

Updated Plan for Hill FTR Portfolio

(Slides 22 and 23 updated after meeting – updates in red font)

PJM Members Committee
February 18, 2022

Tim Horgler
Director, Forward Market Operations &
Performance Compliance

Update on Default

Stakeholder Feedback

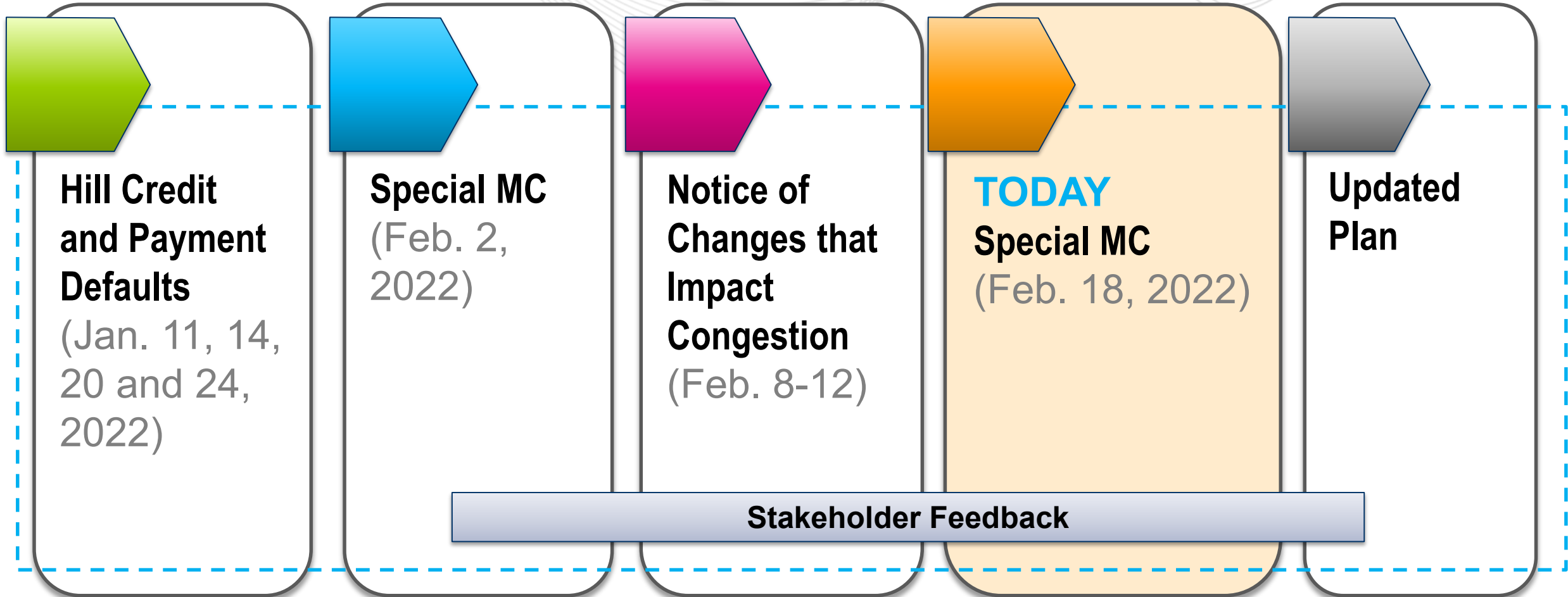
Implication of Changes Impacting Congestion

Updated View of Hill Portfolio and Exposure

Impact of Options

PJM Recommendations

Next Steps



Cancellation of Hill positions

- Cancellation is the best option
- FTR Market should bear the risk of defaults

Liquidation (Selling in auctions)

- Liquidation is the best option
- Ensures sufficient competition exists
- Should not cancel or allow to go to settlement
- Regular auctions are the best approach

**Need more information;
do not make a decision yet**

Other

- Silent auction risks insufficient competition
- Consider cancellation of ALL FTR positions across this constraint (not just Hill positions) given the potential congestion reduction

Events have occurred that are expected to reduce congestion in this region and impact the expected value of the Hill portfolio

Tentatively Effective June 1, 2022

- Transmission upgrades in the Dominion zone in the Harmony Village/White Stone Area*

Effective With FERC Approval

- Change to the application of the Penalty Factor in the Real-Time Energy Market (Filed 1/31/22)

*Details provided in Appendix A

*Any delayed in-service date of transmission upgrade can impact portfolio value

Change	Effective Date	Notice to Stakeholders	Default Positions Impacted	Congestion Impact (Northern Neck Area)
Dominion Upgrades	Jun. 1, 2022	TEAC Feb. 8, 2022	2022/2023 2023/2024 2024/2025	Congestion expected to be significantly reduced or eliminated but there is no guarantee
Penalty Factor Removal	Feb. ?, 2022	Upon approval	All forward positions after effective date	TBD

Takeaway: What if the impact of these actions results in the Hill portfolio having a net POSITIVE value from March forward?
 What does that mean for the available options?

Updated View of Hill Portfolio and Exposure

Period	Settled/MTA Value
Jan. 2022	-\$3,631,896
Feb. 2022 (through Feb. 14)	-\$369,930
Feb. 2022	-\$1,265,179
Mar. 2022	\$841,356
Apr. 2022	\$674,136
May 2022	\$732,033
2022/23	-\$5,989,615
2023/24	\$980,035
2024/25	\$431,839
Total	-\$7,227,290

Total Collateral PJM Holds: **\$6.1 million**

Settled

Settled

MTA projection; will go to settlement. Value prorated for days not settled

- MTA value does not reflect impacts from congestion changes
- Only 2022/2023 positions impacted by congestion changes

- Feb. through May 2022 MTA value from February FTR auction
- 2022/2023 through 2024/2025 MTA value from December long-term auction

Note: None of the above values reflect the anticipated impact of the recent 205/206 filing associated with Penalty Factor.

Options To Resolve Hill Portfolio

1

Allow Positions
To Go to
Settlement

PJM Not
Considering

2

**Sell Positions
in Regularly
Scheduled
FTR Auctions**

**PJM
Considering**

3

Sell Positions in
a Special
Auction for the
Entire Portfolio

PJM Not
Considering

4

**Cancel the
Positions**

**PJM
Considering**

Allow Hill FTR positions to settle against day-ahead prices for certain periods or throughout life of portfolio (through May 2025).

Pros

- Portfolio exposure may be significant reduced or profitable with congestion changes

Cons

- Positions remain “on the books”
- Uncertainty of market congestion for a long period of time

PJM not recommending this option as our primary path because of the uncertainty over time of portfolio value.

Offer Hill FTR Portfolio for sale in an applicable auction

Pros

- Positions may be easier to liquidate
- Competitive market determines value
- Potential profit from liquidation
- Reserve Price can minimize losses

Cons

- Cherry picking can result in only valuable paths being liquidated
- May take multiple auctions

PJM performed a study to determine the impacts of selling Hill positions in an auction

Study Assumptions

- No changes to bids (i.e., same bidding behavior and expectations of congestion without upgrade)
- Dominion upgrade modeled

Results

- Hill positions were successfully liquidated.
- Net liquidation costs were relatively close to the original HILL MTA values, which demonstrates there was sufficient liquidity to sell positions without significant market distortion.
- If actual liquidation would be conducted the bidding, behavior would include new expectations of congestion, so it is difficult to accurately predict actual risk premium that will be required to liquidate the position.

Terminate all effective Hill FTR positions

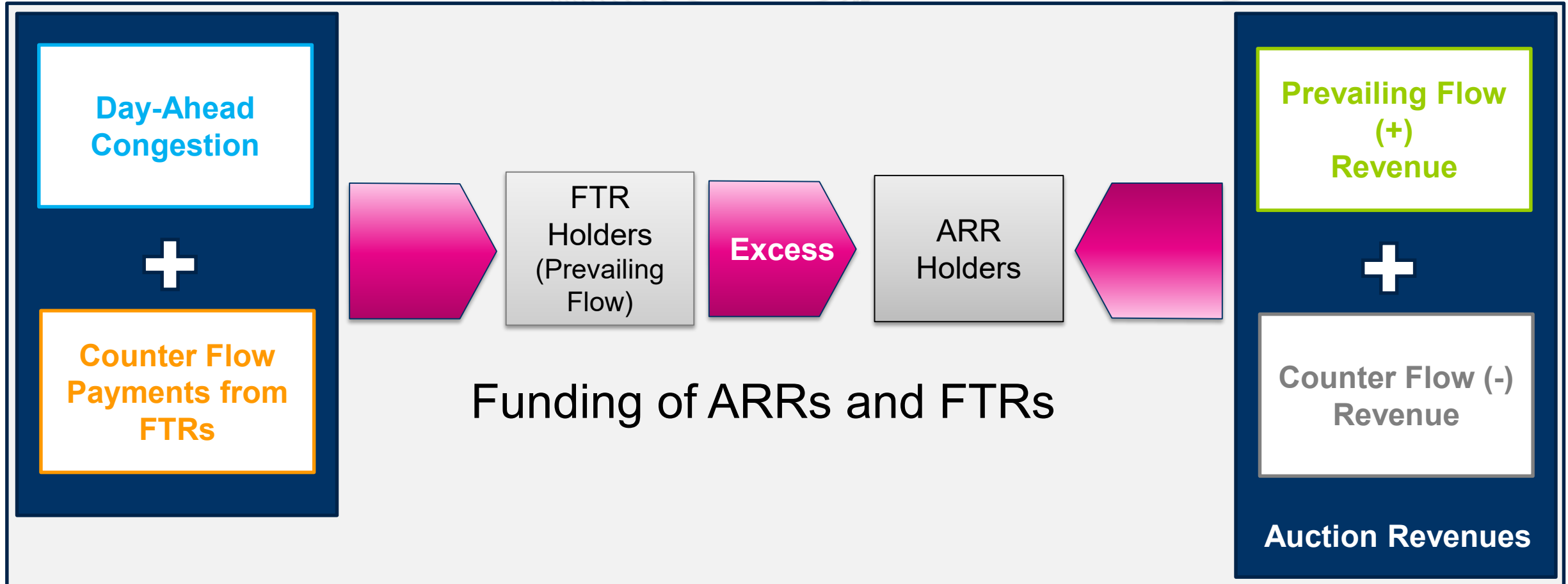
Pros

- Analysis shows minor infeasibilities for all positions
 - Might be minimal impact to revenue inadequacy
- Provides additional capacity in FTR Market for some periods
- Removes risk of future exposure

Cons

- Non traditional (i.e., out of market)
- No additional revenues to offset default allocation (if available credit insufficient)
- Shifts default allocation to FTR holders if revenue inadequacy is created

Deeper Dive of Impacts of Canceling Hill Portfolio (Option 3)



How Does the Type of FTR Impact Cancellation?

FTR Type	Flow Impact	Impact of Canceling
Counter flow	Negative	<ul style="list-style-type: none"> • Increases FTR Flow, which may cause revenue inadequacy if creates infeasibilities on a congested facility • ARR auction revenues increased (original negative auction costs removed)
Prevailing flow	Positive	<ul style="list-style-type: none"> • Decreases FTR Flow, which provides additional capability • ARR auction revenues decreased (original positive auction costs removed) <ul style="list-style-type: none"> – Auction revenues may be recovered in future auction when capability sold

Net Impact of Canceling Hill Positions With Congestion Reduction

	Before Congestion Reduction	Potential After Congestion Reduction	Net Cancellation Impact
Net Original Auction Revenues	Negative (Counter flow)	Negative (Counter flow)	<ul style="list-style-type: none"> Increases auction revenues but may result in infeasibility
Net Mark to Auction	Negative (Counter flow)	Positive (Prevailing flow)	<ul style="list-style-type: none"> Decreases FTR Flow, which provides additional capability Additional auction revenues in future auction when capability sold

Congestion reduction may change the net Mark-to-Auction value from negative to positive.

Risk always exists that congestion is not reduced or transmission upgrade is delayed or suspended.



Illustrative: Detailed View of Hill Portfolio and Potential Cancellation Impact

Period	Hill Auction Revenues*	Type based on Auction Revenues	MTA* (no changes)	MTA* (includes congestion reduction)	Type based on MTA	Feasibility Analysis**	Potential Net Cancellation Impact
Mar. 2022	-\$0.70	Counter flow	\$0.84	\$0.84	Prevailing flow	Minor infeasibilities	Minimal impact in FTR capability and auction revenues
Apr. 2022	\$0.03	Prevailing flow	\$0.67	\$0.67	Prevailing flow	Minor infeasibilities	
May 2022	-\$0.22	Counter flow	\$0.73	\$0.73	Prevailing flow	Minor infeasibilities	
2022/23	-\$1.20	Counter flow	-\$5.99	TBD	TBD	Minor infeasibilities	Moderate increase in FTR capability and auction revenues
2023/24	-\$0.90	Counter flow	\$0.98	\$0.98	Prevailing flow	No infeasibilities	Minor increase in FTR capability and revenues
2024/25	-\$0.22	Counter flow	\$0.43	\$0.43	Prevailing flow	No infeasibilities	
Total	-\$3.21	Counter flow	-\$2.33	TBD	TBD		

Removal of negative auction revenues results in increased ARR Revenues.

If congestion reduction (measured as reduction in MTA) is greater than 45% then net portfolio becomes positive (i.e., $MTA > 0$).

- Feb. through May 2022 MTA values from February FTR auction
- 2022/2023 through 2024/2025 MTA values from December long-term auction

*\$ million
 **Infeasibilities only impact FTR revenue adequacy if congested in day-ahead

Offer for sale the entire portfolio or by period to highest bidder

Pros

- PJM can determine the acceptability of bids/offers
- Potential positive revenues can offset default
- Removes all risk of future exposure

Cons

- Non traditional (i.e., out of market)
- Potential for less participation/competition than liquidating in a regular auction

PJM is not recommending this option because of the risk of less-competitive outcome as compared to liquidating positions in regular auction.

PJM is seeking to minimize the potential cost (losses) to the members while providing as much certainty as possible within a reasonable period per Operating Agreement, section 7.3.9.



PJM Recommendation

Attempt to Sell Positions in Regularly Scheduled FTR Auctions

Typically would expect liquidation at a significant loss given that negatively valued positions are what precipitated the default.

Given impacts of changes impacting congestion, liquidation value may be significantly less negative, or even positive.

Hill portfolio size is small; analysis suggests sufficient competition given high liquidity in auctions.

Multiple auctions available in near term to facilitate liquidation.

Reserve price can be applied to limit losses.

No risk associated with FTR infeasibilities or revenue inadequacy.

Cancellation option introduces uncertainty with FTR revenue inadequacy (FTR holders).

Allowing positions to go to settlement introduces uncertainty with portfolio value over time (all PJM members).

Proceeds from sale of Hill portfolio would net against default; anything over and above default and PJM's legal costs would **need cause collateral** to be returned to Hill.



PJM Recommendation Steps for Short-Term and Long-Term Positions

Short-Term Positions (April–May 2022)		Long-Term Positions (June 2022–May 2025)	
Auction to Sell	Reserve Price	Auction to Sell	Reserve Price
April 2022 FTR Auction (Mar. 15, 2022) <ul style="list-style-type: none"> April and May positions April positions will go to settlement if unsuccessful 	Considerations: <ul style="list-style-type: none"> Previous auction prices Hill original portfolio auction costs Combination 	22/25 LT Auction Round 5 (May March 1, 2022) All positions from June 2022–May 2025	Considerations: <ul style="list-style-type: none"> Previous auction prices Hill original portfolio auction costs Combination
May FTR Auction (Apr. 14, 2022) <ul style="list-style-type: none"> May positions if not liquidated in April auction May positions will go to settlement if unsuccessful 		22/23 Annual FTR auction (Apr. 5, 2022) All 2022/2023 positions not liquidated in 2022/2025 Long-Term Auction	
		If any positions not liquidated then PJM will seek stakeholder feedback on next steps (April–May 2022)	

March 2022 positions will go to settlement.

PJM will provide clarity of collateral requirements before liquidating any positions in an auction.

Next Steps

Consider Additional Feedback From Stakeholders

Feb. 2
Special MC
Present PJM
Initial
Recommendation

Feb 2. through
Feb. 15
**Congestion
Reduction
Impacts
Known**

Feb. 18
Special MC
Present PJM
Updated
Recommendation

Feb. 22
**Stakeholder
Feedback
Due**

Feb. 24
**Final PJM
Notice of
Plan**

**Proceed
With Plan**

FEBRUARY 2022

Stakeholder questions regarding “lessons learned”

1. Minimum Capital and Entity Participation Requirements (RMC)
2. HSIM Model Movement from CI 97% to CI 99% and other Initial Margin Enhancements (e.g., Auction Values and PROMOD) (RMC)
3. Variation Margin Enhancements (e.g., PROMOD enhancements for transmission outages) (RMC)
4. Review of the Outage Scheduling for Lanexa Outage (OC)
5. Evaluation of Enhancements to Outage Scheduling Process (OC)
6. FTR Default Allocation/Funding Review (RMC)
7. Market Surveillance Enhancements (RMC)
8. Application of TCPF/Scarcity Pricing: Amount, Duration, Circuit Breaker during similar situations going forward (EPFSTF/MIC)
9. Review of FTR Market Construct and Products (TBD)
10. Restricted Collateral and Unreasonable Credit Risk Utilization (RMC)

FTR Default Feedback and Questions
FTRquestions@pjm.com

FTR Default information

PJM.com – Markets and Operations – Financial
Transmission Rights – FTR Default

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



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

APPENDIX A

PJM RTEP Solutions: Harmony Village-Greys Point (Line No. 1021) and Rappahannock- White Stone (Line No. 65) 115 kV Lines Overloads



Dominion Transmission Zone: Baseline Harmony Village/White Stone Area

Process Stage: First Review

Criteria: Operational Performance

Proposal Window Exclusion: Immediate Need

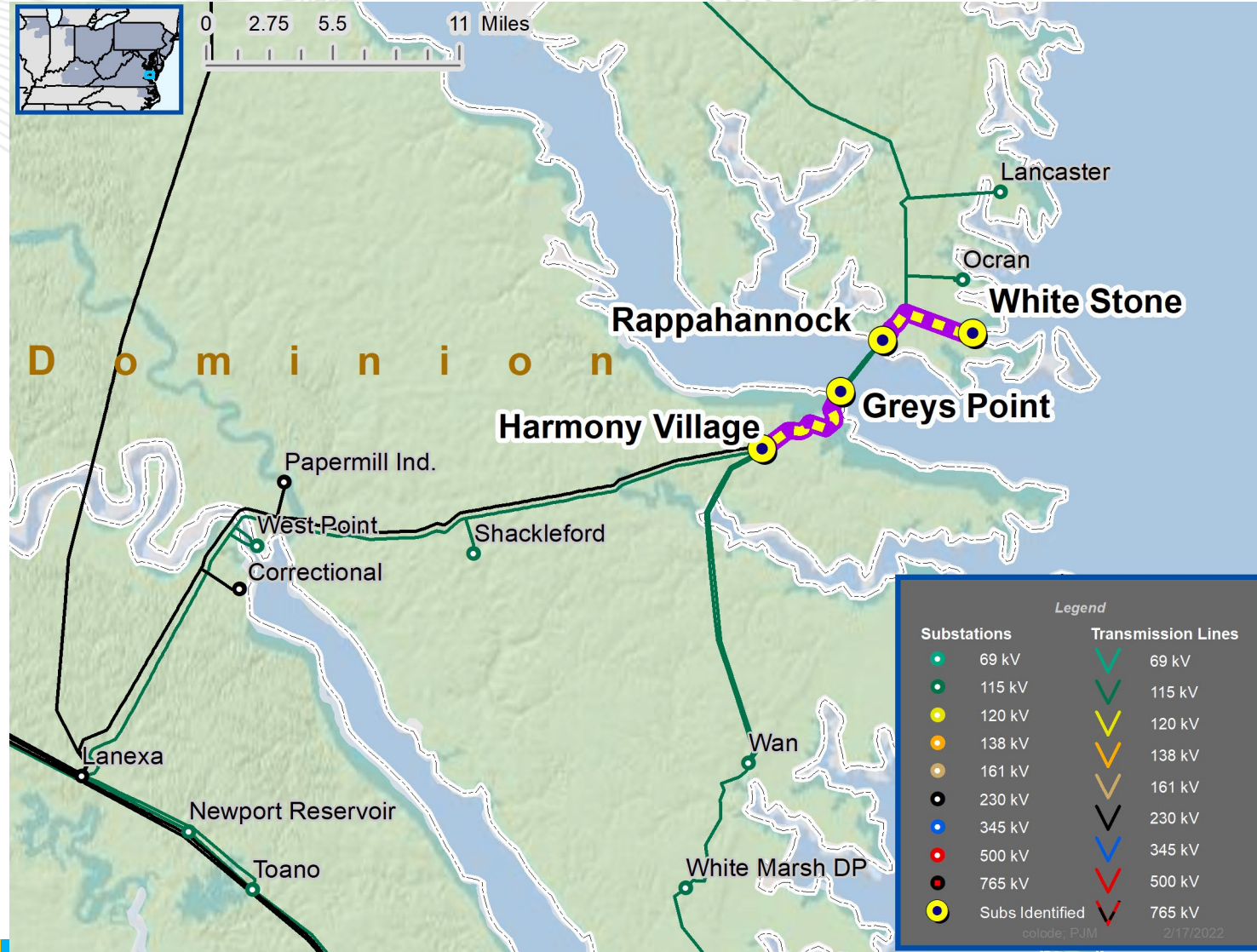
Problem Statement:

115 kV line No. 1021 segment from Harmony Village to Greys Point and 115 kV line No. 65 segment from Rappahannock to White Stone are experiencing significant thermal overloads requiring Emergency Procedures during the current outage of 230 kV line No. 224 Lanexa to Northern Neck that is being rebuilt as an End-of-Life project (b3089). The outage is expected to continue through 2023.

Existing Facility Rating:

Branch	SN/SE/WN/WE (MVA)
3GREYSPT – 3HARMONY 115 kV	146/146/185/185
3RAPPAHNCK– 3WHIT STONE 115 kV	146/146/185/185

Continued on next slide...





Dominion Transmission Zone: Baseline Harmony Village/White Stone Area

Proposed Solution:

- Reconductor approximately 0.57 miles of 115 kV line No. 1021 from Harmony Village to Greys Point with 768 ACSS to achieve a summer emergency rating of 237 MVA. The current conductor is 477 ACSR. **(b3707.1)**
- Reconductor approximately 0.97 miles of 115 kV line No. 65 from Rappahannock to White Stone with 768 ACSS to achieve a summer emergency rating of 237 MVA. The current conductor is 477 ACSR. **(b3707.2)**

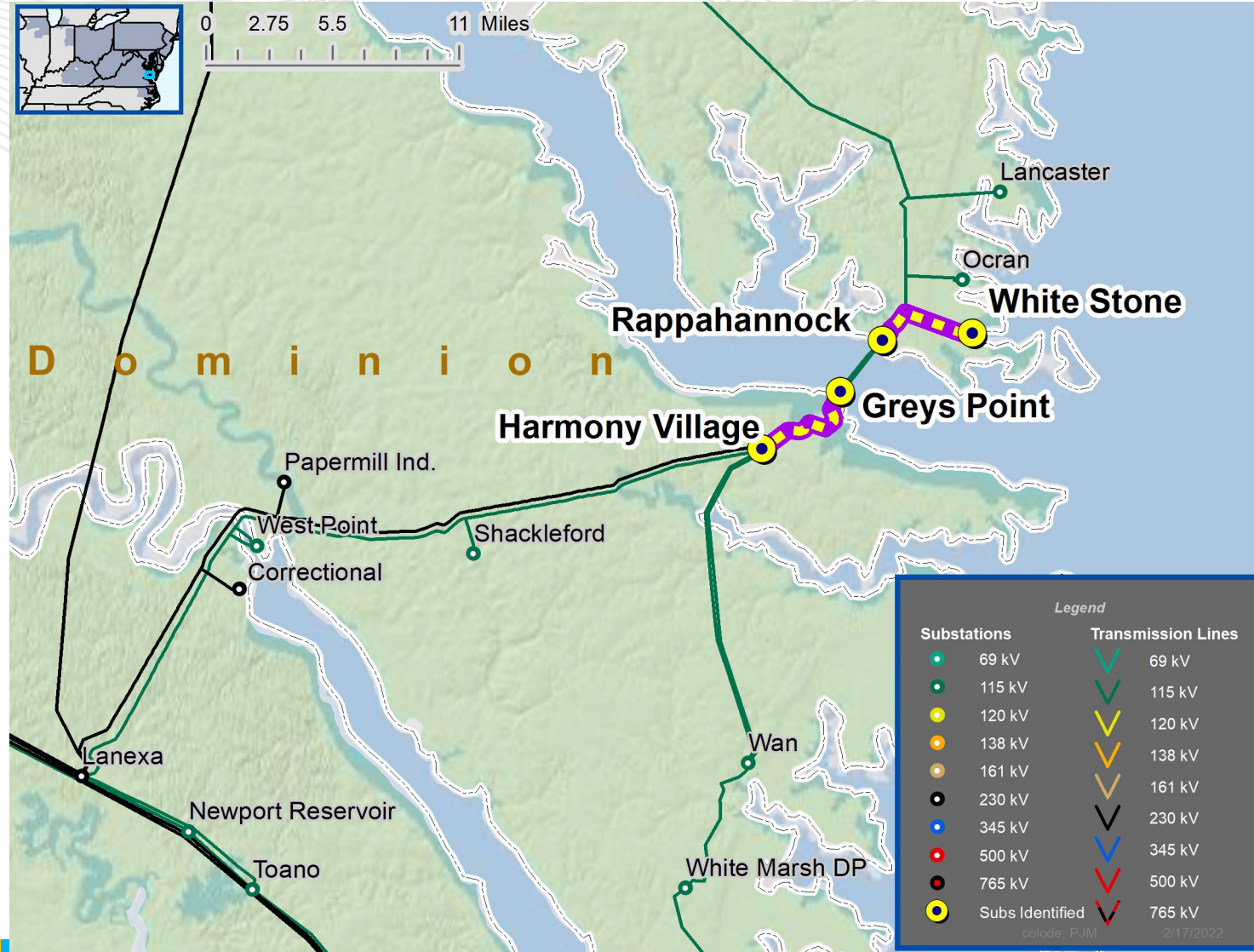
Preliminary Facility Rating:

Branch	SN/SE/WN/WE (MVA)
3GREYSPT – 3HARMONY 115 kV	237/237/279/279
3RAPPAHNCK – 3WHIT STONE 115 kV	237/237/279/279

Total Estimated Cost: \$ 3.0 M

Projected In-Service: 5/31/2022

Project Status: Conceptual / Planning



PJM System Planning will present the Operational Performance baseline upgrade for the two 115 kV line segments of Harmony Village-Greys Point and Rappahannock to White Stone as follows:

- ✓ February 8 – Transmission Expansion Advisory Committee (TEAC)
- ✓ February 16 – PJM Board Approval
- May 31 – Projected In-Service date