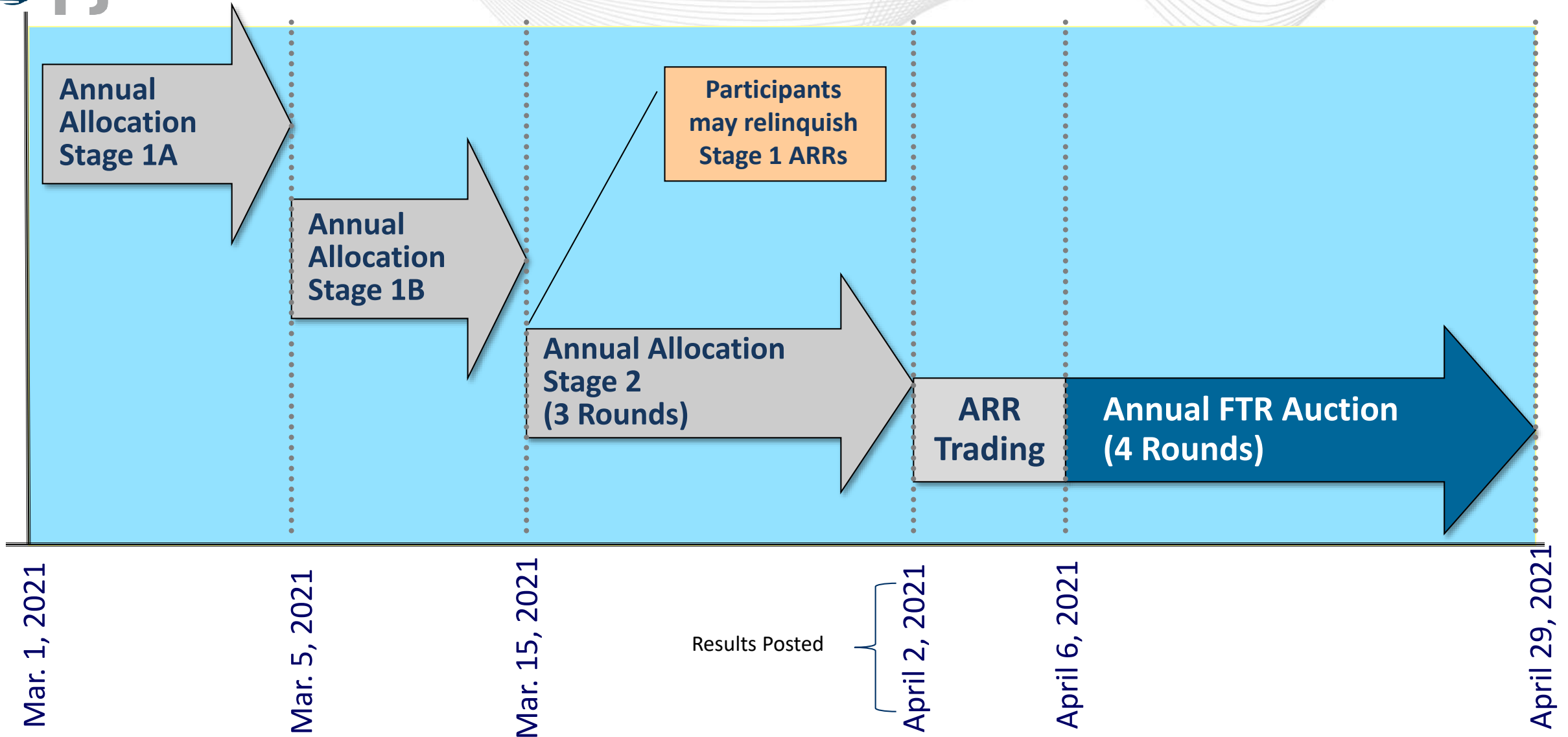




2021/2022 ARR/FTR Update

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- PJM has started preparations for the 2021/2022 ARR allocation and FTR Auction
 - Timeline
 - List of preparations
- Important Topics/Recent Changes:
 - Bid Limit Enforcement by Corporate Entity
 - ARR/FTR Market Task Force (AFMTF) discussing potential changes to market construct throughout 2021
 - DLR Modeling in FTR



- Zonal Base Load (ZBL) and Network Service Peak Load (NSPL)
 - File posted on FTR website on 1/19/2021
- ARR Stage1 eligible resources
 - File posted on FTR website week of 2/8/2021
- Identification of RTEP upgrades to-be modeled for simulated credit reference pricing
 - See appendix for list

- Additional files to be posted throughout February:
 - Transmission outages
 - Key system upgrades modeled
 - M2M Flowgates
 - Loop Flow
 - Contingencies modeled
 - Point-to-Point ARR nomination form
 - IARRs for RTEP upgrades allocated

- Any questions can be addressed to the FTRGroup@pjm.com

FTR credit reference prices

- Adjusted historical values are used in FTR credit requirement when transmission upgrades significantly change congestion patterns
- Market Efficiency model utilized to study congestion patterns with and without identified transmission upgrades
- The list of upgrades modeled for 21/22 and 22/23 in Appendix
- Historic and adjusted FTR Credit Calculator Congestion LMPs can be downloaded through Data Miner 2 in March
https://dataminer2.pjm.com/feed/ftcr_cong_lmp/definition

- FTR Center changed to limit bid submissions by corporate entity
 - 10,000 per corporate entity (previously per participant), per market, per round, per period
 - Manual 6, Revision 26 endorsed at January 2021 MRC
 - MAR 2021 Auction is the first to utilize new bid limits methodology
- FTR Center Bid Limits tab
 - New tab added to FTR Center where the participant's corporate entity, affiliated participant names, and bid counts for FTR auctions, can be viewed
- Analysis/discussion planned for AFMTF for increasing the 10,000 limit

- London Economics International (LEI) report available [here](#)
 - Review of report at December AFMTF
 - Q&A Session with LEI at January AFMTF
- Next meeting 2/26/21 dedicated to hearing stakeholder perspectives on current FTR/ARR market
 - Sign-up form to be sent for speaking time reservations
- TF is expected to explore changes to ARR/FTRs for remainder of meetings in 2021

- Status quo of 95 degree day ratings for Annual model
- Ratings may be adjusted in Monthly models based on information/modeling in Day-ahead

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Annual ARR/FTR Update



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Appendix



Appendix – Transmission upgrades modeled for FTR Credit

2021-2022

Upgrade Id	Sub Region	Transmission Owner	Projected In Service Date	Description
b2992.1	Mid-Atlantic	BGE	6/1/2021	Reconductor the Conastone to Graceton 230 kV 2323 & 2324 circuits. Replace 7 disconnect switches at Conastone Substation
b2992.2	Mid-Atlantic	BGE	6/1/2021	Add Bundle conductor on the Graceton-Bagley-Raphael Road 2305 & 2313 230kV circuits
b2992.4	Mid-Atlantic	BGE	6/1/2021	Reconductor the Raphael Road - Northeast 2315 & 2337 230kV circuits
s1643	Mid-Atlantic	PENELEC	6/3/2021	Replace the existing Roxbury 100 MVA 138/115 kV transformer with a 224 MVA unit. Convert Roxbury 115 kV substation into a four (4) breaker ring bus.



Appendix – Transmission upgrades modeled for FTR Credit

2022-2023

Upgrade Id	Sub Region	Transmission Owner	Projected In Service Date	Description
b2743.1	Mid-Atlantic	Transource	6/30/2022	Tap the Conemaugh - Hunterstown 500 kV line & create new Rice 500 kV & 230 kV stations. Install two 500/230 kV transformers, operated together.
b2743.2	Mid-Atlantic	PENELEC	6/1/2022	Tie in new Rice substation to Conemaugh-Hunterstown 500 kV
b2743.3	Mid-Atlantic	PENELEC	6/1/2022	Upgrade terminal equipment at Conemaugh 500 kV: on the Conemaugh - Hunterstown 500 kV circuit
b2743.4	Mid-Atlantic	ME	6/1/2022	Upgrade terminal equipment at Hunterstown 500 kV: on the Conemaugh - Hunterstown 500 kV circuit
b2743.5	Mid-Atlantic	Transource	6/30/2022	Build new 230 kV double circuit line between Rice and Ringgold 230 kV, operated as a single circuit.
b2743.6.1	West	APS	6/1/2022	Replace the two Ringgold 230/138 kV transformers
b2834	West	AEP	7/30/2021	Reconductor and string open position and sixwire 6.2 miles of the Chemical - Capitol Hill 138 kV circuit
b2970.1	West	APS	6/1/2022	Install two new 230 kV positions at Ringgold for 230/138 kV transformers.
b2970.4	West	APS	6/1/2022	Install new 230 / 138 kV transformer at Catoctin substation. Convert Ringgold-Catoctin 138 kV Line to 230 kV operation.
b3006	West	APS	12/23/2021	Replace four Yukon 500/138 kV transformers with three transformers with higher rating and reconfigure 500 kV bus
b3026	South	Dominion	12/31/2021	Re-conductor the entire 230 kV Line No.274 (Pleasant View – Ashburn – Beaumeade) using a higher capacity conductor with an approximate rating of 1572 MVA.