

## FTR Forfeiture Rule: Analysis of Alternatives to FTR Impact Test

Xu Xu Sr. Engineer II, Market Simulation AFMTF

June 25, 2021

www.pjm.com | Public PJM © 2021



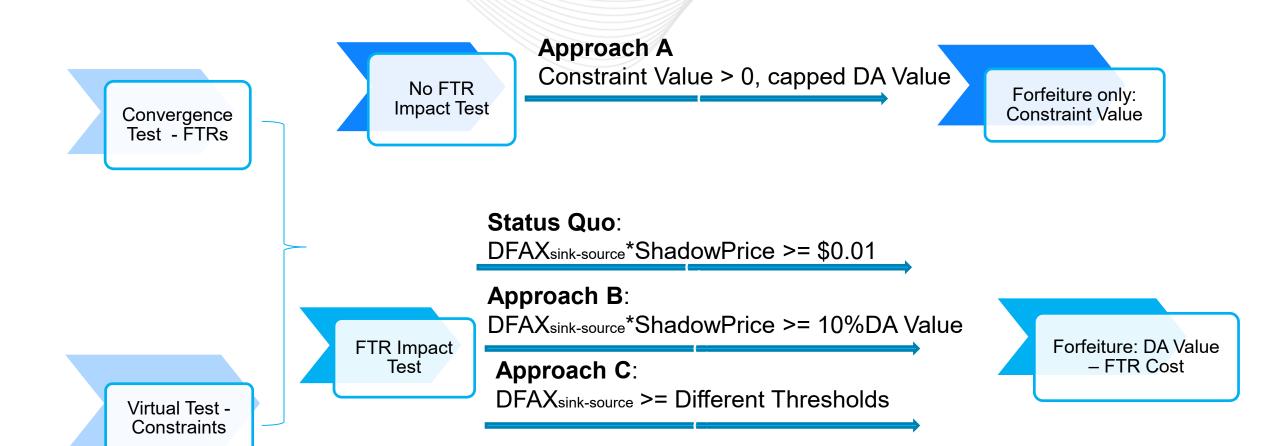
- Convergence Test DA cLmp > RT cLMP for FTR path
  - Determines Hour where DA congestion is greater than RT along a path
- Virtual Test Net virtual activity across all affiliates must be greater than or equal to 10% of DA constraint limit
  - Determines Constraints virtual flow is significantly impacting
- FTR Impact Test (dfax\*Shadow Price)FTR Sink (dfax\*Shadow Price)FTR Source >= \$0.01
  - Determines FTR paths (direction accounted for counter flow)
- FTR Forfeiture DA Value FTR Cost



- Data set: 2020/2021 FTRs that passed Convergence and Virtual Tests
- Approach A: Forfeiture based on constraint value
  - DA FTR Value is the sum of different constraint values;
  - Forfeiture amount is triggered constraint value, capped at DA Value.
- Approach B: Forfeiture based on constraint passing 10% impact
  - Triggered constraint value passed 10% of DA FTR Value
- Approach C: Forfeiture based on FTR's DFAX on triggered constraint
  - Use different DFAX thresholds



## Flowcharts for Alternatives





June 2020 ~ May 2021 Summary	Forfeiture if Constraint value to FTR >= \$0.01 (Status Quo)	Forfeiture Based on Constraint Value (No FTR Impact Test) (Approach A)	Forfeiture if Constraint value to FTR >= 10% DA FTR Value (Approach B)	Forfeiture if FTR DFAX>0.10 (Approach C1)	Forfeiture if FTR DFAX>0.05 (Approach C2)	
Market Participants w/ Forfeiture	74	61	62	16	28	46
Forfeitures (\$)	\$5.5M	\$0.3M	\$0.9M	\$0.05M	\$0.07M	\$0.4M
Average FTR Impact (\$)	\$0.82	\$1.09	\$1.16	\$3.93	\$3.22	\$1.10



June 2017 Summary	Forfeiture if Constraint value to FTR >= \$0.01 (Status Quo)	Forfeiture Based on Constraint Value (No FTR Impact Test) (Approach A)	Forfeiture if Constraint value to FTR >= 10% DA FTR Value (Approach B)		Forfeiture if FTR DFAX>0.05 (Approach C2)	
Market Participants w/ Forfeiture	66	52	44	15	19	36
Forfeitures (\$)	\$920,000	\$22,900	\$63,800	\$1,600	\$2,400	\$180,000
Average FTR Impact (\$)	\$0.32	\$0.64	\$0.76	\$1.42	\$1.14	\$0.48



Stakeholder feedback from now until end of June

July 14<sup>th</sup> MIC – recommendation and compliance filing review



Facilitator: David Anders,

David.Anders@pjm.com

Secretary:
Ankit Kharod

Ankit.Kharod@pjm.com

SME/Presenter: FTR Group

FTRGroup@pjm.com



## Member Hotline

(610) 666 - 8980

(866) 400 - 8980

custsvc@pjm.com