



# RTEP Studies Update

TOA-AC  
September 20, 2018

## Overview of 2023 Results

Total of 160 flowgates identified

- 3 included in the window
  - 1 in West region
  - 2 in the South region
- 157 flowgates excluded
  - 126 due to Immediate Need (PJM OA 1.5.8(m)) (Includes Retired Generator related)
  - 26 Below 200kV (PJM OA 1.5.8(n))
  - 5 Substation Equipment (PJM OA 1.5.8(p))

- Timeline
  - Window Opened: July 2, 2018
  - Window Closed: August 31, 2018
    - Proposal definitions, simulation data and detailed cost data all due at this time
- 7 Proposals received from 2 entities addressing 2 target zones
  - All Transmission Owner Upgrade
  - No greenfield



# 2018 RTEP Proposal Window 1 - Proposals

Project ID	Upgrade/Greenfield	Proposing Entity	Project Cost (\$M)	Target Zone(s)	kV Level(s)	Analysis Type	FG#	Major Components/Project Description
1A	Upgrade	DEOK	\$ 0.377	DEOK	138kV	Summer N-1 Load Drop	N1-SLD1	Add redundant relaying to Port Union 138kV Bus 2 to eliminate the contingency driving the reliability criteria violation.
2A	Upgrade	Dominion	\$ -	Dominion	69kV	Summer N-1 High Voltage	N1-SVH1, N1-SVH2	This is an operational solution that will remotely open Pentagon TX#1 breaker L122, immediately following the breaker-failure event (2036T2142) at Radnor Substation thus resolving the post contingency high voltage.
2B	Upgrade	Dominion	\$ 0.481	Dominion	230/69kV	Summer N-1 High Voltage	N1-SVH1, N1-SVH2	Move the existing 230/69kV TX#4 to the vacant 230/69kV TX#2 spot at Pentagon Substation
2C	Upgrade	Dominion	\$ 0.537	Dominion	230/69kV	Summer N-1 High Voltage	N1-SVH1, N1-SVH2	Move spare 230/69kV transformer from Jefferson Street Substation to the vacant Transformer #2 bay at Pentagon Substation
2D	Upgrade	Dominion	\$ 13.493	Dominion	230kV	Summer N-1 High Voltage	N1-SVH1, N1-SVH2	Construct a 230kV four (4) breaker GIS ring bus in Pentagon Substation and terminate existing Line 2037 and Line 2121.
2E	Upgrade	Dominion	\$ 3.161	Dominion	69kV	Summer N-1 High Voltage	N1-SVH1, N1-SVH2	Install a 50 MVAR fixed shunt reactor at Pentagon Substation on the 69kV bus
2F	Upgrade	Dominion	\$ 12.732	Dominion	230kV	Summer N-1 High Voltage	N1-SVH1, N1-SVH2	A new substation called Cloverleaf with a 230kV variable shunt reactor with a new 230kV underground line roughly 300 ft extending from Cloverleaf Substation to Pentagon substation terminating at the 230kV bus

- Continue review of outstanding violations TEAC/SRRTEPs
- Re-evaluate projects from previous RTEP
- TO Criteria Violations
- CIL Study
- Extreme Contingencies
- Sensitivity Studies