2 and 3 as within the workable range, with different performance tradeoffs
- **Stabilize Pricing Parameters** by adopting "Reference Price" to replace Net CONE parameter, with simplified annual updates (see next slide)
- **Price Cap:** In the range of 1.5-1.75 × Reference Price (approximately $500-625/MW-day). Quantity at the cap no lower than 99% × Reliability Requirement (lower price cap corresponds to higher quantity at the cap to maintain 1-in-10)

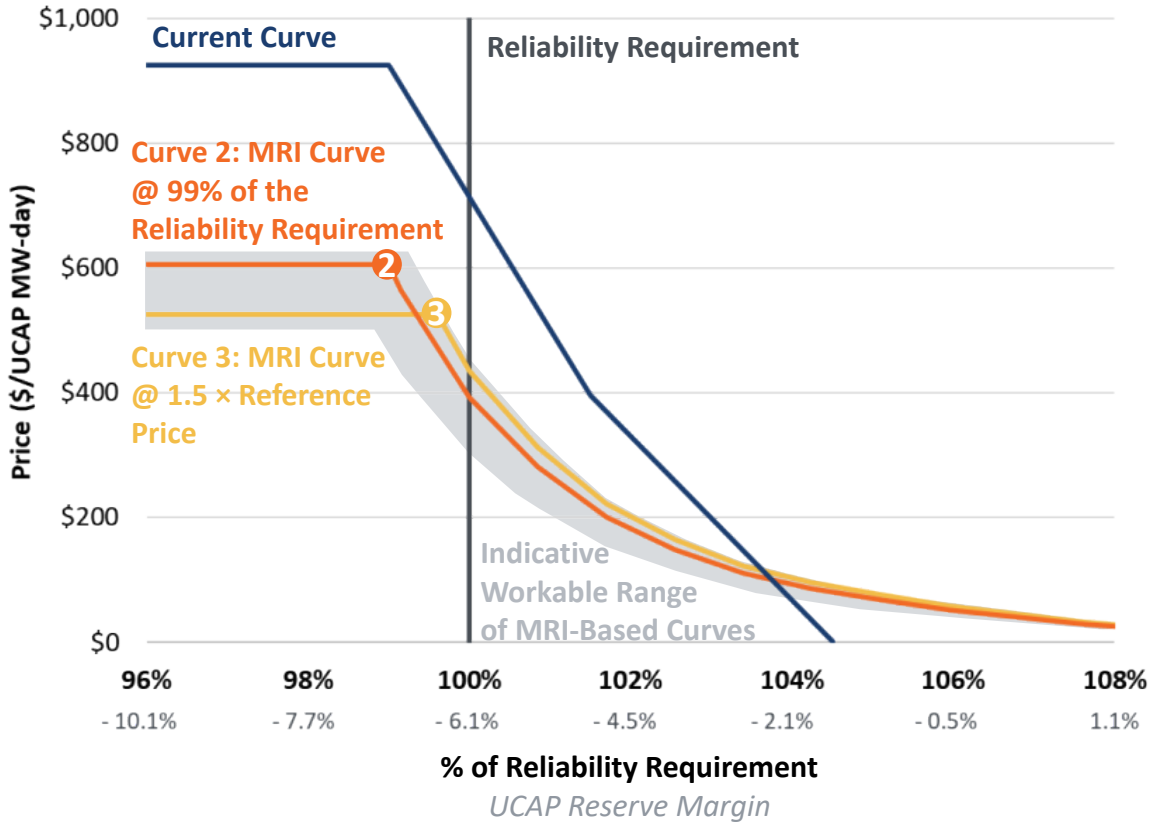
Locational Deliverability Area (LDA) Curves

- **LDA VRR Curves** based on location-specific MRI curves
- **Anchor point** at LDA Reliability Requirement and Reference Price. Local reference price higher in some locations
- **LDA Price cap** at max of: 1.5 × LDA Reference Price, or parent LDA/RTO price cap. Quantity at LDA cap determined by MRI curve (approximately 96-99% across LDAs)

Interactions with RPM Performance

- **Restore 3-Year Forward Period** of the Base Residual Auctions (BRAs)
- **Reliability Backstop** to: (1) update *investigation provisions* to trigger in any shortfall (i.e. price cap) event on an LDA-specific basis (not just RTO-wide); and (2) review whether *backstop procurement* mechanisms are sufficient to address reliability risks
- **Transition to Sub-Annual Capacity Construct** with at least two seasons

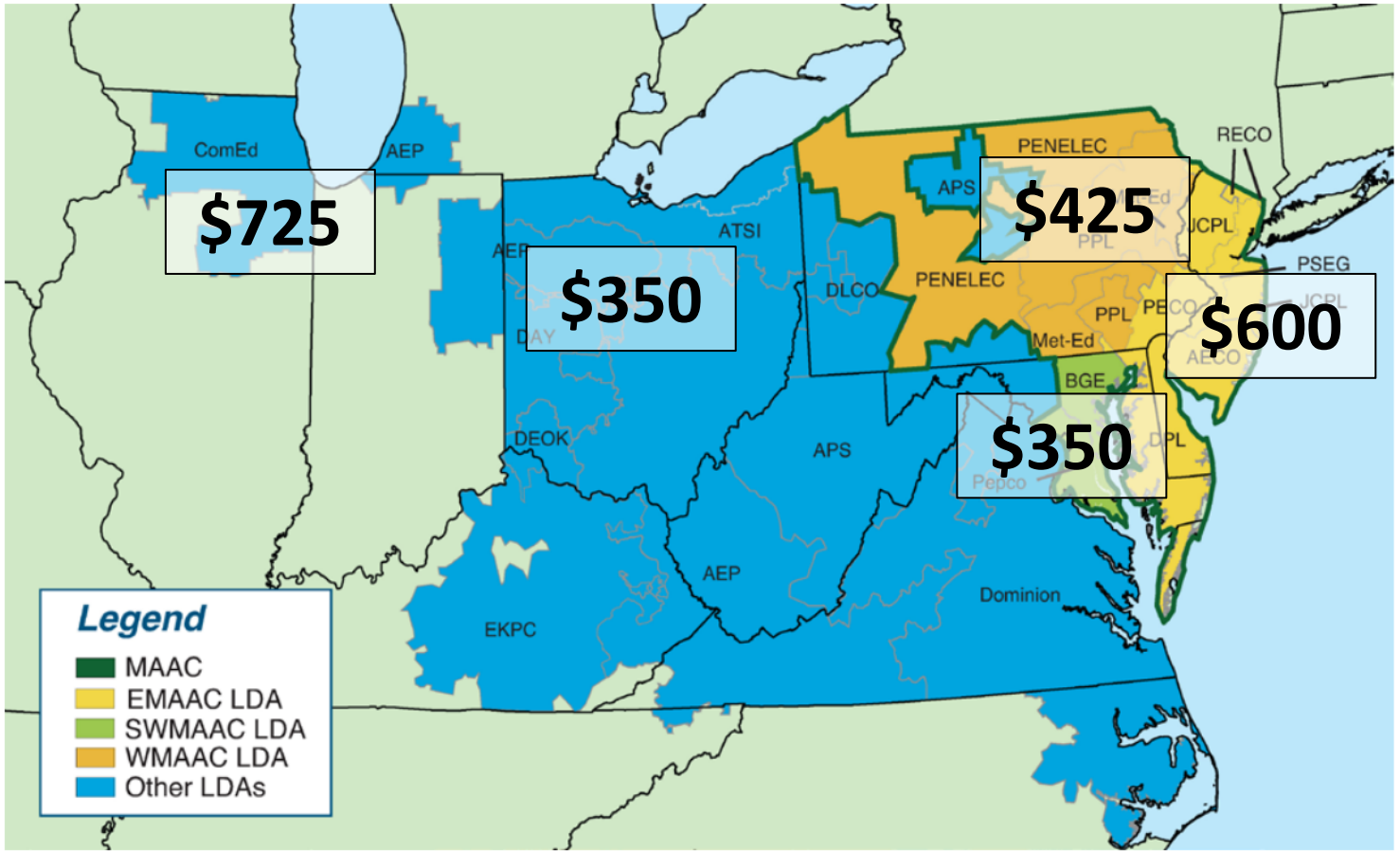
Recommended MRI-Based VRR Curves



Sources and Notes: Recommended Curve constructed using Reference Price of $350/MW-day; Current VRR Formula from PJM, Open Access Transmission Tariff. Attachment DD, Section 5.10.a.iii, using Brattle estimates of CT Net CONE ($528/MW-day) and CT CONE ($832/MW-day); 1.75 × Net CONE is the binding parameter in setting the price cap for the current curve.

Updated: CONE Study Recommendations

- **Proposed Reference Prices for 2028/29 (in 2028)**
  - **RTO: $350/MW-day UCAP**
  - **MAAC: $425/MW-day UCAP**
  - **Other LDAs: see map**
- **Annual Updates**
  - **Index to CPI**
  - **Index to fleetwide UCAP**



Sources and Notes: Monitoring Analytics, PJM State of the Market Report 2017, Volume II: Appendix, Figure A-3.

Gross CONE by Area

CONE Area	Technology	Overnight Capital Cost [A]	Capital Charge Rate [B]	Year 1 Capital Recovery [C]	Levelized Fixed O&M [D]	Gross CONE ICAP [E]
Nominal$ for 2028 Online Year		$/kW	%/year	$/MW-day	$/MW-day	$/MW-day
1. EMAAC	Gas CT	$1,395	16.0%	$611	$59	**$670**
	Gas CC	$1,517	17.0%	$705	$112	**$816**
	BESS 4-hr	$1,832	9.6%	$483	$197	**$680**
2. SWMAAC	Gas CT	$1,339	15.9%	$585	$91	**$676**
	Gas CC	$1,411	16.9%	$653	$166	**$819**
	BESS 4-hr	$1,753	9.6%	$463	$208	**$671**
3. Rest of RTO	Gas CT	$1,361	15.9%	$593	$69	**$663**
	Gas CC	$1,419	16.9%	$656	$157	**$813**
	BESS 4-hr	$1,750	9.6%	$462	$191	**$652**
4. WMAAC	Gas CT	$1,390	15.9%	$606	$58	**$664**
	Gas CC	$1,476	16.9%	$682	$132	**$814**
	BESS 4-hr	$1,784	9.6%	$471	$196	**$667**
5. COMED	Gas CT	$1,495	17.8%	$730	$58	**$789**
	Gas CC	$1,649	18.8%	$849	$105	**$953**
	BESS 4-hr	$1,980	9.6%	$521	$204	**$726**

Sources and Notes:
[A], [B], [D]: Outputs from CONE Model.
[C]: [A] x [B] x (1000 / 365).
[E]: [C] + [D].

Net CONE Benchmarks for RTO

Nominal$ for 2028 Online Year	Overnight Capital Cost [A] $/kW See notes	Capital Charge Rate [B] %/year See notes	Year 1 Capital Recovery [C] $/MW-day See notes	Levelized Fixed O&M [D] $/MW-day See notes	Gross CONE ICAP [E] $/MW-day [C] + [D]	E&AS Offset [F] $/MW-day See notes	Net CONE ICAP [G] $/MW-day [E] - [F]	ELCC [H] % See notes	Net CONE UCAP [I] $/MW-day [G] / [H]
Current Level-Nominal CONE with Forward EAS									
CT	$1,361	15.9%	$593	$69	**$663**	$241	$422	79%	**$534**
CC	$1,419	16.9%	$656	$157	**$813**	$506	$308	81%	**$380**
BESS 4-hr	$1,750	9.6%	$462	$191	**$652**	$244	$409	65%	**$629**
Other Benchmarks									
LTCT and Forward E&AS	$1,053	13.5%	$388	$69	**$457**	$241	$217	79%	**$274**
LTCC and Forward E&AS	$1,263	14.4%	$497	$157	**$655**	$506	$149	81%	**$184**
LTCT and 10-yr Avg. E&AS	$1,053	13.5%	$388	$69	**$457**	$207	$251	79%	**$317**
LTCC and 10-yr Avg. E&AS	$1,263	14.4%	$497	$157	**$655**	$374	$281	81%	**$346**
LTCC, 15-yr life and Forward E&AS	$1,263	16.2%	$560	$157	**$717**	$506	$212	81%	**$261**
CC, 15-yr life	$1,419	19.0%	$738	$154	**$892**	$506	$386	81%	**$477**
BESS 4-hr, Without 30% ITC	$1,750	13.0%	$621	$191	**$812**	$244	$569	65%	**$875**
Adjusted Empirical Net CONE 14/15 to 22/23	-	-	-	-	-	-	-	-	**$241**

Sources and Notes: "LTCT" and "LTCC" refer to "long-term CONE" derived from OFE/EPC costs from the 2022 CONE Study (escalated for 2028) and current Non-EPC costs and FOM.
[A], [B], [D]: Outputs from CONE Model for CONE Area 3.
[C]: [A] x [B] x 1000/365.
[F]: Forward E&AS provided by PJM staff for DEOK LDA. 10-yr Avg E&AS calculated from DEOK net revenues for delivery years 2017/2018 – 2023/24 from Monitoring Analytics, State of the Market Report for PJM, March 14, 2024, pp. 399-400; Net revenues for delivery years 2024/25-2026/27 from PJM, Default New Entry MOPR Offer Prices, Accessed March 6, 2025. See Appendix A.
[H]: Provided by PJM staff.

Short-Term Reservation Price in Transient Tight Conditions

	Current Level-Nominal CONE (ICAP)	Long-run CONE (ICAP)	Front Loaded CONE (ICAP)			Forward E&AS (ICAP)	ELCC	Short-Term Reservation Price (UCAP)			Current Level-Nominal Net CONE (UCAP)
	[A] $/MW-day	[B] $/MW-day	[C] $/MW-day			[D] $/MW-day	[E] %	[F] $/MW-day			[G] $/MW-day
			1-yr	3-yr	5-yr			1-yr	3-yr	5-yr	
CT	$663	$457	$2,436	$1,178	$928	$241	79%	$2,779	$1,186	$870	$534
CC	$813	$655	$2,183	$1,211	$1,018	$506	81%	$2,070	$871	$633	$380
BESS	$652	$471	$2,219	$1,108	$887	$244	65%	$3,040	$1,329	$990	$629

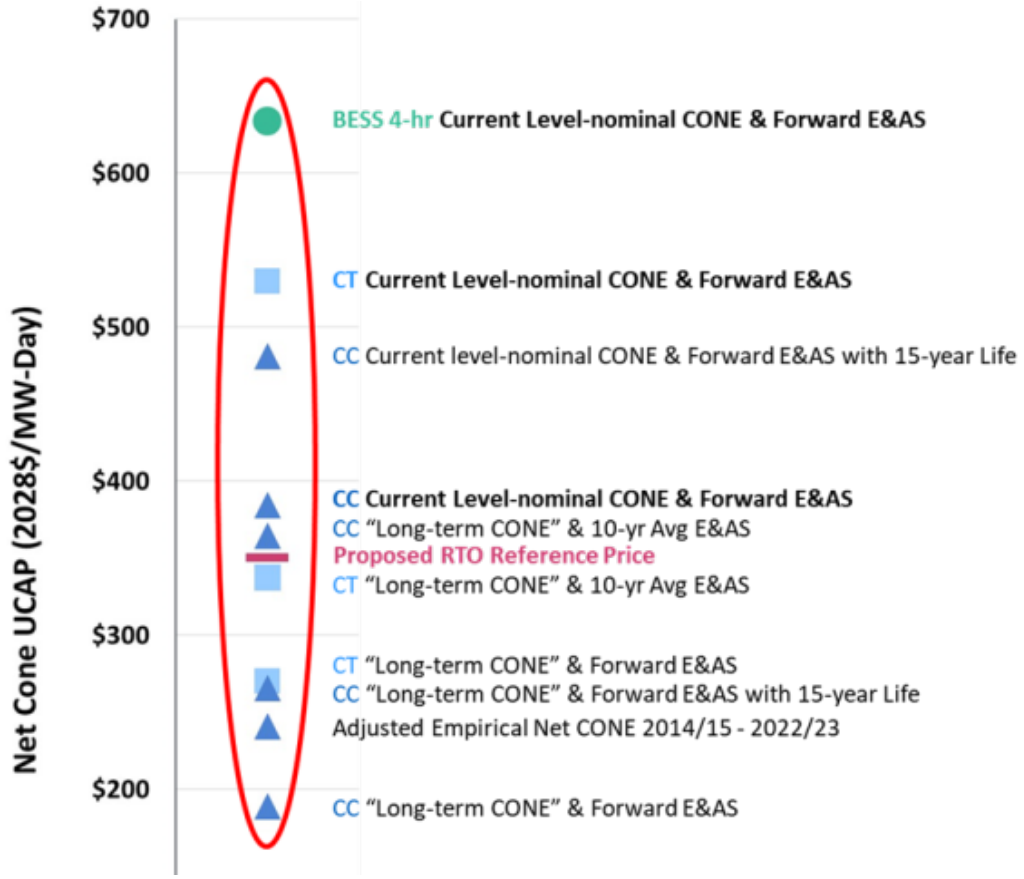
Sources and Notes:
[A]: Current Level-Nominal CONE value from CONE model for RTO.
[B]: for CT and CC, long-run CONE from Table ES-2. For BESS, long-run CONE assumed to be back calculated from the $350/MW-day UCAP long-run Net CONE from Figure ES-1. $471 CONE ICAP = $350 Net CONE UCAP × 65% ELCC + $244 Forward E&AS ICAP for BESS.
[C]: Output from CONE model, reservation price analysis.
[D], [E]: Provided by PJM staff.
[F]: ([C] – [D]) / [E].
[G]: ([A] – [D]) / [E].

Proposed RTO Reference Price for 2028/29

Step 1: Select a representative LDA

- Recognize that to meet the RTO need, one would build in the most economic area
- This points to LDAs with low Net CONE, not an average
- But not the very minimum, since the minimum might be due to errors, and might have limited siting…and the minimum can shift over time in ways that real plants cannot
- It is reasonable to assume the representative RTO entry cost is the 33rd percentile Net CONE among all LDAs
- DEOK becomes the representative

Step 2: Set RTO reference price at median of ten selected benchmarks for DEOK Net CONE



Proposed LDA Reference Prices for 2028/29 *($/MW-day UCAP in 2028$)*

CONE Area	LDA	Current Level-Nominal			Long-Term Benchmarks with 2022 OFE/EPC					Other Level-Nominal		Median	Proposed Reference Price
	Technology E&AS Type	CT	CC Forward	BESS	LTCT Forward	LTCC Forward	LTCT 10-yr Avg	LTCC 10-yr Avg	LTCC 15-yr Forward	CC 15-yr Forward	BESS no ITC Forward	All except BESS no ITC	$/MW-day UCAP
1. EMAAC	AE	$775	$738	$685	$520	$576	$473	$601	$658	$843	$944	$658	
	DPL	$667	$583	$542	$413	$421	$431	$587	$503	$688	$801	$542	
	JCPL	$778	$733	$700	$524	$571	$472	$592	$653	$838	$959	$653	
	PE	$734	$624	$675	$479	$461	$440	$560	$543	$728	$934	$560	**$600**
	PSEG	$785	$751	$695	$531	$589	$453	$570	$671	$856	$954	$671	
	RECO	$767	$697	$670	$512	$535	$451	$547	$617	$802	$929	$617	
	EMAAC 33rd percentile	**$756**	**$673**	**$674**	**$501**	**$510**	**$447**	**$566**	**$592**	**$777**	**$933**	**$592**	
2. SWMAAC	BGE	$473	$260	$493	$182	$38	$260	$265	$113	$358	$739	$260	
	PEPCO	$662	$486	$528	$372	$264	$384	$407	$339	$584	$774	$407	**$350**
	SWMAAC 33rd percentile	**$536**	**$335**	**$505**	**$245**	**$114**	**$302**	**$312**	**$188**	**$433**	**$751**	**$312**	
3. Rest of RTO	AEP	$486	$345	$638	$226	$149	$328	$354	$226	$442	$884	$345	
	APS	$408	$259	$618	$148	$63	$343	$349	$140	$356	$864	$343	
	ATSI	$567	$415	$641	$307	$220	$338	$370	$297	$512	$887	$370	
	DAYTON	$510	$351	$625	$250	$155	$306	$327	$232	$447	$871	$327	
	DEOK	$534	$380	$629	$274	$184	$317	$346	$261	$477	$875	$346	
	DLCO	$585	$468	$636	$325	$272	$336	$380	$349	$564	$882	$380	**$350**
	DOM	$489	$293	$483	$230	$97	$314	$347	$174	$390	$729	$314	
	EKPC	$561	$410	$636	$301	$214	$372	$406	$291	$507	$882	$406	
	OVEC	$521	$387	$644	$261	$191	$383	$320	$268	$484	$890	$383	
	Rest of RTO 33rd percentile	**$503**	**$349**	**$628**	**$243**	**$153**	**$324**	**$347**	**$230**	**$445**	**$873**	**$347**	
4. WMAAC	METED	$641	$491	$641	$391	$323	$343	$421	$403	$591	$891	$421	
	PENELEC	$447	$300	$658	$197	$131	$297	$436	$212	$400	$908	$300	**$425**
	PPL	$707	$575	$676	$458	$406	$355	$434	$486	$675	$926	$486	
	WMAAC 33rd percentile	**$576**	**$428**	**$652**	**$327**	**$259**	**$328**	**$430**	**$339**	**$528**	**$903**	**$428**	
5. COMED	COMED	**$862**	**$774**	**$720**	**$684**	**$685**	**$679**	**$803**	**$698**	**$791**	**$1,002**	**$720**	**$725**
MAAC	**MAAC 33rd percentile**	**$664**	**$519**	**$646**	**$399**	**$350**	**$365**	**$435**	**$431**	**$619**	**$897**	**$435**	**$425**

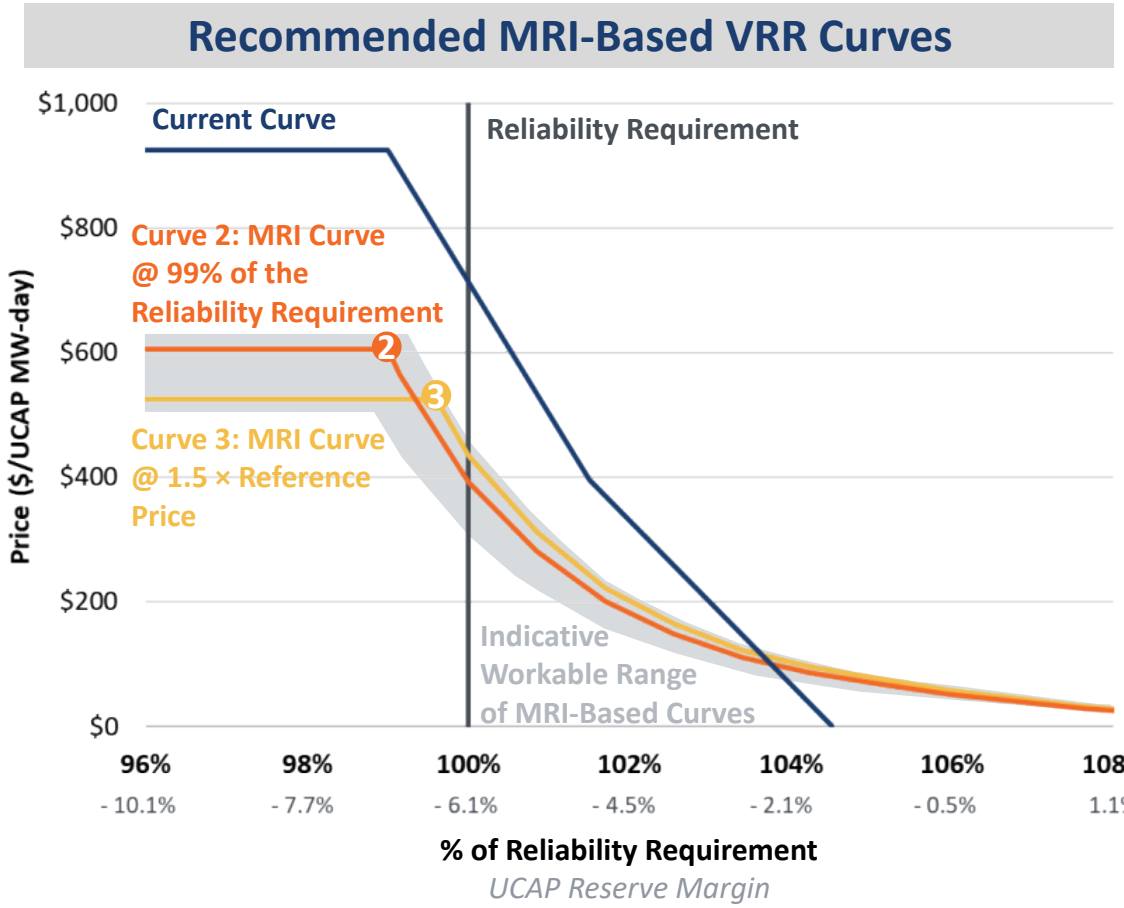
Annual Updates to Reference Prices

- Since the recommended Reference Price does not express the net cost of entry at a snapshot in time but a long-term view, it does not need to be updated annually for temporary changes in costs and revenues
- We therefore propose to hold the Reference Price constant in real terms between Quadrennial Reviews by indexing to the Consumer Price Index (CPI), other than scaling to changes in fleet-wide average accreditation factors
  - We propose the "Consumer Price Index for All Urban Consumers (CPI-U) for the U.S. City Average for All Items, 1982-84=100" as reported by the U.S. Bureau of Labor Statistics (BLS), since this is the broadest, most comprehensive CPI; to be measured at the time of each setting parameters for each auction, relative to this filing or most recent update
  - To maintain consistency with ongoing updates to ELCC ratings, the Reference Price would also be updated based on annual changes to the pool-wide accredited UCAP factor considering all technologies (not tied to a specific technology to avoid excess shifting)
- This should help stabilize capacity price signals, supporting investment
- For MOPR purposes, our Report provide more detailed weights and indexes for traditionally annual Net CONE adjustments

Discussion & Next Steps

Next Steps:

- PJM & stakeholders to review recommendations for potential VRR Curve and Reference Price Updates
- Stakeholders vote at the MIC and MRC are expected around the end of Q2 2025
- FERC Filing date anticipated before October 1, 2025
- Updated parameters applicable beginning with the 2028/29 BRA



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Price Cap

Recommendation: Price cap at 1.5-1.75 × Reference Price

- Approximately $500-625/MW-day UCAP
- Quantity at or somewhat above 99% × Reliability Requirement, where Reliability Backstop is triggered (specific value to be aligned with Reference Price and "tuning" to 1-in-10)
- Remove CONE-based minimum (not needed to mitigate possibility of low/zero Net CONE if Reference Price is stabilized over review period)

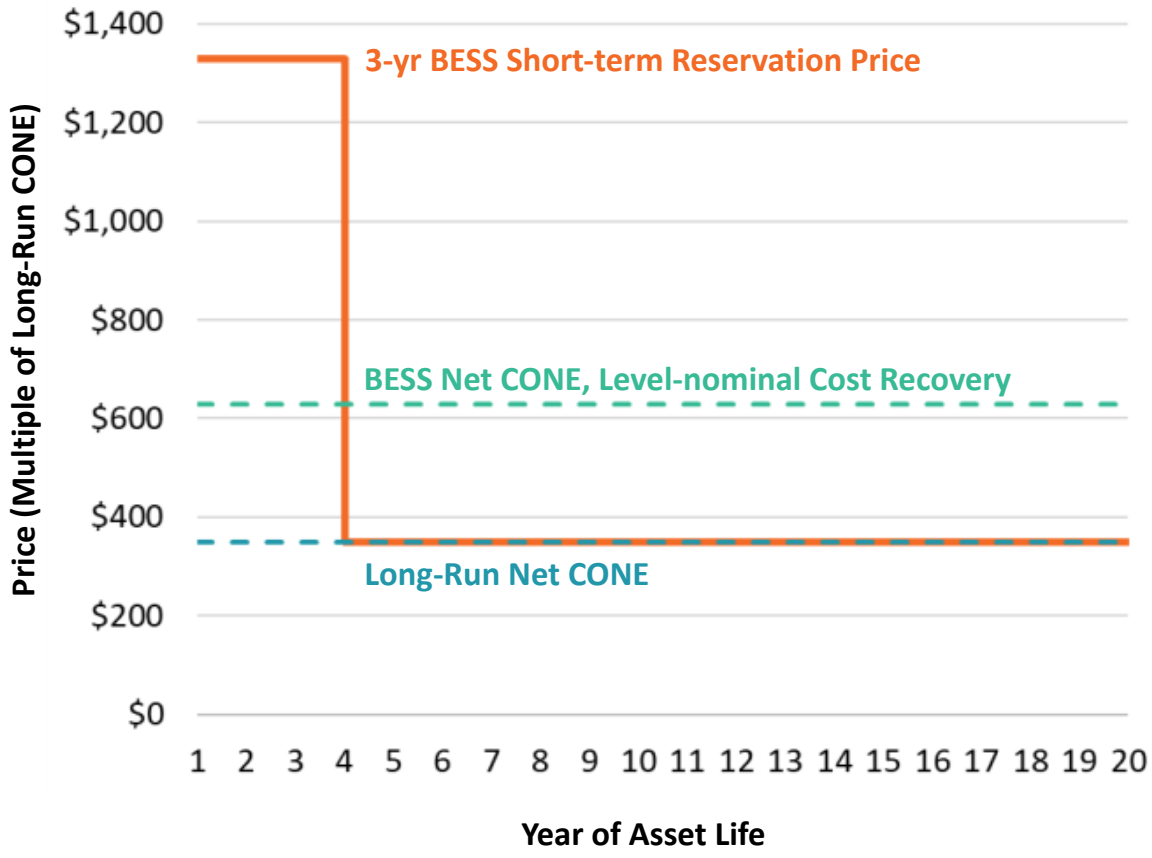
Consideration	Cap Range	Suggests Price Cap:
Historical RPM Price Cap	$450-$625 (nominal $, adjusted for ELCC)	• Historical price cap range has been sufficient to maintain supply-side interest in new developments (except in most recent auction when other factors limited participation)
Proposed Temporary Cap	$325	• PJM proposal filed with FERC (pending approval) to temporarily reduce price cap and mitigate customer exposure to price cap events under near-term tight supply conditions. Paired with price floor at $175 to maintain supplier interest
Neighboring Markets' Caps	$524-$631 (2028$)	• Price high enough to align with price caps in neighboring capacity markets and compete for imports when multiple regions are tight
Simulation Modeling	150%-191% × Net CONE @ $350 Reference Price, cap would be $605 for Curve 2, or $525 for Curve 3	• Curve 2: Cap at 168%-191% × Reference Price supports 0.1 LOLE under long-run equilibrium conditions if price cap quantity is at 99% of reliability requirement • Curve 3: Lower cap at 150% × Reference Price would be right-shifted at minimum quantity

Note: Historical price caps are adjusted up to account for transition to ELCC, not adjusted for inflation. Neighboring market caps reflect 2028$, and UCAP of each market.

Challenge: How to Manage Acute Reliability Risks in Transition

- **Challenge:** Material risk that price cap of 1.5-1.75 × Reference Price may be insufficient to attract entry under present conditions, because:
  - Gas-fired developments are small relative to 32 GW PJM forecast load growth plus 18 GW retirements by 2030 (with turbine supplies limited and selling at premium while faced with >150 GW forecast US demand growth and international demand)
  - This may necessitate costlier BESS, and even its cost could increase w/further tariffs or loss of ITC
  - The prospect of capacity price spiking then declining toward long-run Net CONE means short-term reservation prices might be much higher than level-nominal
  - Hence prices might have to rise even above BESS level-nominal Net CONE to attract enough new entry via auctions for 1-year commitments
  - We will share analyses of possible short-term reservation prices for CT, CC, and BESS
- These conditions exceed the bounds tested or expected before for RPM
- One option would be to consider a much higher price cap, but this is not our recommendation, because:
  - Base analyses indicates cap of 1.5-1.75 × Reference Price will be high enough over the long term; very high cap would only be needed until supply conditions resolve
  - Customer exposure to extremely high prices may be politically unsustainable (moderated somewhat if they pursue demand-side approaches)
- Suggests that acute supply shortages might be better addressed through another mechanism, such as offering multi-year terms for new resources in the event of transient tight conditions (else accepting shortfalls):
  - Trigger only in defined extreme shortage conditions
  - Provide enough compensation to attract needed supplies
  - Minimize undermining the market

Illustration of Reservation Price vs. Level-Nominal



Reliability Backstop Provisions

Recommendation: Enhance reliability backstop mechanism to:

1. Update *investigation provisions* to trigger in any shortfall (i.e. price cap) event on an LDA-specific basis (not just RTO-wide); and
2. Review whether *backstop procurement* mechanisms are sufficient to address reliability risks

Role of Price Cap vs. Reliability Backstops

- A well-functioning capacity market ideally produces few events at the price cap and rarely or never relies on a reliability backstop
- However, it is difficult to set a price cap for a single-year commitment high enough to procure sufficient capacity in *all* conceivable conditions
- To mitigate risks posed by acute and transient tight supply conditions, a backstop may be needed; the current backstop can be improved to be more systematic, competitive and limit impacts on the broader market

Current RPM Backstop Mechanism

- **<99% Reliability Requirement (1 Year):** Triggers investigation to review reasons for shortfall to recommend changes to address shortfall (e.g., address barriers to entry, increase VRR curve prices)
- **<99% Reliability Requirement (3 Consecutive Years):** Triggers post-BRA backstop auction (up to 15-year commitments, seller offers collected for 6-month bid window, sellers compete on price)
- Backstop mechanisms apply only on an RTO-wide basis (not to LDAs)

Current Reliability Backstop Provisions: PJM Tariff Attachment DD.16.

Potential Enhancements to Reliability Backstop Procurements

- **Timing of Backstop Procurement:** to avoid delay in attracting supply, the backstop may need to trigger more quickly if the BRA clears short (3 consecutive years of shortage unlikely to be acceptable)
- **Volume**: Only up to defined "minimum acceptable" quantity (e.g. at or below quantity at RTO & LDA price cap)
- **Term:** If one year at price cap is insufficient to attract supply, procure incremental supply at the price cap, but under a 2 to 15-year commitment
- **Format of competitive procurement**: Structured to prioritize both lower cost and shorter term
- **Sellers eligible for multi-year commitments**: New resources, plus existing resources that need it, subject to monitoring and mitigation of offers
- **Other sellers**: Earn 1-year commitment @ price cap (same as today)

Caveats

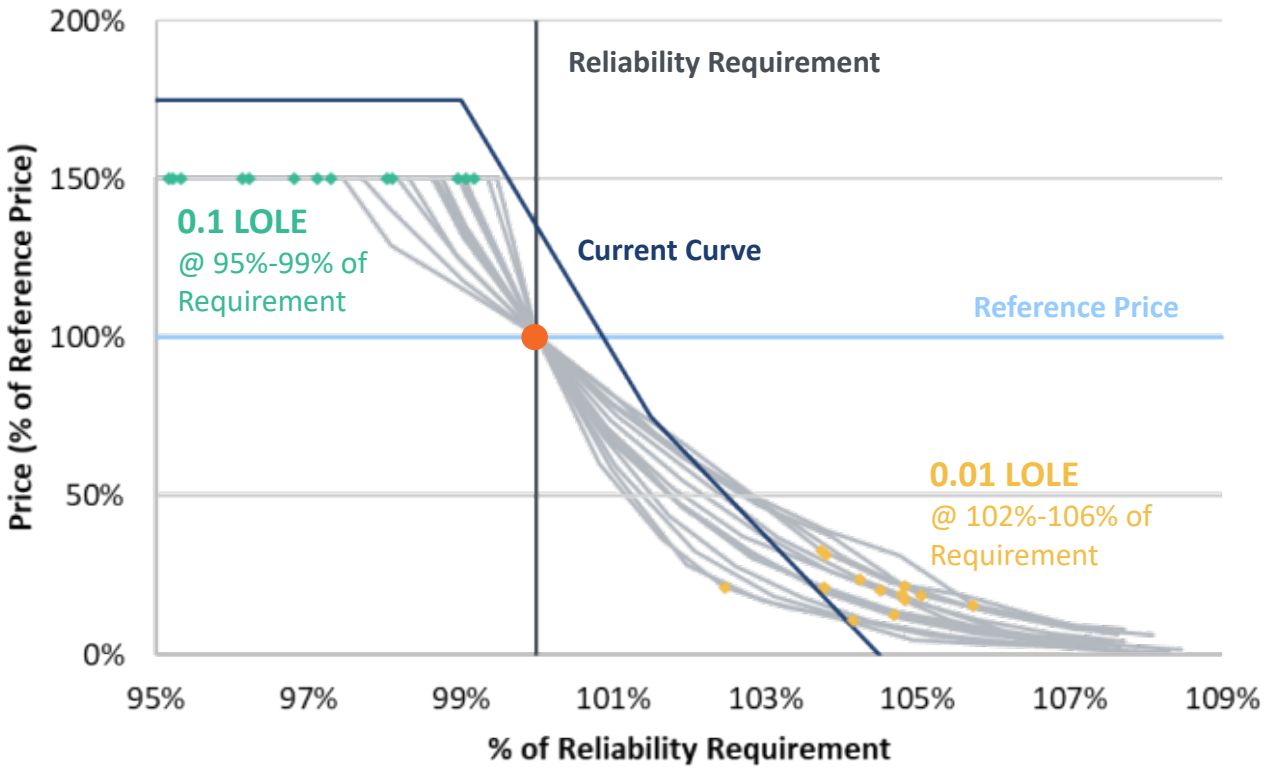
- Not offering a fully specified solution (out of scope for quadrennial review), would need to be carefully developed to manage customers cost and risk exposure (which differs greatly by state), and avoid adverse interactions with competitive market
- Relying on such a mechanism departs from the current "spot" construct with the same terms for all resources
- Could suppress auction price below other opportunities PJM capacity may have (which also complicates offer mitigation and eligibility for special terms)
- Would necessitate allocating above-market costs in later years

LDA VRR Curves: Transition to MRI-Based Demand Curves

Recommendation: LDA-specific MRI curves

- LDA curves defined by target point at Reliability Requirement and Reference Price, produces a different scaling factor in each LDA
- Price cap at max of: 1.5 × LDA Reference Price or parent LDA/RTO reference price
- Quantity at cap ranges 96%-99% of LDA Reliability Requirement (flatter curve reflects graduated reliability value)
- Longer-term: Consider moving to uniform $/MWh scaling factor across all LDAs and seasons (will help to manage tradeoffs in reliability vs. cost by location and season, but requires updated clearing logic similar to ISO-NE)

Recommendation: MRI-Based Curve in LDAs

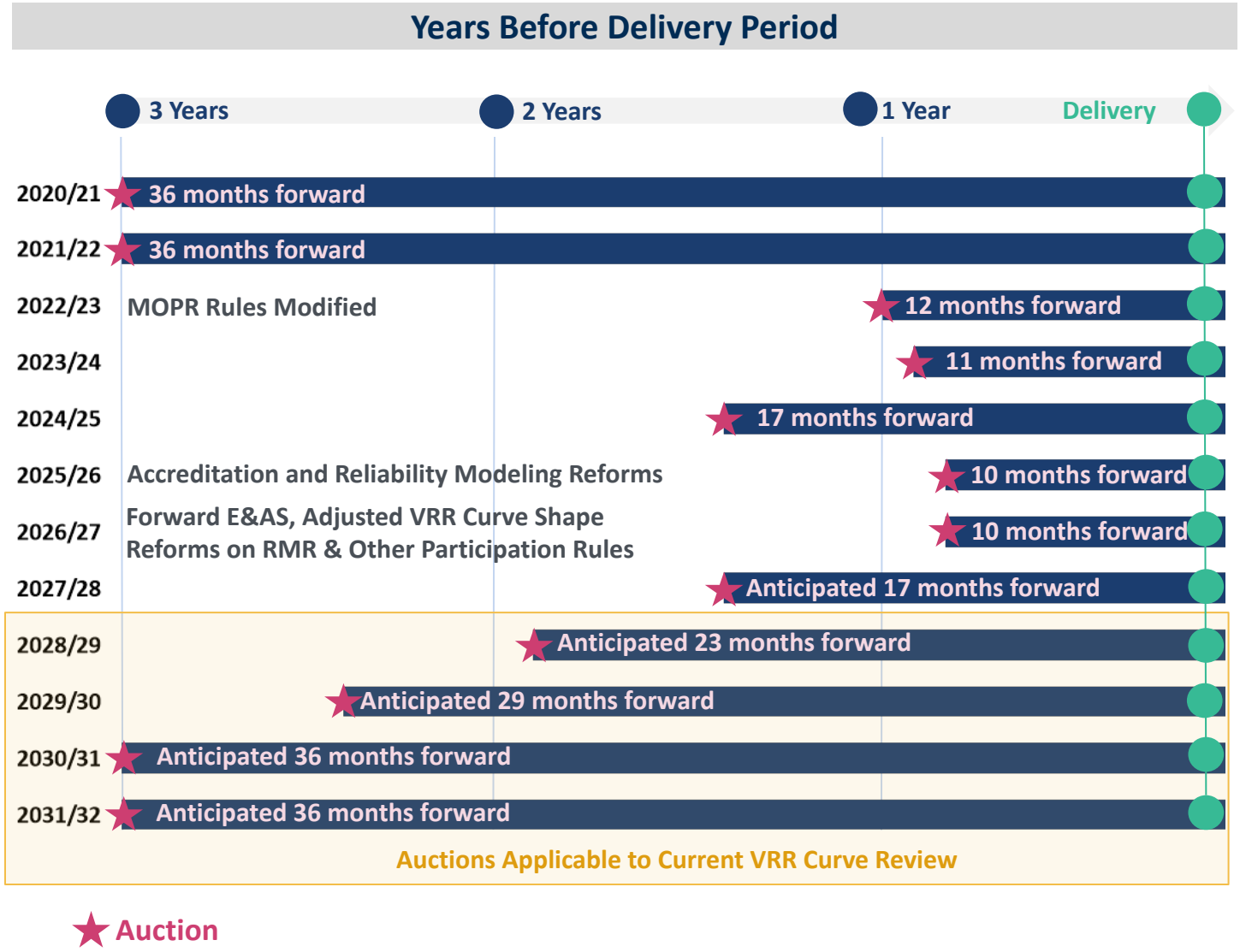


Notes: Each gray line represents the MRI curve for a different LDA.

Restore Full 3-Year Forward Delivery Period

Recommendation: Maintain current schedule to restore 3-year forward period, aligned with overall RPM design

- May require some reforms to be implemented in a staged fashion (delay implementation rather than delaying auctions)
- Compared to recent compressed forward periods, full 3-year-forward auctions can allow more time for market participants to manage design changes and bring supply online



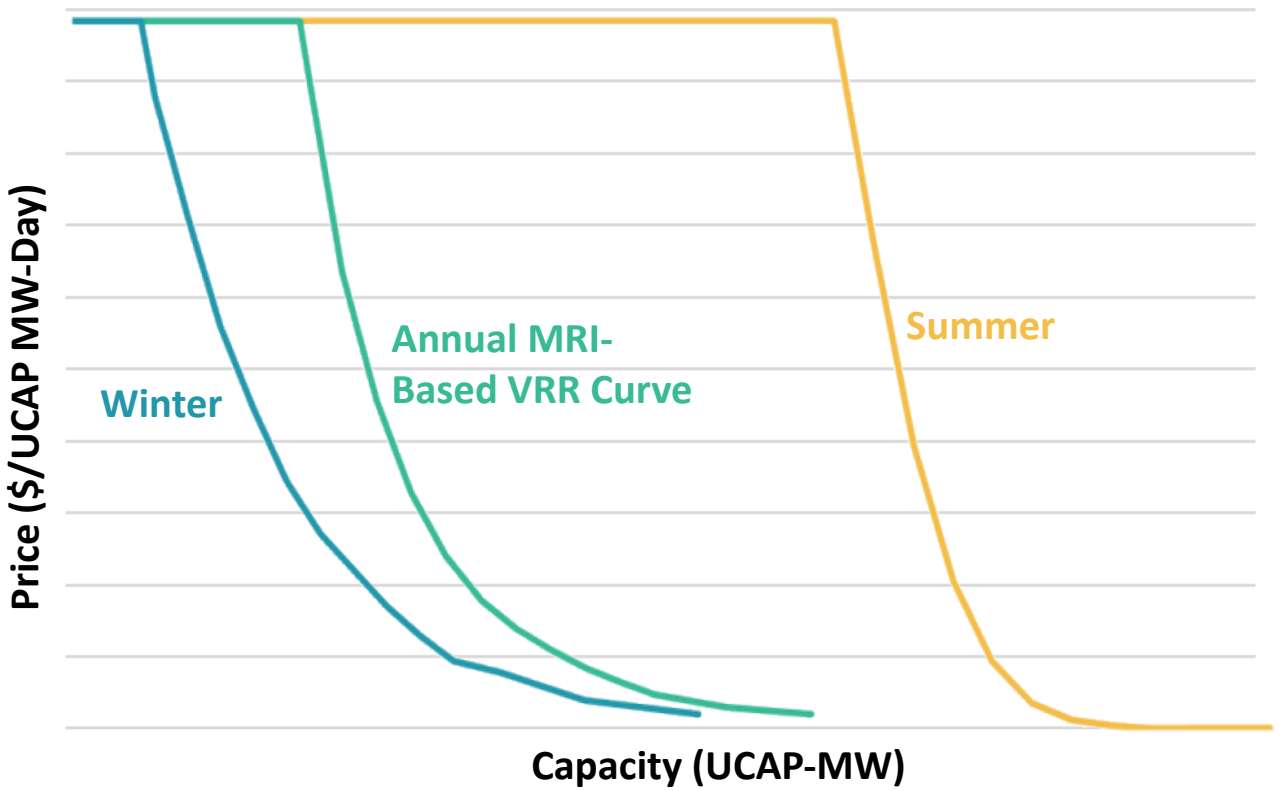
Sources and Notes: Timeline of future auctions from PJM, Auction Schedule, 2024.

Transition to sub-annual capacity market

Recommendation: Transition to sub-annual capacity market with MRI-based VRR curves

- Will substantially improve capability to manage of reliability needs across seasons with different reliability drivers, resource capabilities, and relative supply-demand balance
- Sub-annual MRI-based curves can naturally balance economic value by season (same $/MWh scaling factor by sub-annual period, similar to MISO's 4-season MRI curves)

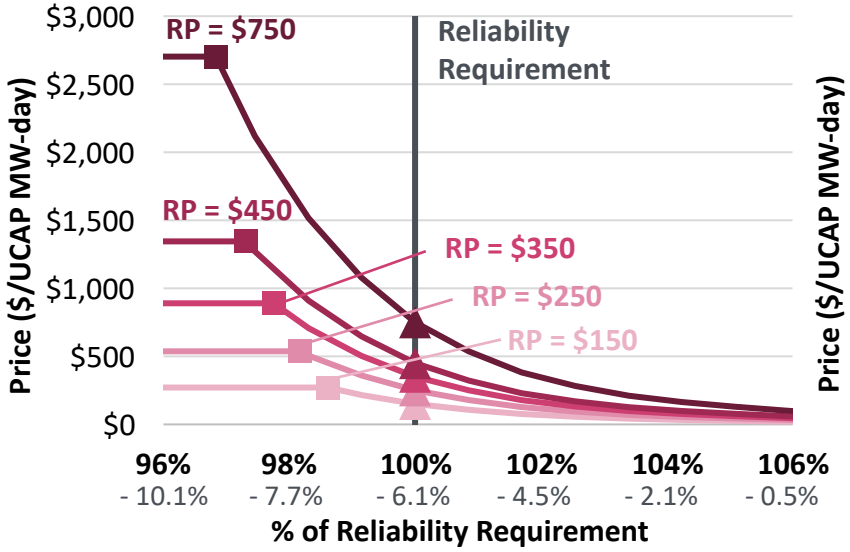
Illustrative Seasonal Capacity Demand Curves



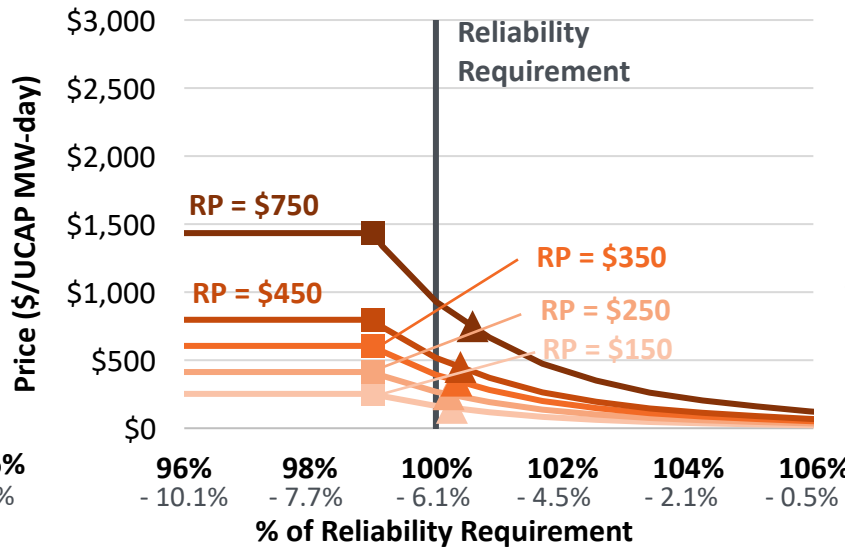
Sources and Notes: Curves are illustrative set based on projections of winter and summer peak demand. Seasonal curves use the same scaling factor as the annual curve.

Summary of Implications for Price Cap Given Net CONE Uncertainties

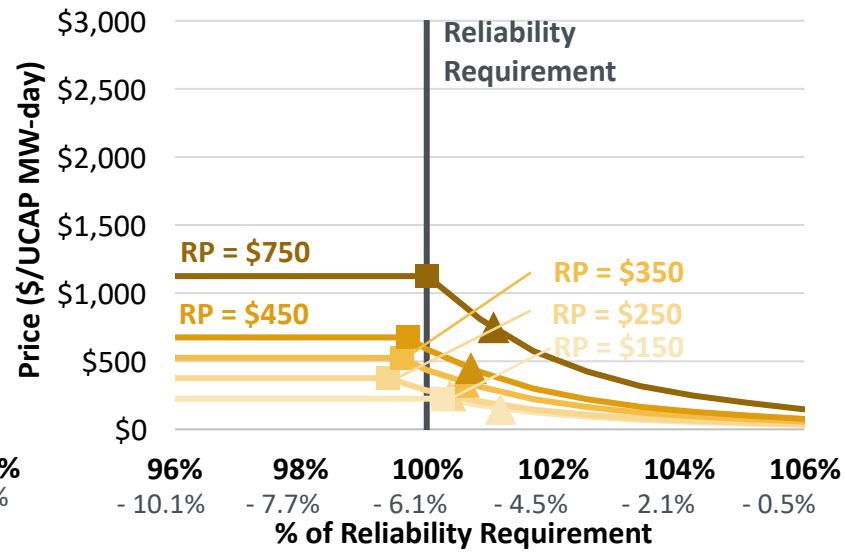
Curve #1: Anchored @ Target Point



Curve #2: Cap @ 99% of Requirement



Curve #3: Cap @ 150% of Net CONE



	Anchored to Target Point					Anchored to Cap at 99% of Reliability Requirement					Anchored to Cap at 1.5 X Net CONE				
	Price Cap			Quantities		Price Cap			Quantities		Price Cap			Quantities	
	Price ($/MW-D)	Multiple of Net CONE (%)	Adder to Net CONE ($/MW-D)	Quantity at Price Cap (% of RR)	Quantity at Net CONE (% of RR)	Price ($/MW-D)	Multiple of Net CONE (%)	Adder to Net CONE ($/MW-D)	Quantity at Price Cap (% of RR)	Quantity at Net CONE (% of RR)	Price ($/MW-D)	Multiple of Net CONE (%)	Adder to Net CONE ($/MW-D)	Quantity at Price Cap (% of RR)	Quantity at Net CONE (% of RR)
Reference Price = $150	$271	181%	$121	98.6%	100.0%	$253	168%	$103	99.0%	100.3%	$225	150%	$75	100.3%	101.2%
Reference Price = $250	$537	269%	$337	98.2%	100.0%	$413	207%	$213	99.0%	100.2%	$300	150%	$125	99.4%	100.4%
Reference Price = $350	$890	297%	$590	97.8%	100.0%	$605	202%	$305	99.0%	100.3%	$450	150%	$275	99.6%	100.6%
Reference Price = $450	$1,345	336%	$945	97.3%	100.0%	$797	199%	$397	99.0%	100.4%	$600	150%	$225	99.7%	100.7%
Reference Price = $750	$2,703	386%	$2,003	96.8%	100.0%	$1,434	205%	$734	99.0%	100.6%	$1,050	150%	$375	100.0%	101.1%

Curve #1: Cap is a substantially higher multiple of Net CONE compared to today. Poorer reliability before reaching cap

Curve #2: Cap @ 99% of requirement and lower value than current CONE-based minimum. Curve runs through Net CONE @ 0.2-0.4% above Requirement

Curve #3: Lowering cap to 50% of Net CONE requires right-shifting the curve another 0.2-0.3% to maintain reliability

Tuned MRI Curves: Performance with Varying Net CONE

	Clearing Price			Price Cap @ 1-in-10		Reliability						Cost
	Avg. Clearing Price	Standard Deviation	Frequency at Cap	Price	Multiple of Ref. Price	Avg. LOLE	Avg. Excess (Deficit) Above Reliability Requirement	Avg. Excess (Deficit) Above Target Reserve Margin	Normalized Portfolio EUE (% of Target)	Frequency Below Reliability Requirement	Frequency Below 99% of Reliability Requirement	Avg. Procurement Cost
	($/MW-d)	*($/MW-d)*	*(%)*	*($/MW-d)*	*(%)*	*($/MW-d)*	*(MW)*	*(UCAP RR + X %)*	*(%)*	*(%)*	*(%)*	*($ mln/yr)*
Curve 1: Anchor Point at the Target, Tuned to 1-in-10 LOLE												
Ref. Price = $150	$150	$65	3.7%	$271	181%	0.100	351	0.26%	104.4%	47.6%	16.4%	$7,340
Ref. Price = $250	$250	$104	3.8%	$537	215%	0.100	288	0.22%	104.5%	43.6%	10.7%	$12,264
Ref. Price = $350	$350	$178	3.0%	$890	254%	0.100	366	0.28%	106.3%	34.7%	13.3%	$17,188
Ref. Price = $450	$450	$273	3.3%	$1,345	299%	0.100	470	0.36%	108.4%	33.7%	14.1%	$22,104
Ref. Price = $750	$750	$600	3.8%	$2,703	360%	0.100	741	0.56%	112.6%	30.6%	16.9%	$36,812
Curve 2: Anchor Point at 99% of the Reliability Requirement, Tuned to 1-in-10 LOLE												
Ref. Price = $150	$150	$63	8.5%	$253	168%	0.100	503	0.37%	107.5%	40.5%	8.5%	$7,343
Ref. Price = $250	$250	$90	8.9%	$413	165%	0.100	351	0.27%	105.5%	39.3%	8.9%	$12,263
Ref. Price = $350	$350	$141	12.7%	$605	173%	0.100	463	0.35%	108.1%	31.2%	12.7%	$17,189
Ref. Price = $450	$450	$197	13.4%	$797	177%	0.100	558	0.42%	110.0%	31.8%	13.4%	$22,106
Ref. Price = $750	$750	$402	17.7%	$1,434	191%	0.100	882	0.66%	114.1%	27.3%	17.7%	$36,860
Curve 3: Anchor Point at 1.5 × Reference Price, Tuned to 1-in-10 LOLE												
Ref. Price = $150	$150	$57	19.2%	$225	150%	0.100	1,303	0.94%	121.8%	18.4%	14.2%	$7,374
Ref. Price = $250	$250	$83	13.9%	$375	150%	0.100	411	0.32%	107.3%	33.5%	11.6%	$12,264
Ref. Price = $350	$350	$122	19.9%	$525	150%	0.100	566	0.43%	109.7%	29.1%	15.0%	$17,192
Ref. Price = $450	$450	$166	22.6%	$675	150%	0.100	674	0.51%	111.7%	30.1%	16.0%	$22,111
Ref. Price = $750	$750	$305	28.2%	$1,125	150%	0.100	1,018	0.76%	115.5%	27.7%	18.5%	$36,890

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