

# Annual ARR & Self-Scheduled FTR

February 13, 2023 Xu Xu Lead Engineer, Market Simulation





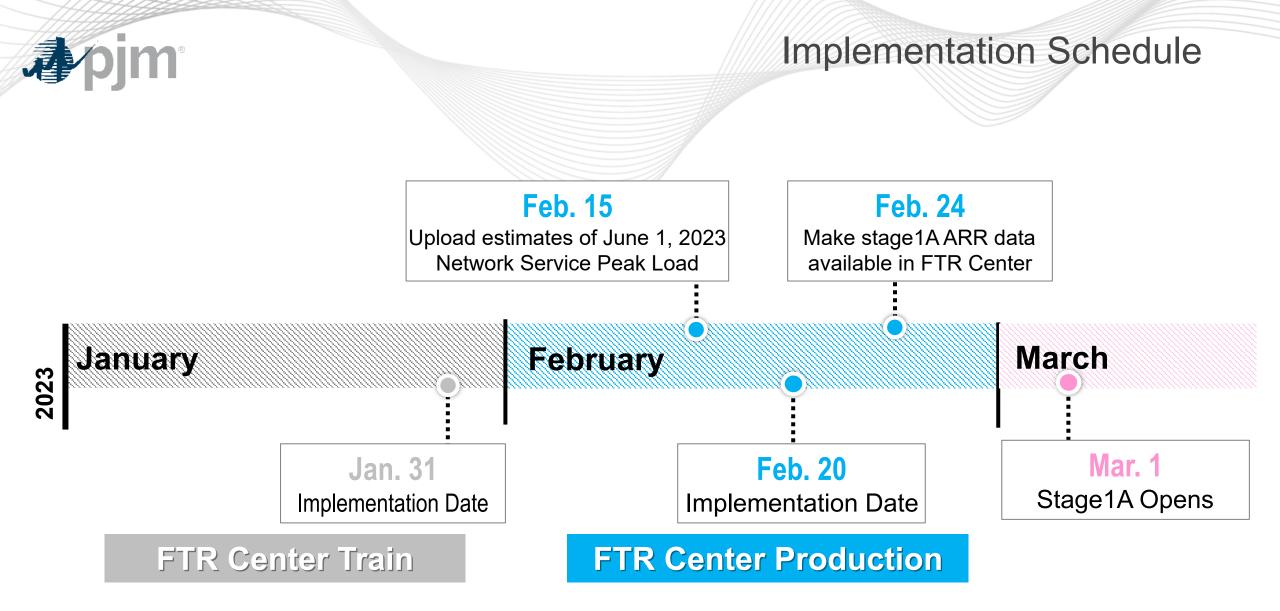
- 1/17/2023 New presentation
- 2/13/2023 Add schedule



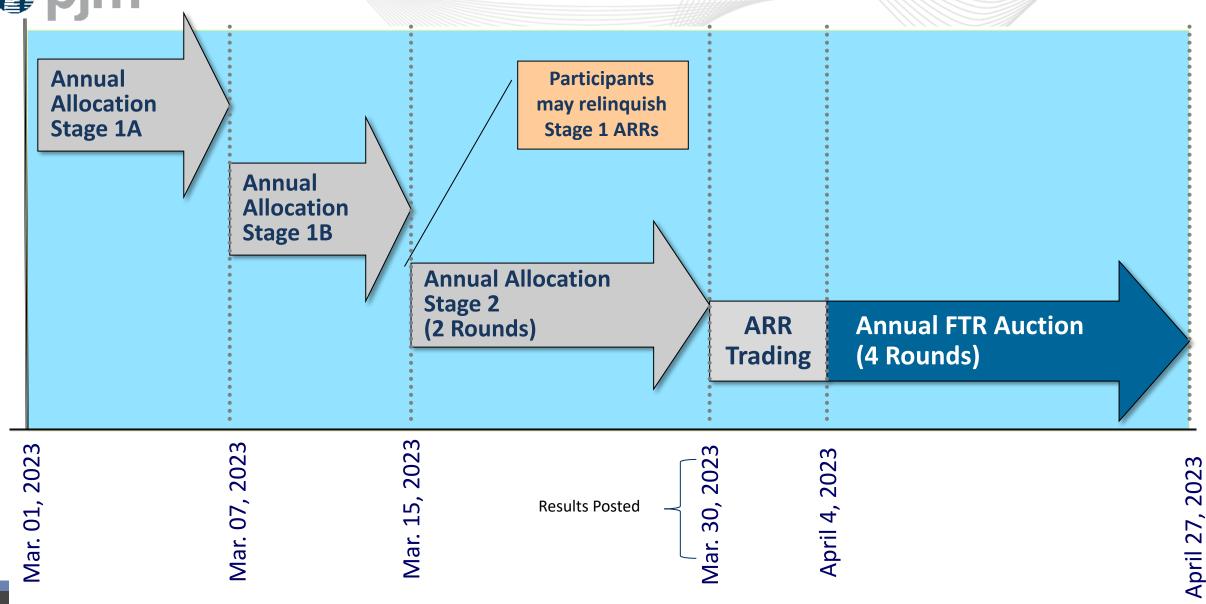
#### **Impact Details**

<b>Product - Action Required</b>	Deadline	Who May Be Affected
Release – Train	January 31	ARR Allocation Participants
Release – Production	February 20	ARR Allocation Participants
Annual ARR Opens	March 1	ARR Allocation Participants
Annual FTR Opens	April 4	Only FTR Auction Participants who can Self- Schedule





#### Annual ARR/FTR Market Timeline



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# **ARR Changes**

- Stage 1A MWs up to 60% of Network Service Peak Load
- New source pnodes for Stage1B
- New sink pnodes for Stage 2

# Self-Scheduled FTR

- Pre-change, only 24 h class type
- All class types (24 h, On-Peak, Daily Off-Peak, Wknd On-Peak) are available



#### ARR Changes

#### Pre-changes

ARR Round	Source Pnode	Sink Pnode	Capability (MW)
Stage1A	Active historical resources or Qualified Replacement Resources	Aggregate Network Customer Load in the Transmission Zone or other designated Load Aggregation Zone	Up to value of Zonal Base Load (ZBL)
Stage1B	Same as stage1A	Same as stage1A	Up to Network Service Peak Load (NSPL)
Stage2 Round1	any available generator, interface, hub, zone	Same as stage1A	Up to Network Service Peak Load (NSPL)
Stage2 Round2	Same as Round1	Same as stage1A	Up to Network Service Peak Load (NSPL)
Stage2 Round3	Same as Round1	Same as stage1A	Up to Network Service Peak Load (NSPL)



#### **ARR** Changes

# Changes

ARR Round	Source Pnode	Sink Pnode	Capability (MW)
Stage1A	Active historical resources or Qualified Replacement Resources	Aggregate Network Customer Load in the Transmission Zone or other designated Load Aggregation Zone	Guarantee 60% of Network Service Peak Load (NSPL)
Stage1B	Same as stage1A, plus Hub, Zone and Interface	Same as stage1A	Up to Network Service Peak Load (NSPL) (subject to proration)
Stage2 Round1	any available generator, interface, hub, zone	Same as stage1A, and any available generator, interface, hub, zone	Up to Network Service Peak Load (NSPL) (subject to proration)
Stage2 Round2	Same as Round1	Same as round1	Up to Network Service Peak Load (NSPL) (subject to proration)

CONEMAUG115 KV DIESEL

#### Has to be same for stage1A and 1B Refresh XML -2023/2024 ARR Stage 1A (Open) BGE\_RESID\_AGG BGE\_RESID\_AGG Market Stage $\sim$ Sink Zone Sink $\sim$ Save CSV 📑 Will be 60% of Network Service Peak Load IARR Requests Requests Total Bid MW: 100 Round Capability: 522.2 Network Service Peak Load: (,,....) Row Count: 57 Sink **MW Capability** Bid MW Source ASYLUM 23 KV LIBRTY10 BGE\_RESID\_AGG <u>ר ר</u> 0.0 BRANDONS24 KV GEN 01 BGE\_RESID\_AGG 117 100 BRANDONS24 KV GEN 02 BGE\_RESID\_AGG 1 .- 9 0.0 100.0 CALVERTC22 KV GEN 02 BGE\_RESID\_AGG 0.0 BGE RESID AGG 177.4 CALVERTC25 KV GEN 01 0.0

Bid MW needs to be equal or smaller than the MW Capability

Total Bid MW needs to be equal or smaller than the Round Capability

0.0

BGE\_RESID\_AGG

**⊅**∕pjm

Request

Results

ARRs

Credit

Position

Public

Ouotes

Results Trading

Utilities

### ARR Changes – Stage 1A

0.0

#### ARR Changes – Stage 1B

<b>ø</b> jm	100M2 10 M2	Wred X + PIM - Financial Transmission Rig: /ftrcenter/pages/secure/#IARRs/Requests/Requests		ent Overview: AFMTF Pha × +	× ×	inges – St	age 1B
	My 'Soots  FTR Center  ARRs  Reguest Results Credit Position Public Quotes Results Karket LARR Rec Total Bid MW; 30		Sink Zone DOM_RESID_AGG NSPL min Network Service Peak Load: *	Sink DOW_RESID_AGG	(XUX66664650)   Sign Out Contact   Help Refresh CIE Seve SIGE ared MWS of 6	stage1A	
	Trading Source Utilities OUGUENMINZS POLYESTRI3.8 POSSUMP4141 POSSUMP4141 REMNTNCT18 REMNTNCT18 REMNTNCT18 REMNTNCT18	KV 61 V 675 V 66 KV 671 KV 672 KV 673 KV 674	UURLRESID_AGG           DOM_RESID_AGG	MW Capability	Bid MW         0.0           1         0.0           1         0.0           5:         0.0           7:         0.0           1         0.0           5:         0.0           1:         0.0           1:         0.0           1:         0.0           1:         0.0           1:         0.0           2:         0.0	Bid MW needs or less than M	_
	AEP     AEP     AEP     AEPGEN     AEP-DAYTC     AP5     ATSI     BATHC0 2C     BATHC0 2C	UB N HUB KV GM1 KV GM2 KV GM3	DOM_RESID_AGG DOM_RESID_RESID_AGG DOM_RESID_AGG DOM_RESID_AGG DOM_RESID_	odes: Hub	, Zone and In	Iterface	
	Plat © 2022. All rights reserved Legal and Privacy	0 # 🗖 % 🗿 💵	11 E 01 9 9 8 9	EN 🔆 Sn	v7.0.6.2211071437_0acf70 Feedback ow to stop ^ □ 40 12/23/2022 ₽		
	BRUNSCOL21 KV BRUNSST CHESAPKE13.8 KV GT1 CHESAPKE13.8 KV GT6 CHESTER414 KV G7G		DOM_RESID_AGG DOM_RESID_AGG DOM_RESID_AGG DOM_RESID_AGG		Right click,	UI to add additio showing 'Add A e path from the o	NRR'



#### ARR Changes – Stage 1 XML query

#### • Sink (sinkpnodename) has to be the load settlement's point/aggregate

kenv:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
<env:Header/>
<env:Body>
<SubmitRequest xmlns:xsd="http://eftr.pjm.com/ftr/xml" xmlns:xsi="http://eftr.pjm.com/ftr/xml" xmlns="http://eftr.pjm.com/ftr/xml">
<ARRQuotes MarketName="2023/2024 ARR" MarketRoundName="Stage 1B">
<ARRQuote>
</Path source="BGE" sink="DOM\_RESID\_AGG"/>
</ARRQuote>
</ARRQUOT

</env:Envelope>

#### Can put both sink and sinkZone, but they have to be the same

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
<env:Header/>
<env:Body>
<SubmitRequest xmlns:xsd="http://eftr.pjm.com/ftr/xml" xmlns:xsi="http://eftr.pjm.com/ftr/xml" xmlns="http://eftr.pjm.com/ftr/xml">
<ARRQuotes MarketName="2023/2024 ARR" MarketRoundName="Stage 1B">
<ARRQuote>
</ARRQuote>
</ARRQUOTE

pjm			4	ARR Char	nges – Stage 2
Market 2023/2024	ARR V Stage Stage 2 Round	1 (Open) V Sink Zone	M_RESID_AGG ~		
Requests IARR Requests			Sink Zone match	hes the load se	ettlement's point/aggreg
otal Bid MW: 0.0	Round Capability:	٤,275 C Networ	k Service Peak Load: २२, २२ : . ३	Row Count: 0	
Source		Sink	Bid MW		
	Add ARR	Any availa	able generator, inte	erface, hub, zo	one
Source	Add ARR	Any availa	able generator, inte	erface, hub, zo	one
Source			-	erface, hub, zo	DNE 10.0
		Sink	-	erface, hub, zo	
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF APS ALTOONA 46 KV WARRIORR	Bid MW	erface, hub, zo	10.0
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF APS ALTOONA 46 KV WARRIORR AMOS 26 KV AM1	Bid MW	erface, hub, zo	10.0
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF MDS ALTOONA 46 KV WARRIORR AMOS 26 KV AM1 AMOS 26 KV AM2	Bid MW	erface, hub, zo	10.0
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF APS ALTOONA 46 KV WARRIORR AMOS 26 KV AM1	Bid MW	erface, hub, zo	10.0
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF ALTOONA 46 KV WARRIORR AMOS 26 KV AM1 AMOS 26 KV AM2 AMOS 26 KV AM3	Bid MW	erface, hub, zo	10.0
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF ALTOONA 46 KV WARRIORR AMOS 26 KV AM1 AMOS 26 KV AM2 AMOS 26 KV AM3 AMPOR 138 KV GENDUMMY APS ARCHBTAP13 KV PEI 1	Bid MW	erface, hub, zo	10.0
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF ALTOONA 46 KV WARRIORR AMOS 26 KV AM1 AMOS 26 KV AM2 AMOS 26 KV AM3 AMPOR 138 KV GENDUMMY APS ARCHBTAP13 KV PEI 1 ARCHBTAP13 KV PEI 2	Bid MW	erface, hub, zo	10.0
100 SHAD34.5 KV GSG6W		Sink 139 MEND34.5 KV WBROOKWF ALTOONA 46 KV WARRIORR AMOS 26 KV AM1 AMOS 26 KV AM2 AMOS 26 KV AM3 AMPOR 138 KV GENDUMMY APS ARCHBTAP13 KV PEI 1	Bid MW	erface, hub, zo	10.0

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#### ARR Changes – Stage 2 XML query

- Has to specify sink zone at the load settlement's point/aggregate
- Sink can be any available generator, interface, hub, zone





# **Train Implementation**

January 31

# **Production Implementation**

- February 20
- Make stage1A ARR data available on February 24
- Bidding window opens on March 1



#### **Useful Information**

- Annual ARR/FTR Training
  - <u>https://www.pjm.com/training/training-resources</u>
- 2023/2024 ARR post materials
  - <u>https://www.pjm.com/markets-and-operations/ftr</u>
- External Interface Specification Guide
  - <u>https://www.pjm.com/-/media/markets-ops/ftr/ftr-external-interface-specification.ashx</u>



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**ARR Changes/SelfScheduled FTR** 



