

Transmission Expansion Advisory Committee – FirstEnergy Supplemental Projects

December 12, 2019

Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Need Number: JCPL-2019-028

Process Stage: Solutions Meeting 12/12/2019

Previously Presented:

Need Meeting 04/11/2019

Project Driver:

Equipment Material Condition, Operational Flexibility and Efficiency

Specific Assumption Reference:

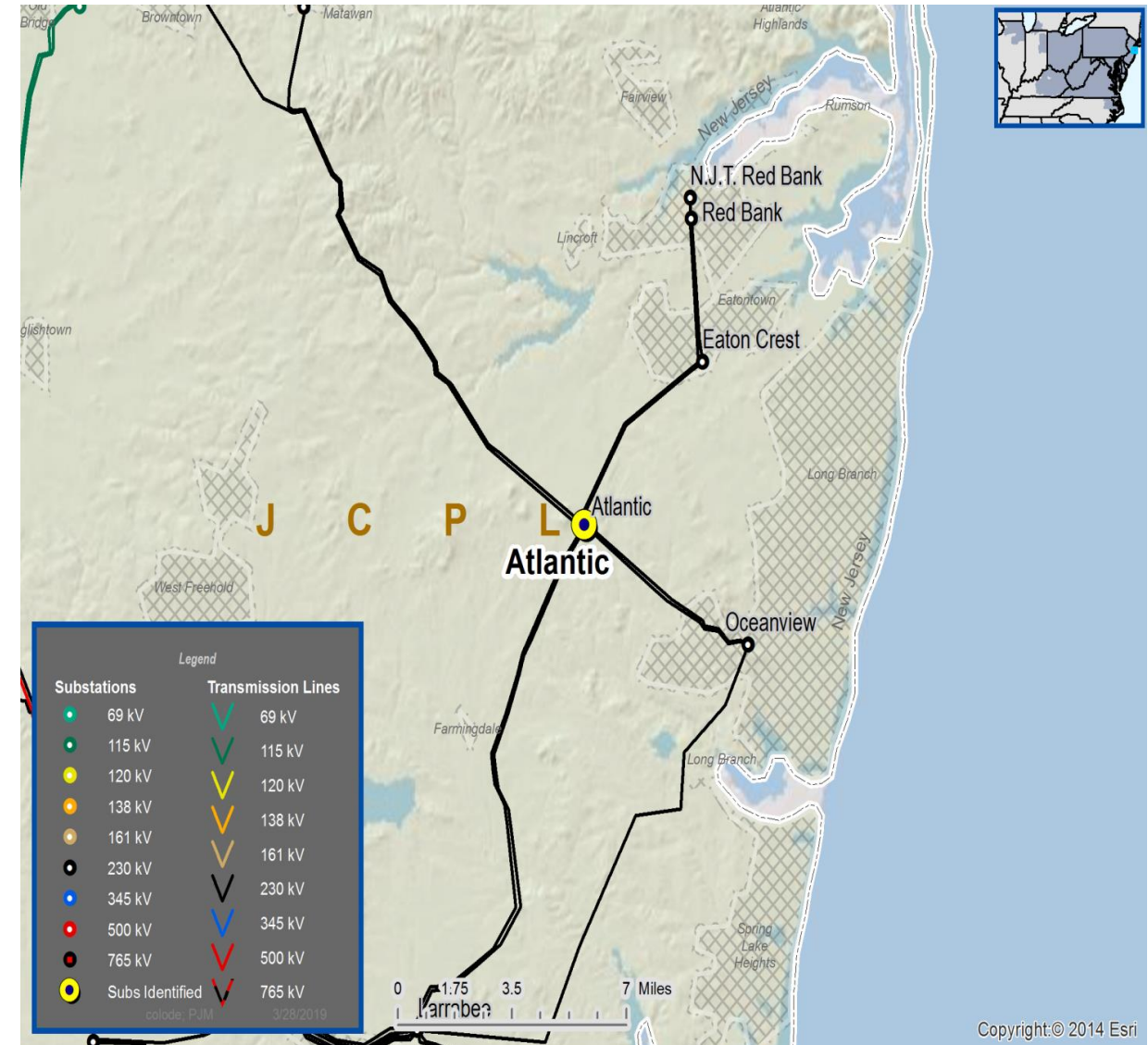
System Performance Projects Global Factors

- Past system reliability and performance
- Permanent Reactive Device Installations
- Reactive device with multiple trips in recent years
- Reactive device to reduce high voltage
- Substation Condition Rebuild/Replacement
- Reactive power support system

Problem Statement:

The Atlantic SVC has an increasing trend of outages and failures increasing maintenance needs.

High voltage on the 230 kV system has been observed at Atlantic substation with either the SVC in-service or out-of-service. The 230 kV voltage at Atlantic substation with the SVC in-service has been measured as high as 1.06 per unit. With the SVC out-of-service the measured system voltage was as high as 1.07 per unit.



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Process Stage: Solutions Meeting 12/12/2019

Proposed Solution:

Replace the Atlantic 230 kV Static Var Compensator (SVC) with a +/- 300 MVAR, 230 kV STATCOM

Cost: \$55.7 M

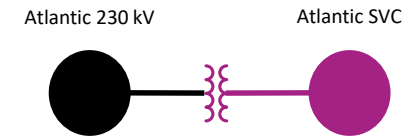
Alternatives Considered:

Maintain existing condition

Projected In-Service: 12/31/2020

Project Status: Engineering

Model: 2019 RTEP Model for 2024 (Light Load)



Legend	
500 kV	
345 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
34.5 kV	
23 kV	
New	

Appendix

High level M-3 Meeting Schedule

Assumptions	Activity	Timing
	Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
	Stakeholder comments	10 days after Assumptions Meeting
Needs	Activity	Timing
	TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
	Stakeholder comments	10 days after Needs Meeting
Solutions	Activity	Timing
	TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
	Stakeholder comments	10 days after Solutions Meeting
Submission of Supplemental Projects & Local Plan	Activity	Timing
	Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
	Post selected solution(s)	Following completion of DNH analysis
	Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
	Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

12/02/2019 – V1 – Original version posted to pjm.com