Transmission Expansion Advisory Committee

November 11, 2014

Interregional Planning Update

EIPC non-grant 2014 Analysis

- 2014 Scenario Analysis - update
  - Scenario A - Update rollup case - complete
  - Scenario B - Severe Heat and Drought
    - Scenario complete - Initial run results under review
  - Stakeholder WebEx – November 21, 11 AM
  - Report update for Scenarios A and B in progress

EIPC non-grant – Future Work

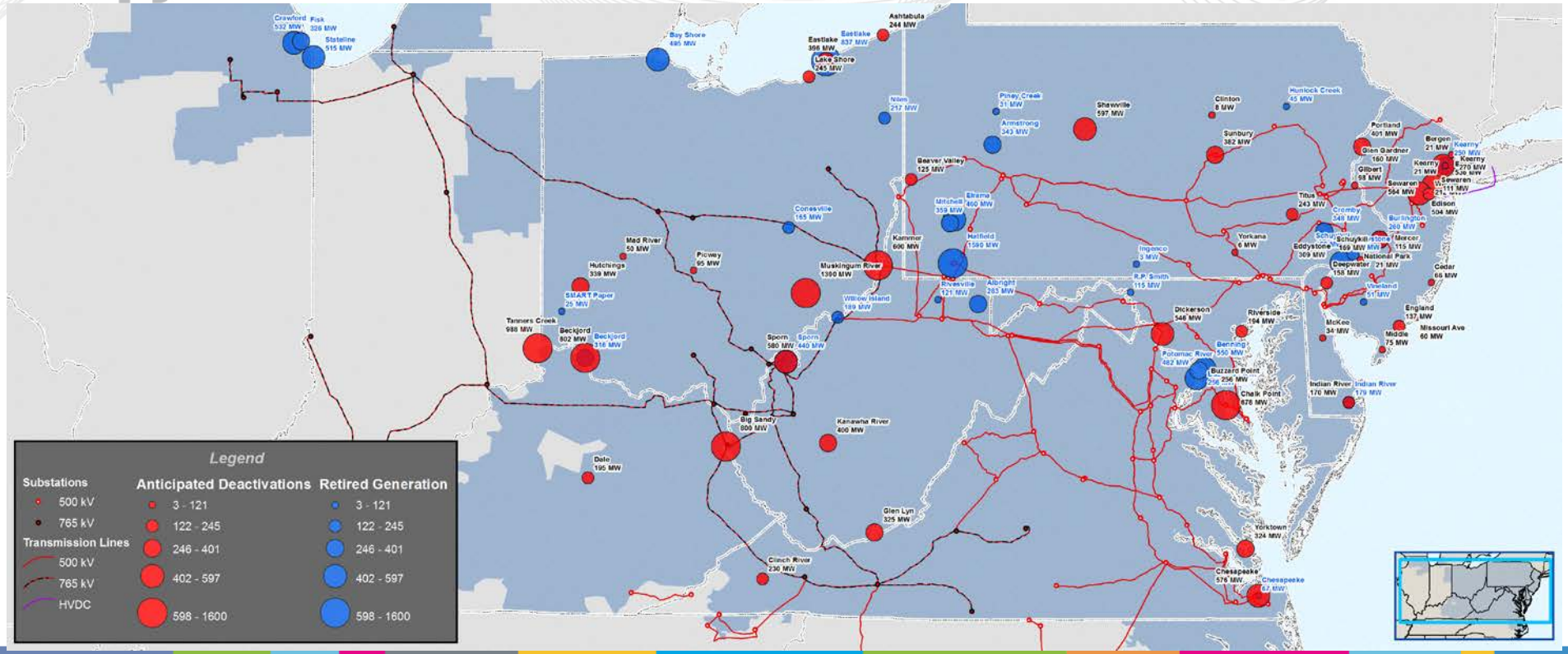
- Beyond 2014 discussions
  - Summer and Winter case builds and analysis
  - Ongoing review of potential scope
    - TC approval items 11-20-2014
      - Committee representation rotation
      - 2015/16 work plan and budget
      - Administrative item approvals (contracts and meetings)
    - 2015/16 Work Plan and Budget
      - 2025 summer and winter
      - Production Cost studies – resource, data, funding Q1/Q2
      - Database Q3/Q4
    - NERC model building - November 18-19 meeting
    - DOE Congestion Report Support

Interregional Planning Studies (not including JCM)

- NCTPC - update
  - Study requested by NCUC
  - Reliability analysis – complete – documentation in progress
  - Economic analysis preliminary runs complete - reviews and additional runs in progress
  - 2014 target completion – report draft in progress
- PJM/MISO IPSAC
  - Metric and Process Review
    - September 11 WebEx – introduction and plan
    - October 2 In person at PJM – detailed reviews of PJM and MISO planning
    - October 24 in-person at MISO – input from stakeholders
    - November 10 JCM update
    - December 8 hold for next IPSAC
- Northeast Protocol Activities – reviewing possibilities for end of year IPSAC WebEx

Generation Deactivation Notification (Retirements) Update

Generation Retirements

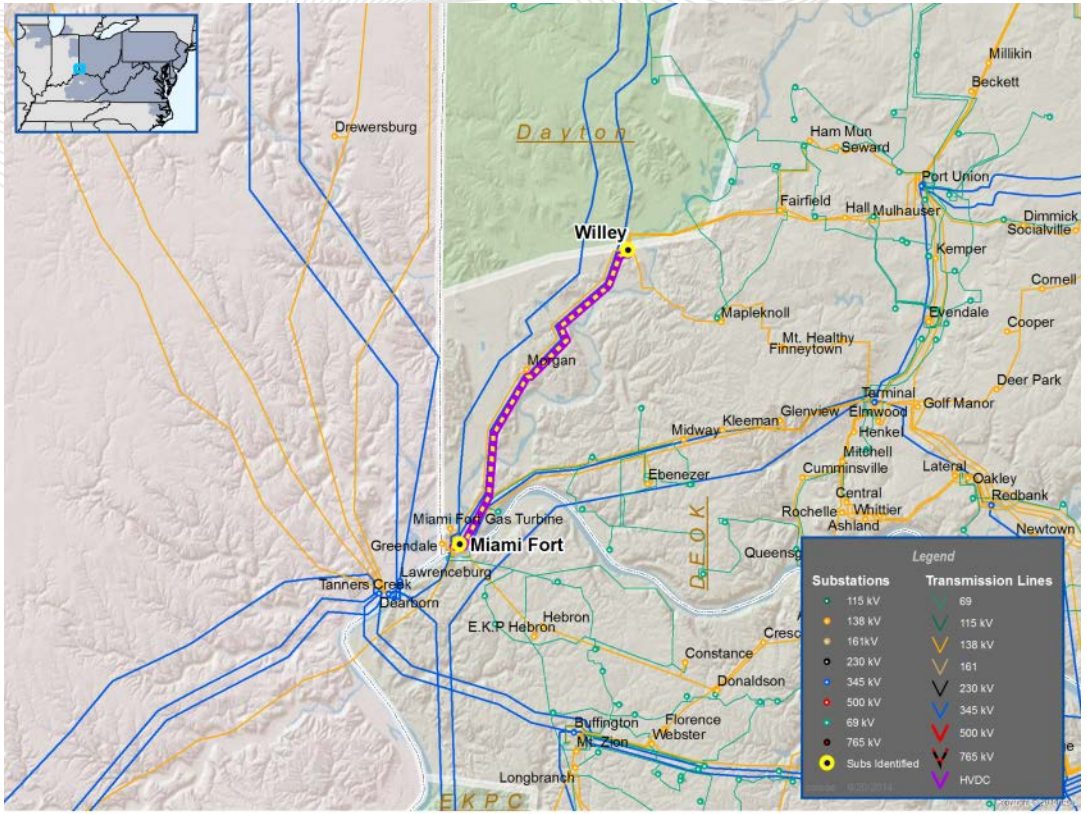


Beckjord GTs 1 – 4

- DEOK Transmission Zone
- Beckjord GT 1: 47 MW
- Beckjord GT 2: 47 MW
- Beckjord GT 3: 47 MW
- Beckjord GT 4: 47 MW
- Requested Deactivation date: 12/25/2014

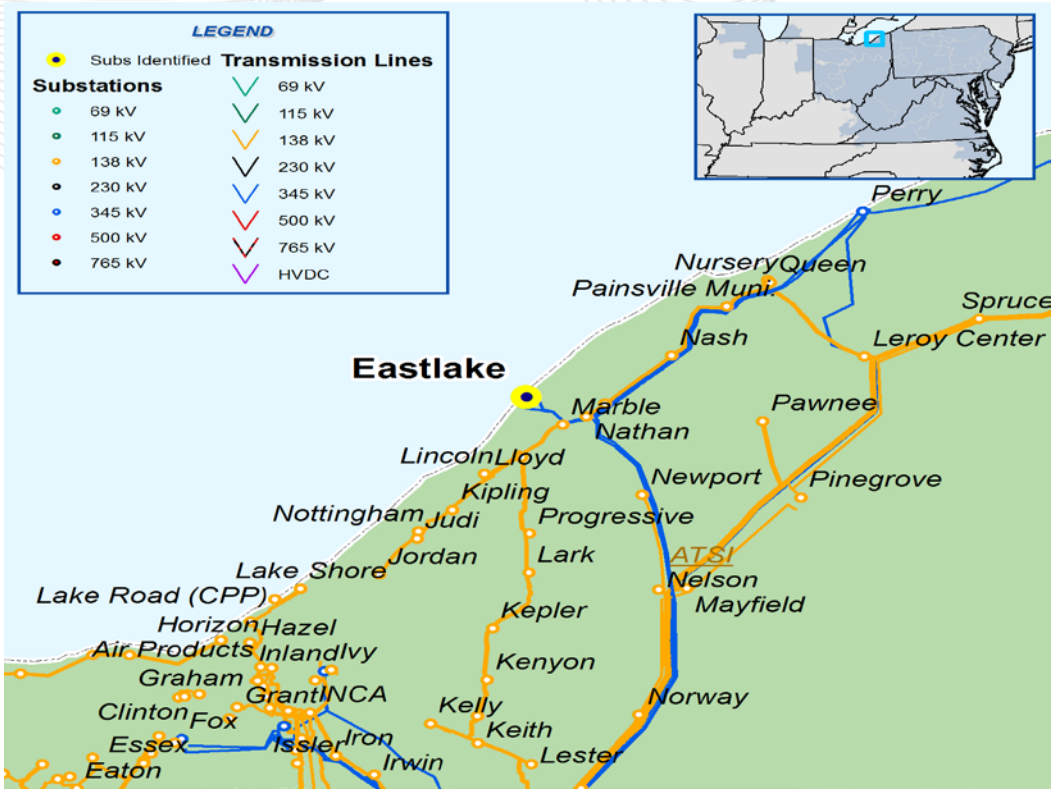
DEOK Transmission Zone

- **Generation Deliverability Violation**
- The Miami Fort – Wiley 138 kV line is overloaded of its emergency rating (198 MVA) for the breaker contingency loss of Miami Fort to Midway 138 kV line, Miami Fort 345/138k V transformer #10, Miami Fort – Clifty 138 kV line, Miami Fort – Hebron Tap 138 kV line, Miami Fort – Morgan 138 kV line for the '925' breaker failure at Miami Fort station ('P4-6 925_MIAMIFORT').
- Proposed Solution: Add two breakers at Miami Fort 138 kV. (B2564) ('P4-6 925_MIAMIFORT)
- Estimated Project Cost: $2M
- Required IS date: 6/1/2015
- Projected IS date: 6/1/2016
- Interim Solution: Operating Procedure



ATSI/APS (FES) Deactivations – Update

- ATSI Load Deliverability Voltage Sample Case would not converge and did not permit solving for the initial load flow to begin study without the following assumptions:
- Proposed solution (remaining elements at Eastlake):
  - Convert Eastlake units 1-3 to synchronous condensers
  - Install SVC at Lake Shore
  - Required in-service date: 6/1/2015
- Additional studies completed have resulted in new required in-service dates:
  - Eastlake units 1-3 conversion to synchronous condensers: 6/1/2016
    - Currently expected to be in service 12/31/2015
  - SVC at Lake Shore: 6/1/2015



2014 Baseline RTEP Status & Timeline

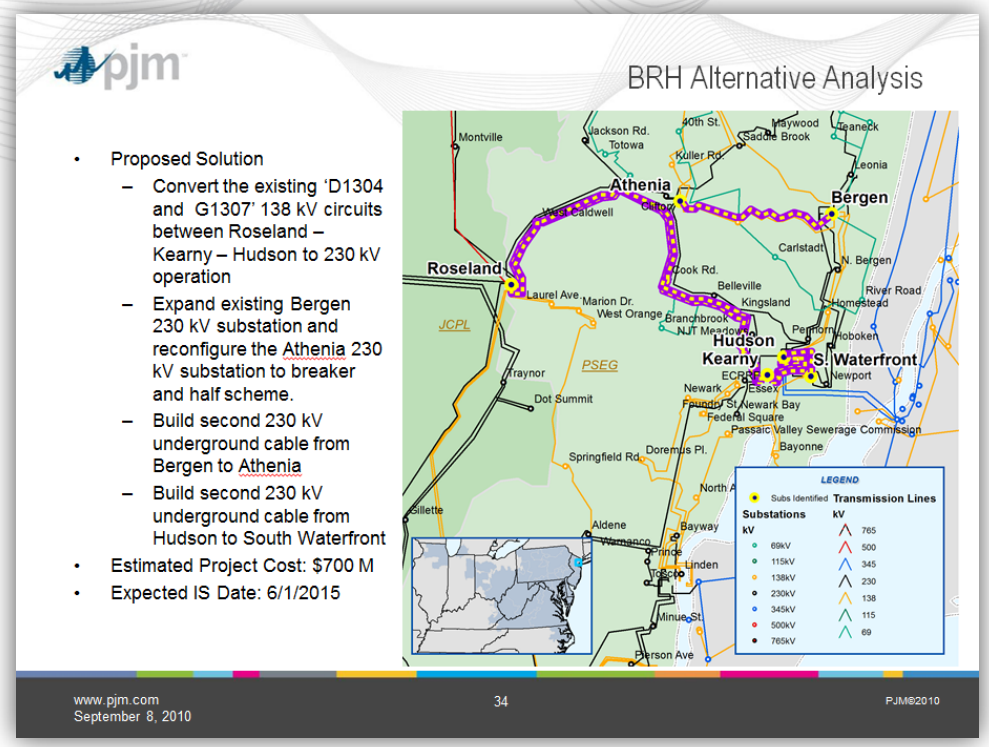
2014 Baseline RTEP Status & Timeline

- Near term Baseline N-1 thermal, N-1-1 thermal, generator deliverability, common mode outage test, load deliverability
  - Complete, all solutions approved by the PJM Board in November 2014
- Transmission Owner Criteria, 2019 Baseline N-1 Voltage, 2019 N-1-1 Voltage and 2018 Light Load Reliability Criteria
  - Problems presented for the RTEP Proposal Window #2
- 15 Year Long Term Analysis
  - Reliability and Market Efficiency
  - Problems presented for the 2014/15 Long Term Proposal Window

Reliability Analysis Update

PSE&G Transmission Zone

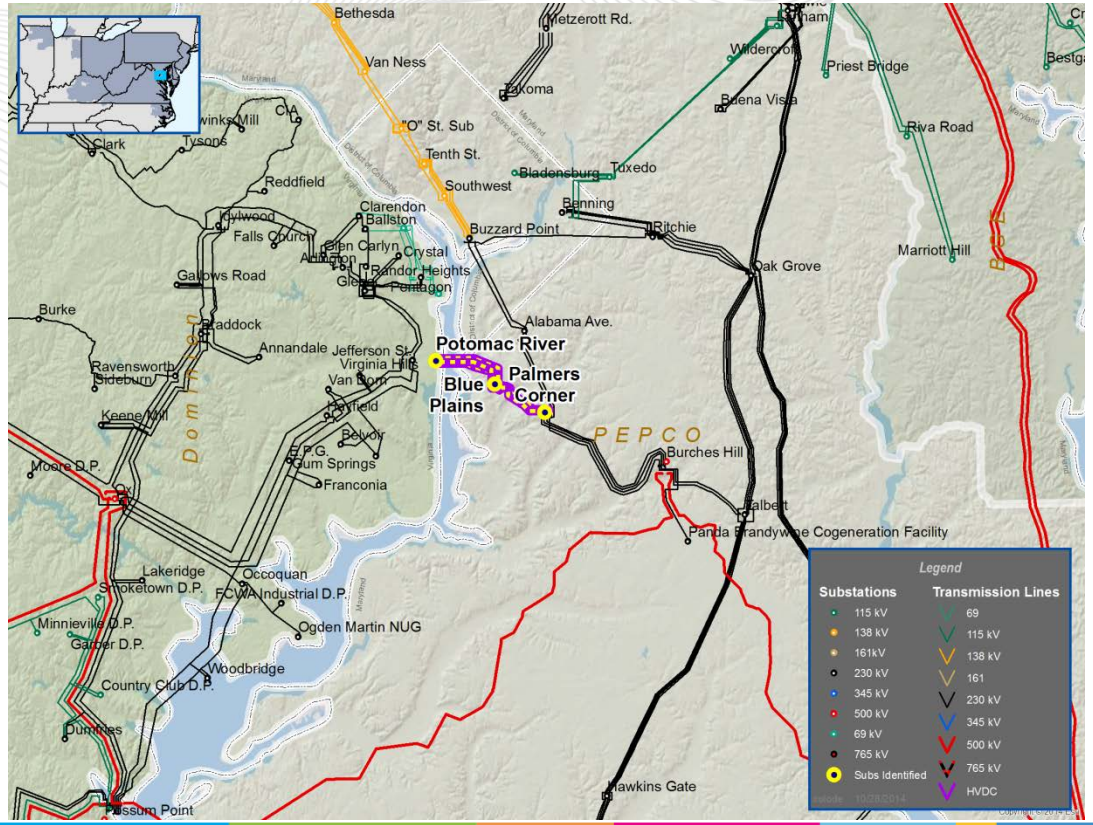
- Updated cost estimate from PSE&G for Baseline Project B1304
- Previous Estimated Project Cost: $700 M
- Additional scope:
  - Active cooling and equipment on some underground circuits to achieve required ratings
  - Post Super Storm Sandy flood level requirements such as raised foundations
  - Additional scope to limit environmental impacts requires complex foundation design
- Updated Estimated Project Cost: $780M



PEPCO Transmission Zone

- Generator Deliverability Violation:
- The Four 230 kV circuits from Palmers Corner – Blue Plains – Station C are overloaded for several contingencies.

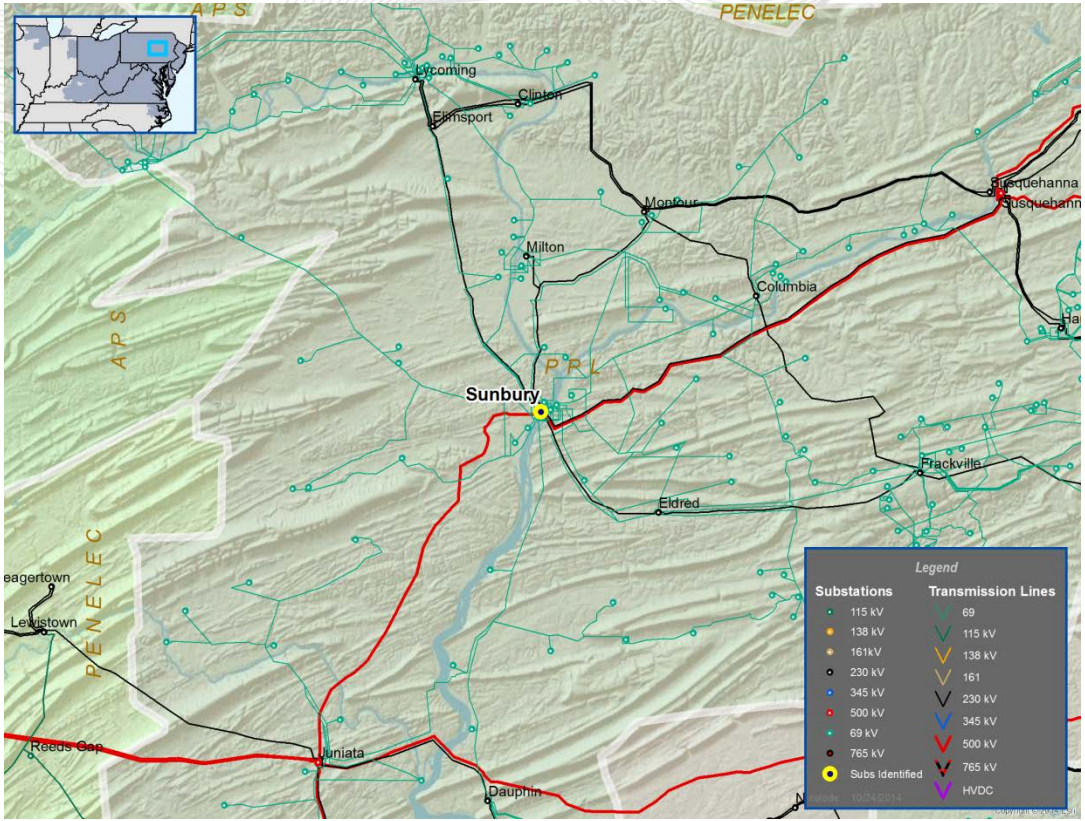
- The existing approved project B2443 included an option to install an 800 MVA PAR at Station C in the PEPCO transmission Zone
  - B2443 - Construct new underground 230 kV line from Glebe to Station C, rebuild Glebe Substation, construct 230 kV high-side bus at Station C with the option to install 800 MVA PAR
- Updated analysis shows that the Phase Angle Regulator at the Station C substation is needed by 6/1/2018
- Estimated Project Cost:
  $ 10 M
- Required IS Date:
  6/1/2018



Short Circuit Upgrades

PPL Transmission Area

- The Sunbury 230 kV breaker ‘MONTOUR NORT‘ is overstressed
- Proposed Solution: Replace the Sunbury 230 kV breaker ‘MONTOUR NORT‘ with a 63kA breaker (B2574)
- Estimated Project Cost: $750K
- Required IS Date: 6/1/2019



2014 RTEP Proposal Window 2

2014 RTEP Proposal Window 2

- Scope: Transmission Owner Criteria, 2019 Baseline N-1 Voltage, 2019 N-1-1 Voltage and 2018 Light Load Reliability Criteria

  – Opened Friday, October 17, 2014
  – Closes Monday, November 17, 2014

2014 RTEP Proposal Window 2

Unique Monitored Elements by TO Zone

TO Zone	Thermal Violations	Voltage Violations
APS	0	2
AEP	35	18
ComEd	4	0
PENELEC	0	5
METED	0	7
JCP&L	2	0
PSE&G	0	18
EKPC	1	8
DVP	7	11
TOTAL	**49**	**69**

Unique Monitored Elements by Voltage

Thermal Violations	
Voltage	Total
230	2
138	4
115	4
69	16
46	6
35	2
34.5	9
23	5
Dominion Loss of Load Criterion	1
Grand Total	**49**

Voltage Violations	
Voltage	Total
345	1
230	21
161	7
138	2
115	20
69	1
46	17
Grand Total	**69**

AEP Transmission Zone

- AEP TO Criteria Voltage Violations

Bus Name	KV	Contingency	Violation Date
CHAP	69	For the loss of the Bim – Wharton - Shumate Creek 138KV line	6/1/2019
LATROBE	46	For the single contingency at Becco 46kV lines	6/1/2019
PARDEE	46	Several contingencies	6/1/2019
TONEYFRK	46	Several contingencies	6/1/2019
THREEFRK	46	Several contingencies	6/1/2019
CRANEC1	46	Several contingencies	6/1/2019
CRANEC2	46	Several contingencies	6/1/2019
CYCLONE	46	Several contingencies	6/1/2019
BOONE	46	Several contingencies	6/1/2019
EMMONS	46	Several contingencies	6/1/2019
PENN VA	46	Several contingencies	6/1/2019
HOPKINSF	46	Several contingencies	6/1/2019

AEP Transmission Zone

- AEP TO Criteria Voltage Violations - continued

Bus Name	KV	Contingency	Violation Date
ROUNTBOT	46	Several contingencies	6/1/2019
CAMPCRK	46	For the loss of the Turner –Lakeview – Am&SCRs –St. Albans – Hopkins 138kV lines	6/1/2019
MAXINE	46	Several contingencies	6/1/2019
MIKESRUN	46	Several contingencies	6/1/2019
PEYTONA	46	Several contingencies	6/1/2019
SHABDUE	46	Several contingencies	6/1/2019

AEP Transmission Zone

- AEP TO Criteria Thermal Violations

Overloaded Facilities	Contingency	Violation Date
242644 05FREMO1 138 242873 FREMONT- 69.0 1	Loss of the Beaver Creek– Fremont 138kVl line	6/1/2019
243106 05SOMERT 138 245017 SOMERTON 69.0 1	Loss of the Kammer – West Bellaire 138kV line	6/1/2019
243659 BELFN5EQ 999.0 244660 BELLEFNT 69.0 1	Loss of the Bellefonte –Hanging Rock 138kV line	6/1/2019
243948 BRANTLY 69.0 243949 BRIDGE S 69.0 1	Loss of the Danville- Riverside 138kV line	6/1/2019
244228 CLINTWTP 69.0 244244 LICKFKTP 69.0 1	Several contingencies	6/1/2019
244237 HAYSI 69.0 244598 ELKHRNCT 69.0 1	Loss of the Big Sandy – Inez 138kV lines	6/1/2019
244238 HAYSI SS 69.0 244248 MOSS 69.0 1	Loss of the Fletcher Ridge – Skeggs Branch –Garden Creek 138kV line	6/1/2019
244305 RICHLNDS 69.0 244315 TOWNOF R 69.0 1	Loss of the Saltville – Tazewell 138kV line	6/1/2019
244471 BECCO 46.0 244481 LATROBE 46.0 1	Several contingencies	6/1/2019
244480 CHAUNCEY 46.0 244509 PINE GAP 46.0 1	Loss of the Becco –Braeholm – HuffCRK 46kV line	6/1/2019
244516 SKINFORK 46.0 244526 THREEFRK 46.0 1	Loss of the Becco – Braeholm, Becco – Latrobe, and Becco – Slagle 46kV lines	6/1/2019
244696 CONNORST 34.5 244705 E HUNTGT 34.5 1	Several contingencies	6/1/2019

AEP Transmission Zone

- AEP TO Criteria Thermal Violations --continued

Overloaded Facilities	Contingency	Violation Date
244740 23RD ST 34.5 244741 24TH ST 34.5 1	Loss of the East Huntington –North Proctorville – South Point 138KV lines	6/1/2019
244822 SLAUGHTR 46.0 244823 WINIFRED 46.0 1	Several contingencies	6/1/2019
244828 CLENDENI 46.0 244833 HARTLAND 46.0 1	Several contingencies	6/1/2019
244899 SCARBRO 46.0 247334 PAX BR 46.0 1	Loss of the BRADL1 –SPAX BR 138kV line	6/1/2019
244980 BELMONT 69.0 245025 W BETHSD 69.0 1	Loss of the Kammer – West Bellaire 138kV line	6/1/2019
245008 DTE COAL 69.0 245011 ROBYVILL 69.0 1	Loss of the Kammer – West Bellaire 138kV line	6/1/2019
245018 SPEIDEL 69.0 245025 W BETHSD 69.0 1	Loss of the Kammer – West Bellaire 138kV line	6/1/2019
245033 AUGUSTA 23.0 247252 BANE SS 23.0 1	Loss of the Pekin – Bane 23kV line	6/1/2019
245039 FT STB 1 69.0 245045 HIGH ST 69.0 1	Loss of the Steubanville –Tidd 138kV line	6/1/2019
245043 HAMMSVLL 23.0 245044 HAMMSVLL 69.0 1	Loss of the Pekin – Bane 23kV line	6/1/2019
245060 SUMMITVL 23.0 245061 SUMMTVL8 23.0 1	Loss of the Pekin – Bane 23kV line	6/1/2019
245161 PEKIN 23.0 245162 PEKIN 69.0 1	Base case and Loss of the Hammondsville – Salineville 23kV line	6/1/2019

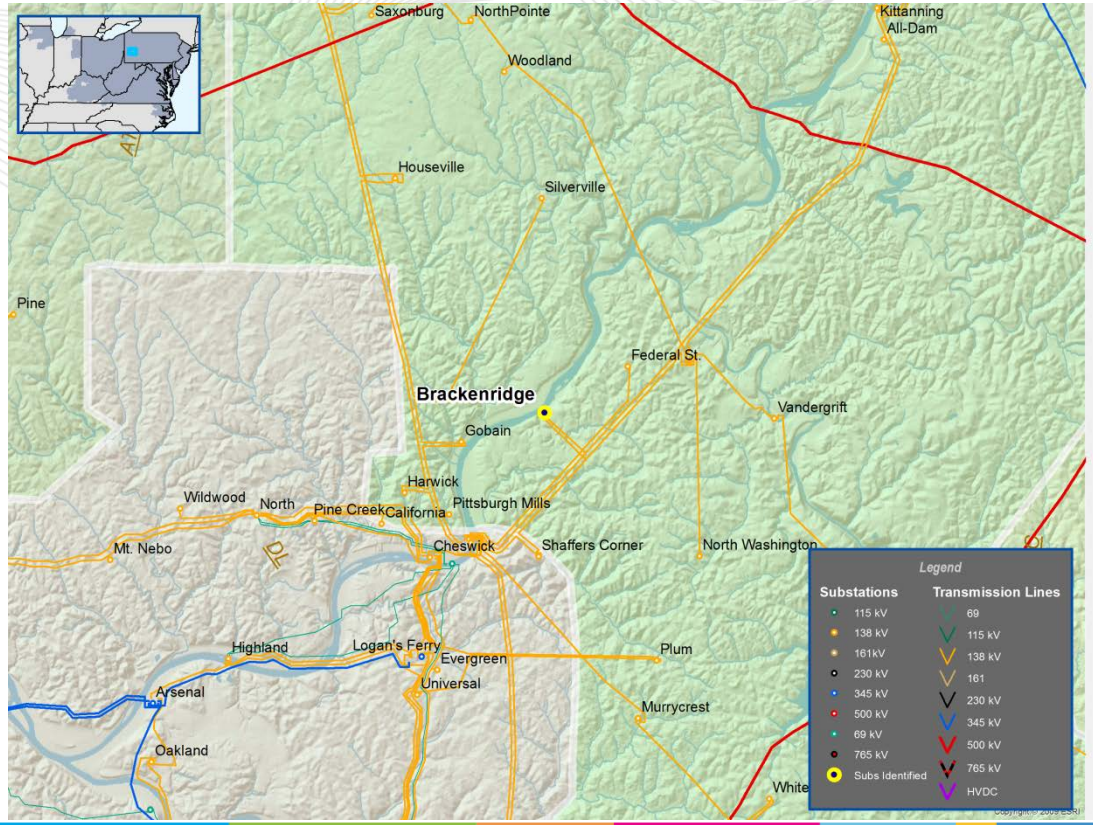
AEP Transmission Zone

- AEP TO Criteria Thermal Violations --continued

Overloaded Facilities	Contingency	Violation Date
245161 PEKIN 23.0 247252 BANE SS 23.0 1	Base case and Loss of the Hammondsville – Salineville 23kV line	6/1/2019
245320 COSHCTN8 34.5 245336 N COSHCT 34.5 1	Loss of the NEWCOM – NEWCMTEQ branch	6/1/2019
245922 C.COL IR 69.0 245938 KAMMER 69.0 1	Several contingencies	6/1/2019
245939 LOCKWOOD 69.0 245942 MOUNDVIL 69.0 1	Loss of the Kammer – West Bellaire 345kV lien	6/1/2019
246300 BEIGER 34.5 246368 VIRGIL S 34.5 1	Loss of the Dragoon 138/34.5kV transformer	6/1/2019
246300 BEIGER 34.5 246415 KLINE 34.5 1	Loss of the Dragoon 138/34.5kV transformer	6/1/2019
246313 DODGE TA 34.5 246314 DRAGOON 34.5 1	Loss of the Kline 138/34.5 kV transformer	6/1/2019
246329 KANKAKEE 34.5 246363 TORNGT Z 34.5 1	Loss of the Jackson Road 138/34.5 kV transformer	6/1/2019
246340 LYDICK 34.5 246369 W SIDE 34.5 1	Loss of the New Carlisle 138/34.5KV transformer	6/1/2019
246355 S.BEND 34.5 246360 ST.MARYS 34.5 1	Loss of the W Side - Goodland – Drewrey ‘s 34.5kV line	6/1/2019
246179 ALBION- 69.0 246226 ALBION Z 69.0 1	Loss of the Bixler - Kendallville 138kV line	6/1/2018

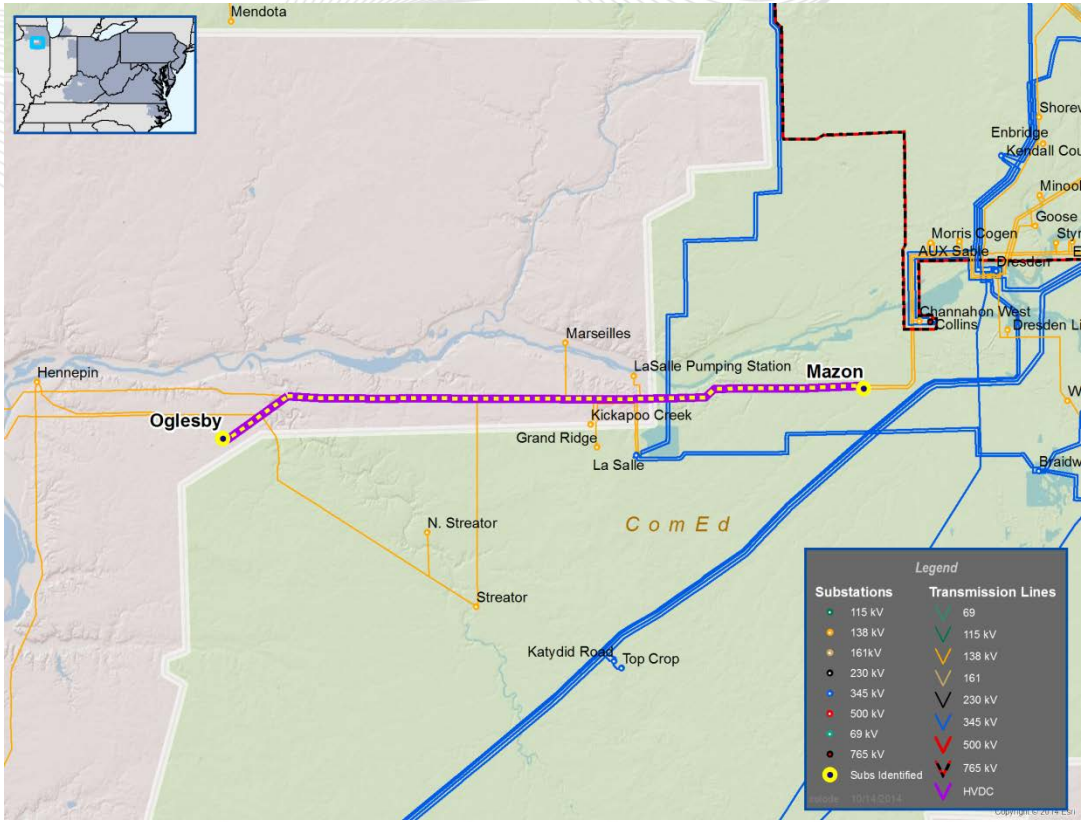
APS Transmission Zone

- N-1 Voltage Violation
- Low voltage at Brackenridge 138kV bus for the tie breaker failure at Springdale



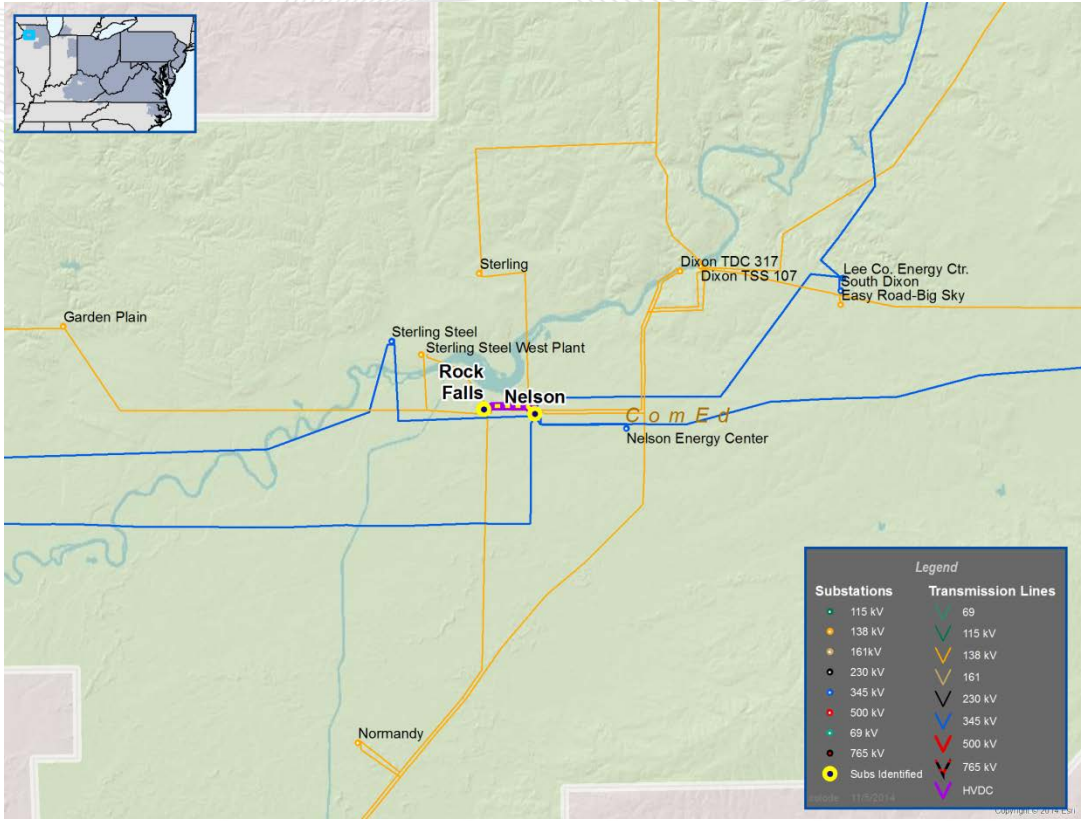
ComEd Transmission Zone

- Light Load Reliability Criteria Thermal Violation
- Ogelsby – Mazon is overloaded for the loss of the Kickapoo Creek – LaSalle 138Kv blue line (L0112)
- Queued generation related (reliability violations will be re-evaluated pending the status of the planned generation)



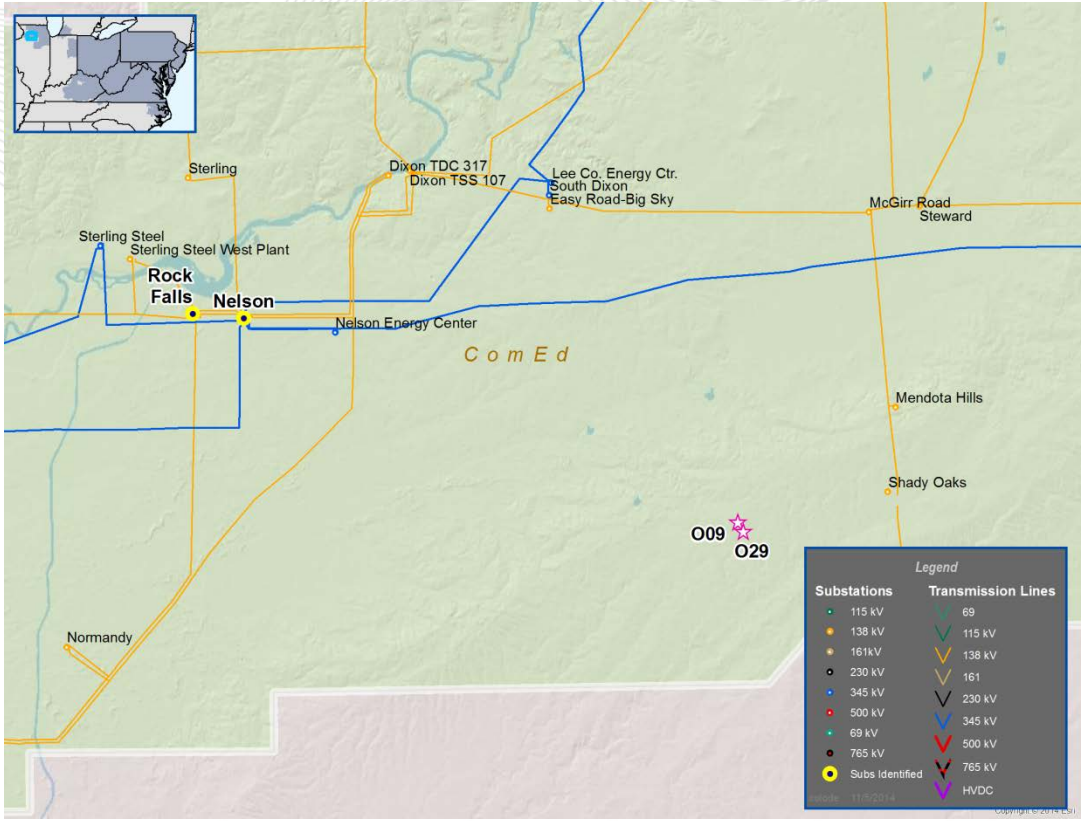
ComEd Transmission Zone

- Light Load Reliability Criteria Thermal Violation
- The Rock Fall– Nelson 138kV red line is overloaded for all facility in service and several contingencies
- Queued generation related (reliability violations will be re-evaluated pending the status of the planned generation)



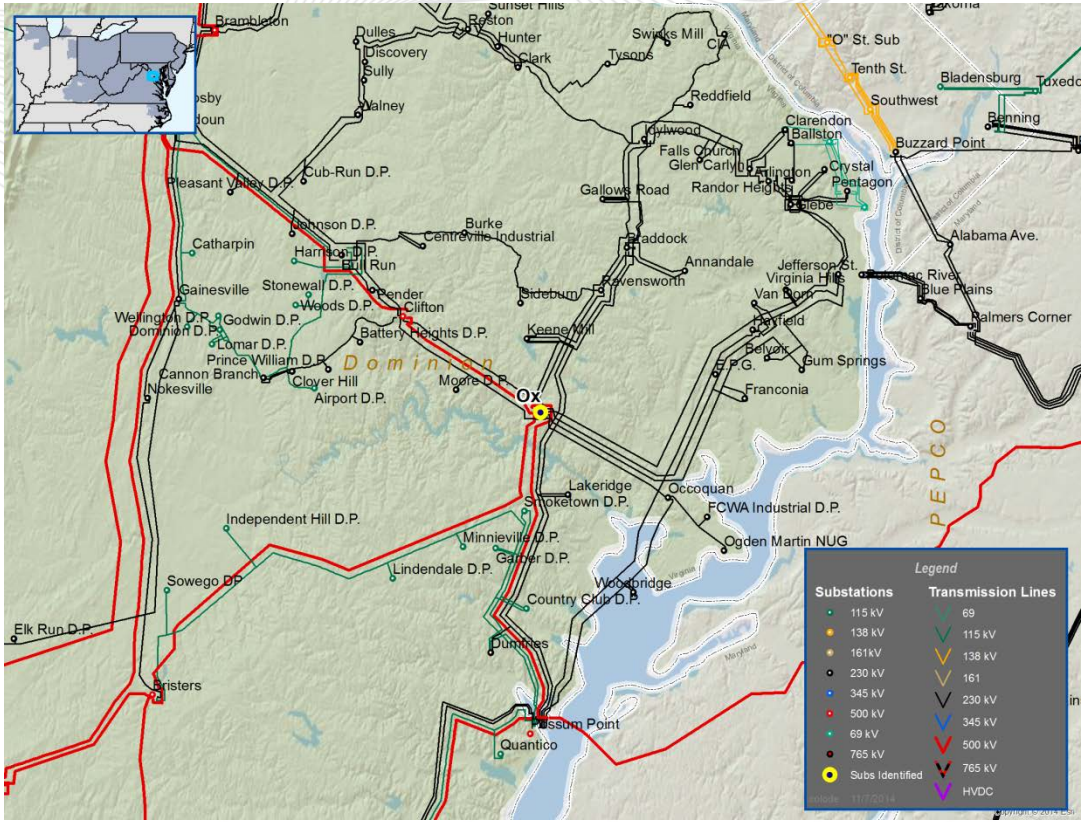
ComEd Transmission Zone

- Light Load Reliability Criteria Thermal Violation
- The O09 - Rock Falls – Nelson –O29 138kV red line is overloaded for all facility in service and several contingencies
- Queued generation related (reliability violations will be re-evaluated pending the status of the planned generation)



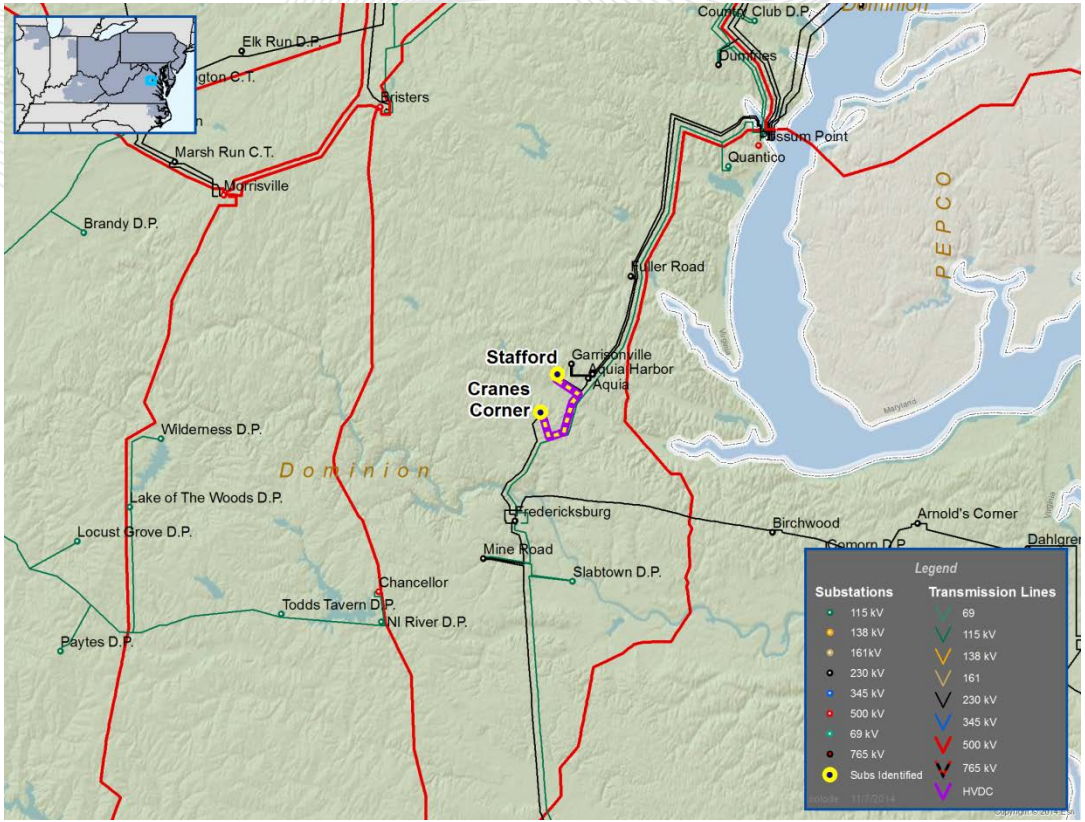
Dominion Transmission Zone

- Dominion Planning Criteria Violation
- The Ox 500/230 transformer #2 is overloaded for line fault stuck breaker contingency loss of the Ox – Clifton 500 kV circuit, Ox 500/230 kV #1 and Clifton 500/230 #2 kV transformers.



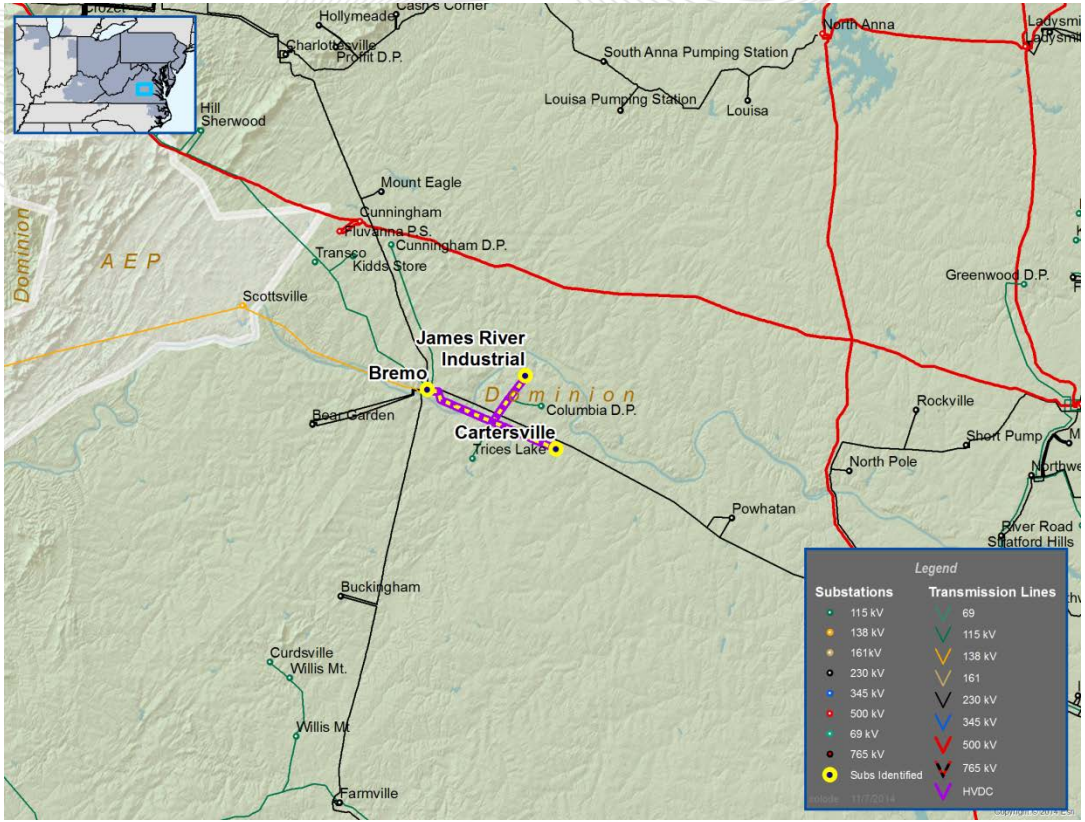
Dominion Transmission Zone

- Dominion Planning Criteria Violation
  - Stressed condition of Possom Point #6 Offline
- The Cranes – Stafford 230 kV circuit is overloaded for single contingency loss of the Ladysmith – Possum Point 500 kV circuit.



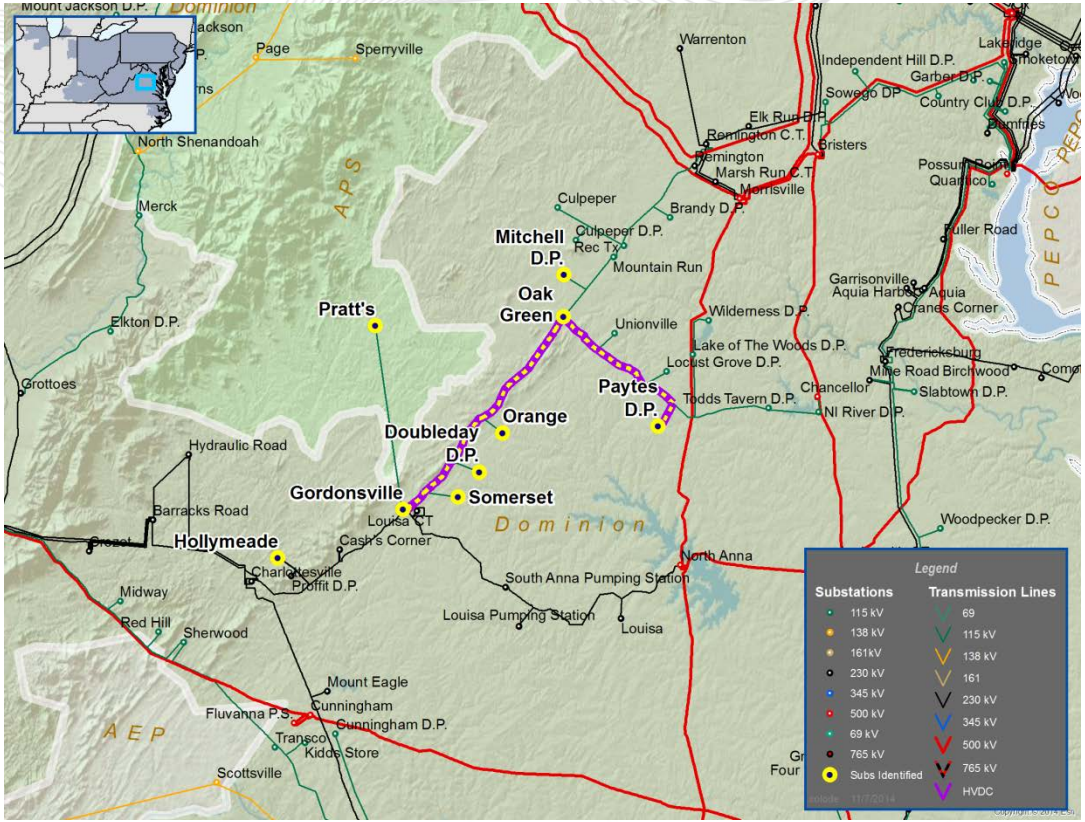
Dominion Transmission Zone

- Dominion Planning Criteria Violation:
- Loss of more than 100 MW load for the loss of the Bremo - James River - Cartersville 115 kV circuit.



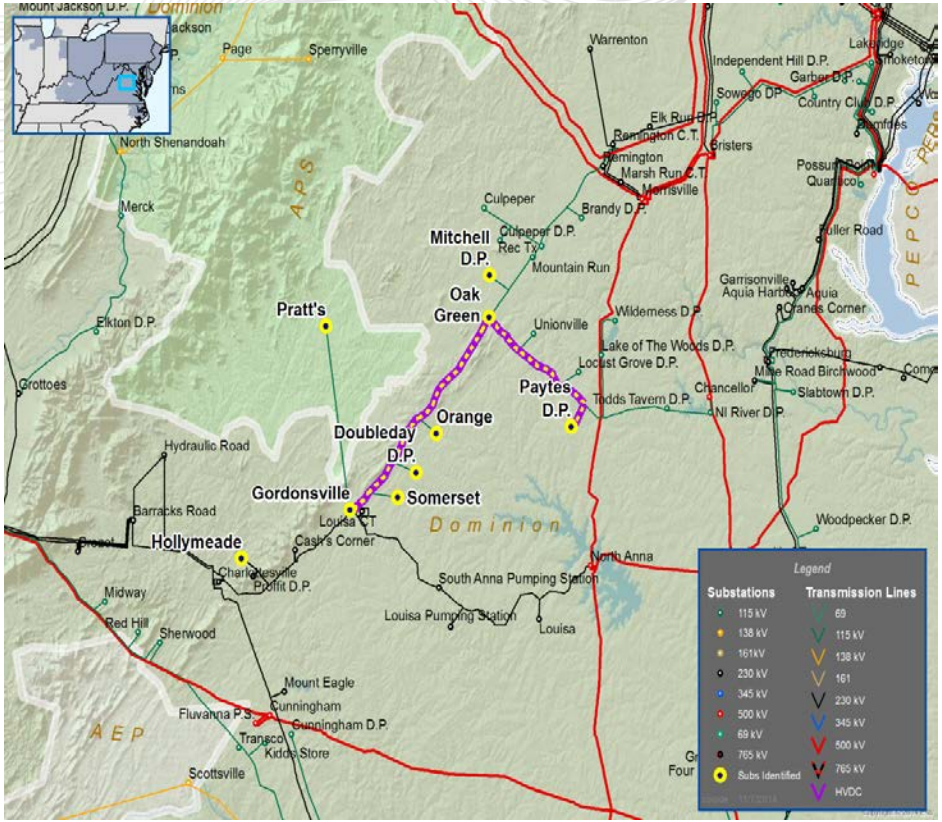
Dominion Transmission Zone

- N-1-1 and Dominion Planning Criteria Violation:
- Several Thermal and voltage violations in the Gordonsville and Pratts vicinity.
- Continued on the next slide…



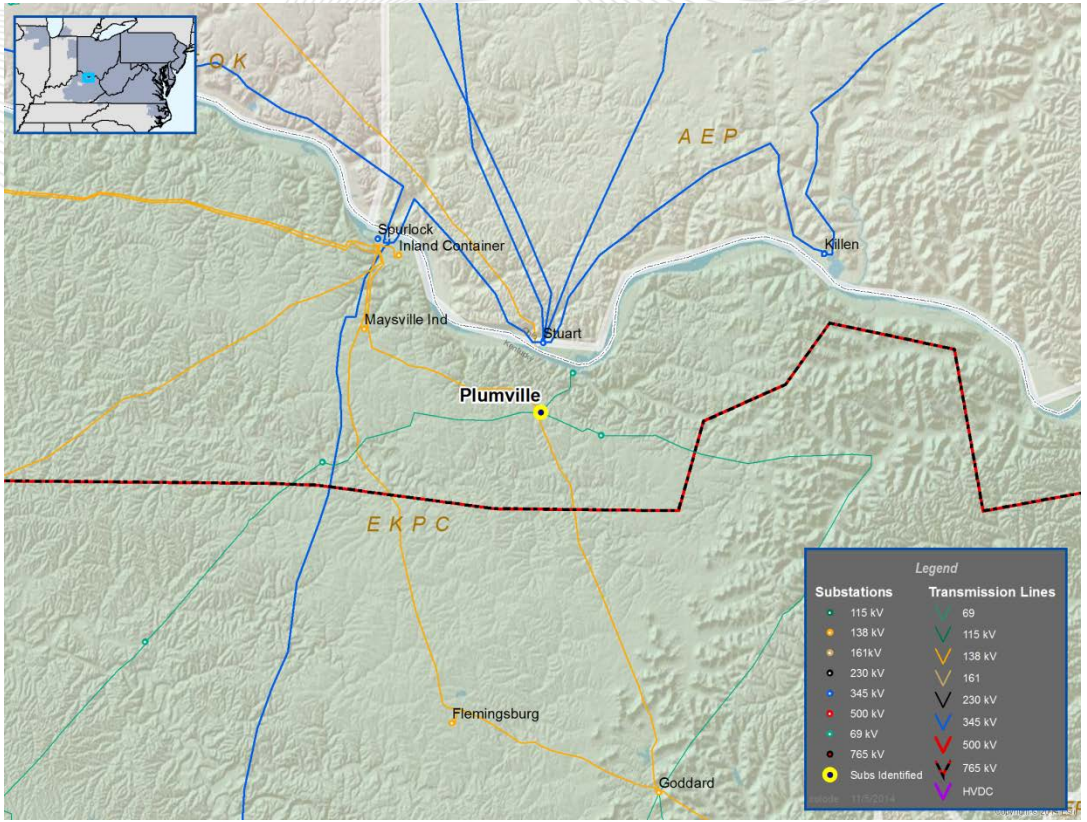
Dominion Transmission Zone

- N-1-1 and Dominion Planning Criteria Violation:
- Thermal Overloads:
  - Gordonsville 230/115 kV transformer
  - Gold Dale – Paytes D.P. 115 kV circuit
  - Oak Green – Orange 115 kV circuit
- Voltage Violation:
  - Several voltage violations in the Gordonsville and Pratts vicinity.



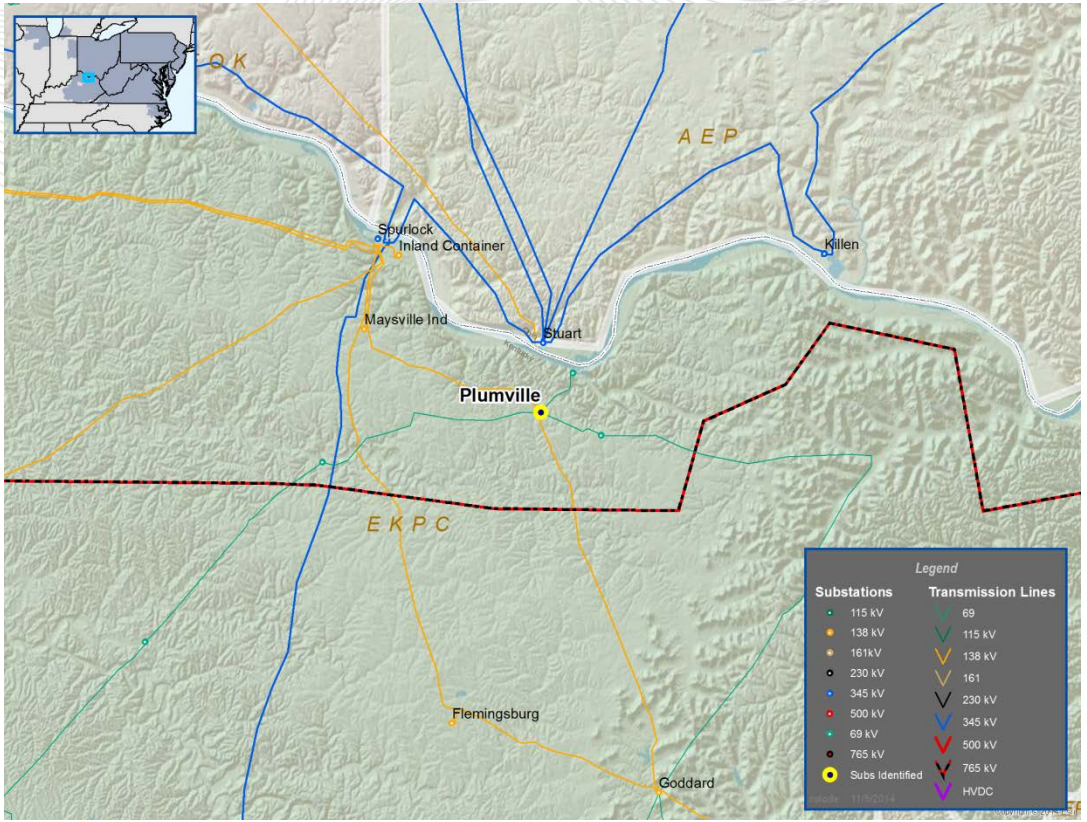
EKPC Transmission Zone

- N-1 Voltage Violation
- Voltage drop violation at Plumville 138kV for the tower outage of the Godard – Flemingsburg –Spurlock 138kV line and the Plumville – Maysville – Spurlock 138kV line



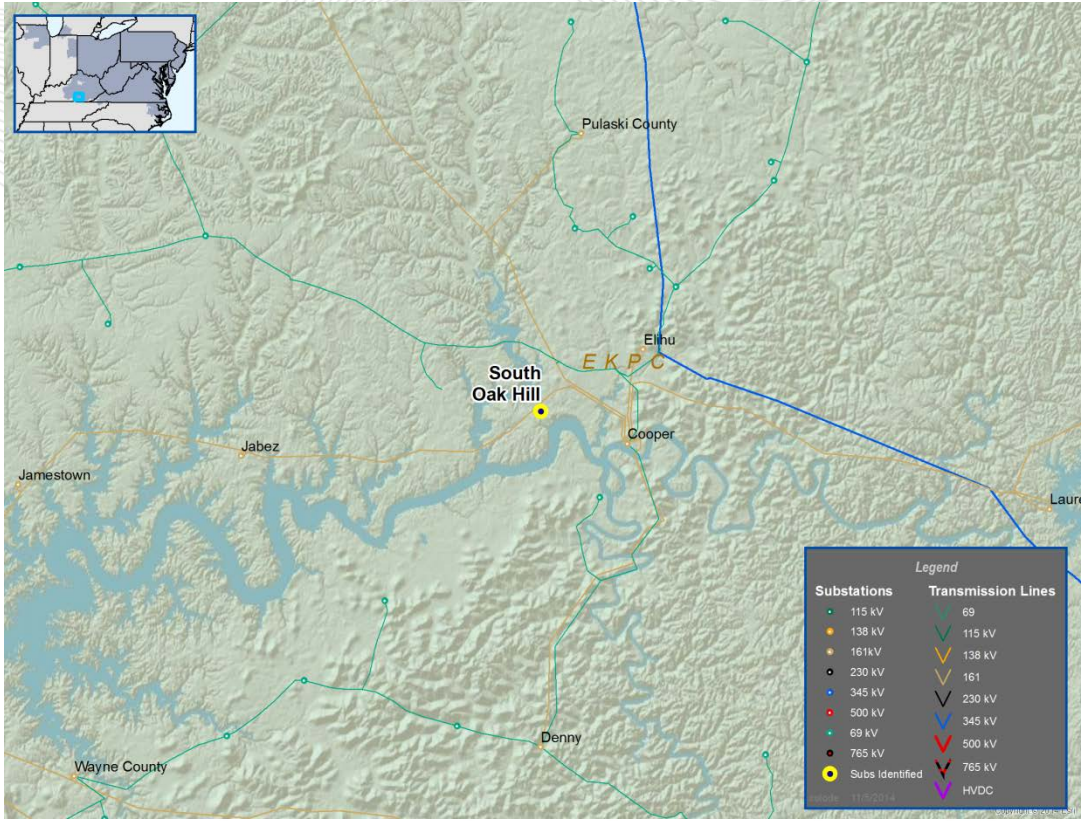
EKPC Transmission Zone

- N-1-1 Voltage Violation
- Voltage drop violation at Plumville 138kV for the loss of the Godard – Flemingsburg – Spurlock 138kV line and the loss of the Plumville – Maysville – Spurlock 138kV line



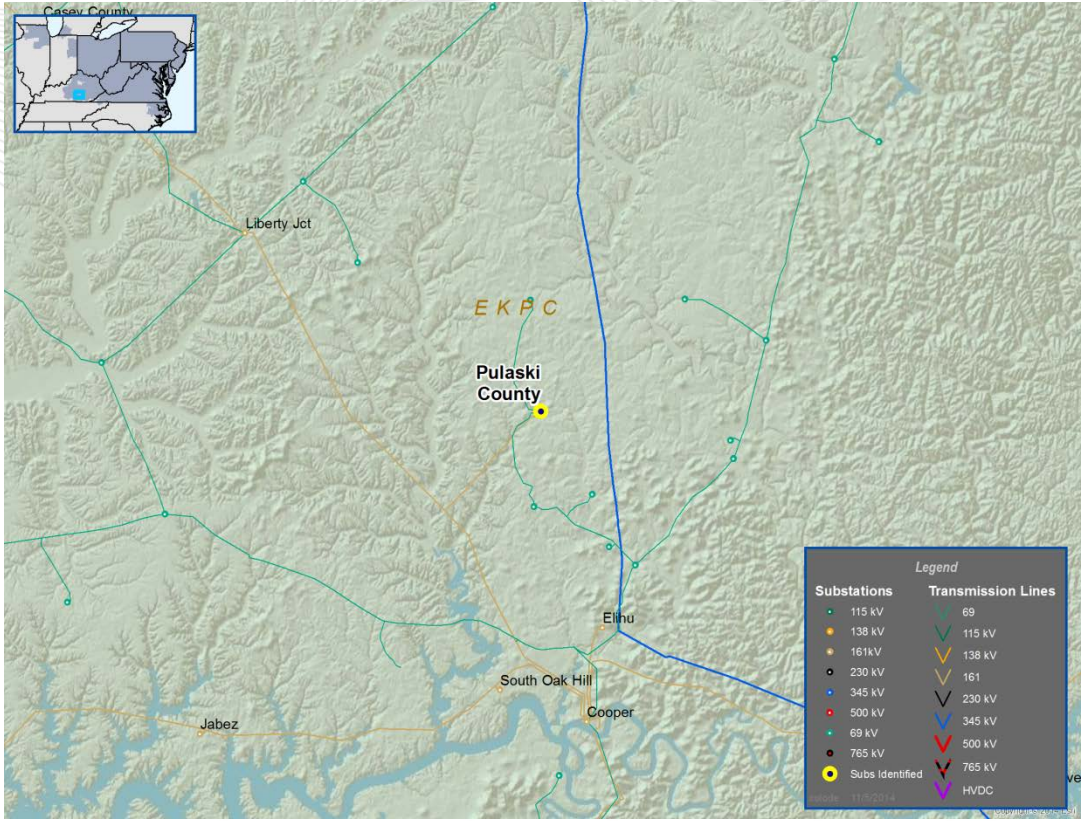
EKPC Transmission Zone

- Light Load Reliability Criteria Voltage Violation
- High voltage at South Oak Hill 161kV for several single contingencies



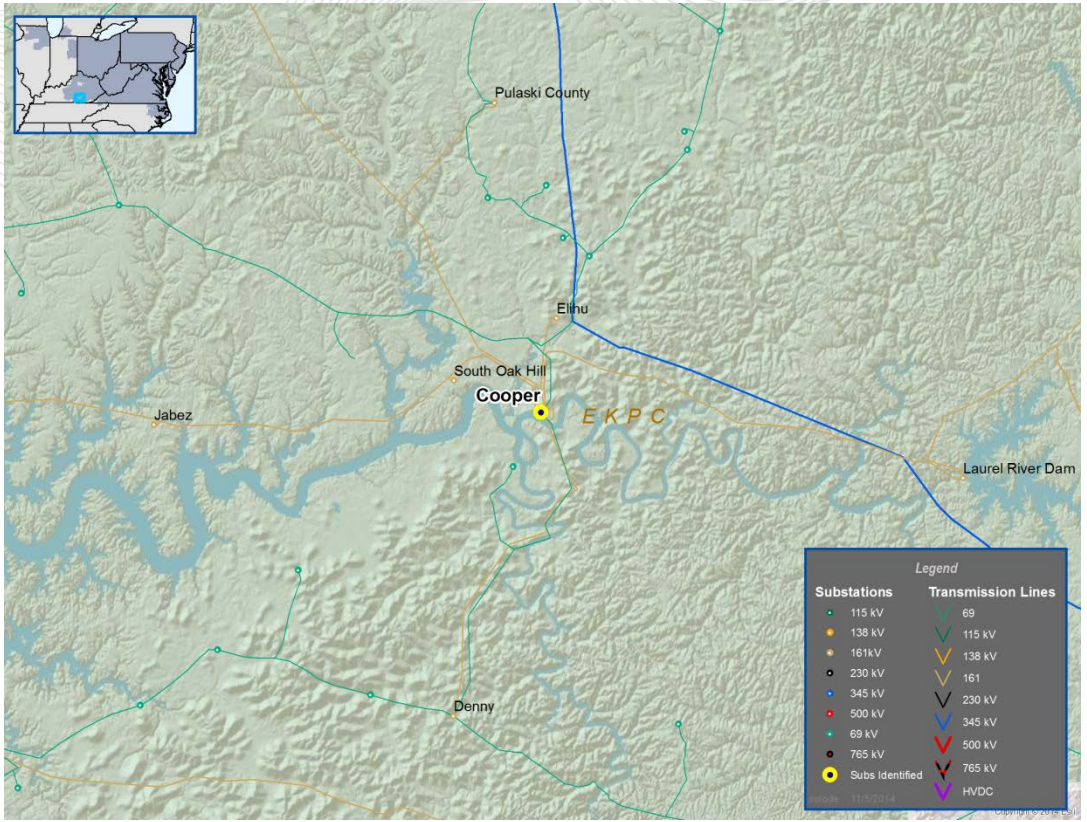
EKPC Transmission Zone

- Light Load Reliability Criteria Voltage Violation
- High voltage at Pulaski County and Pulaski County Junction 161kV buses for several single contingencies



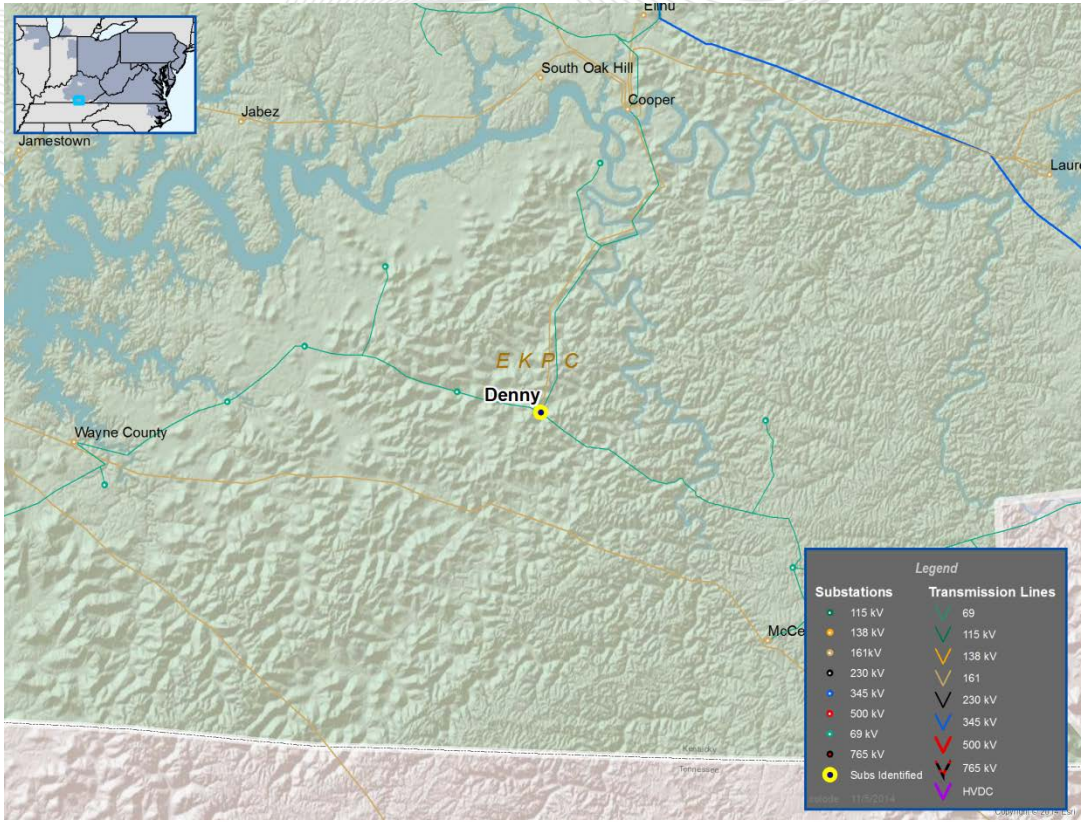
EKPC Transmission Zone

- Light Load Reliability Criteria Voltage Violation
- High voltage at Cooper 161kV buses for several single contingencies



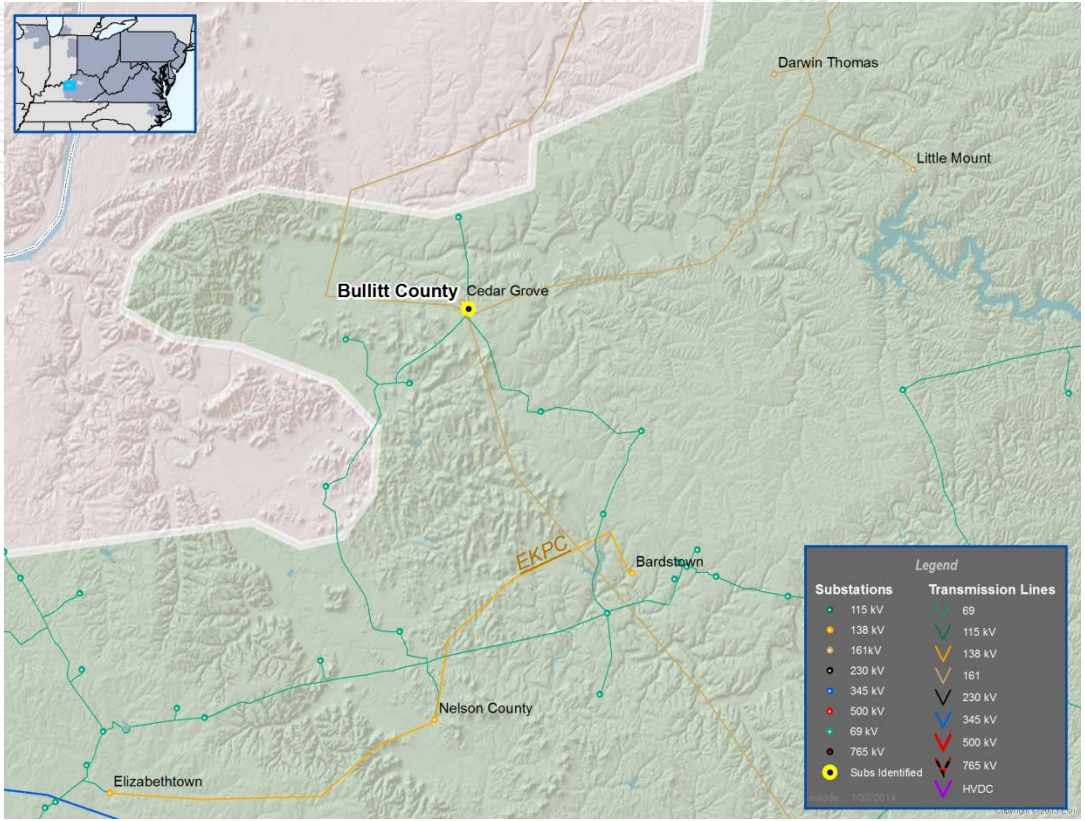
EKPC Transmission Zone

- Light Load Reliability Criteria Voltage Violation
- High voltage at Denny 161kV bus for several single contingencies



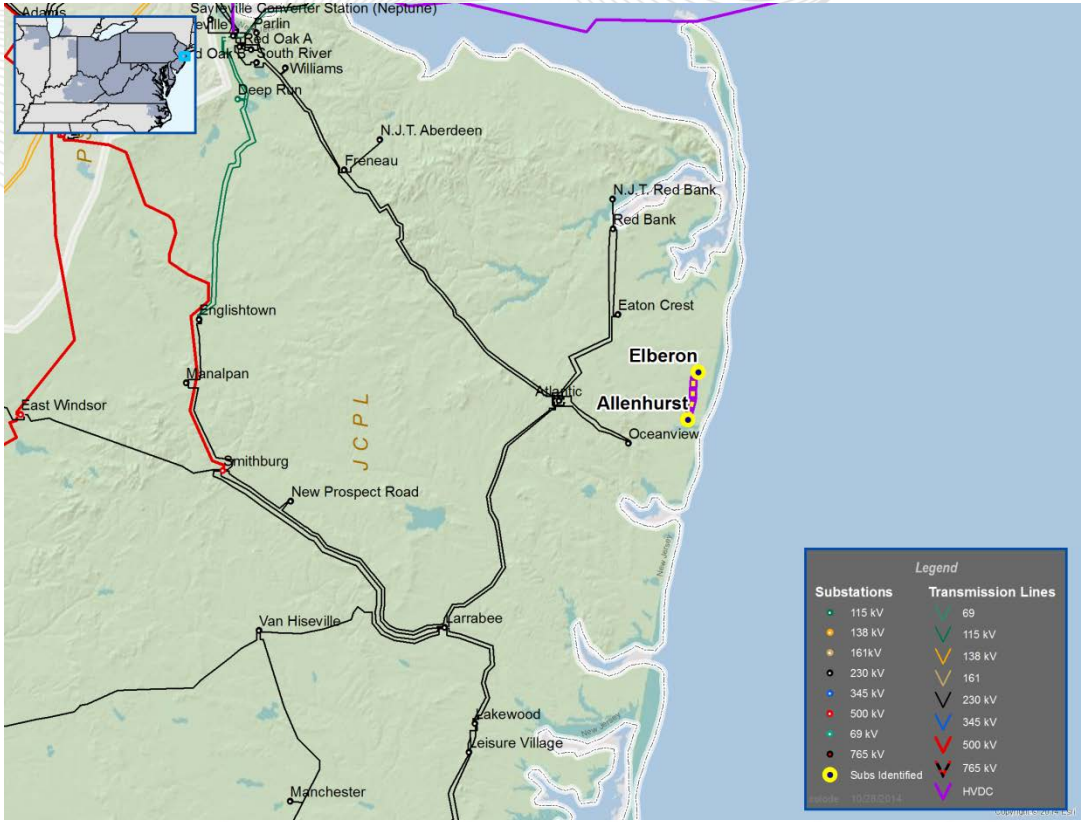
EKPC Transmission Zone

- EKPC Criteria Violation
- The Bullitt County 161/69kV transformer is overloaded during an outage of LGE/KU's Hardin County 345/138kV transformer with LGE/KU's Brown Unit #3 off



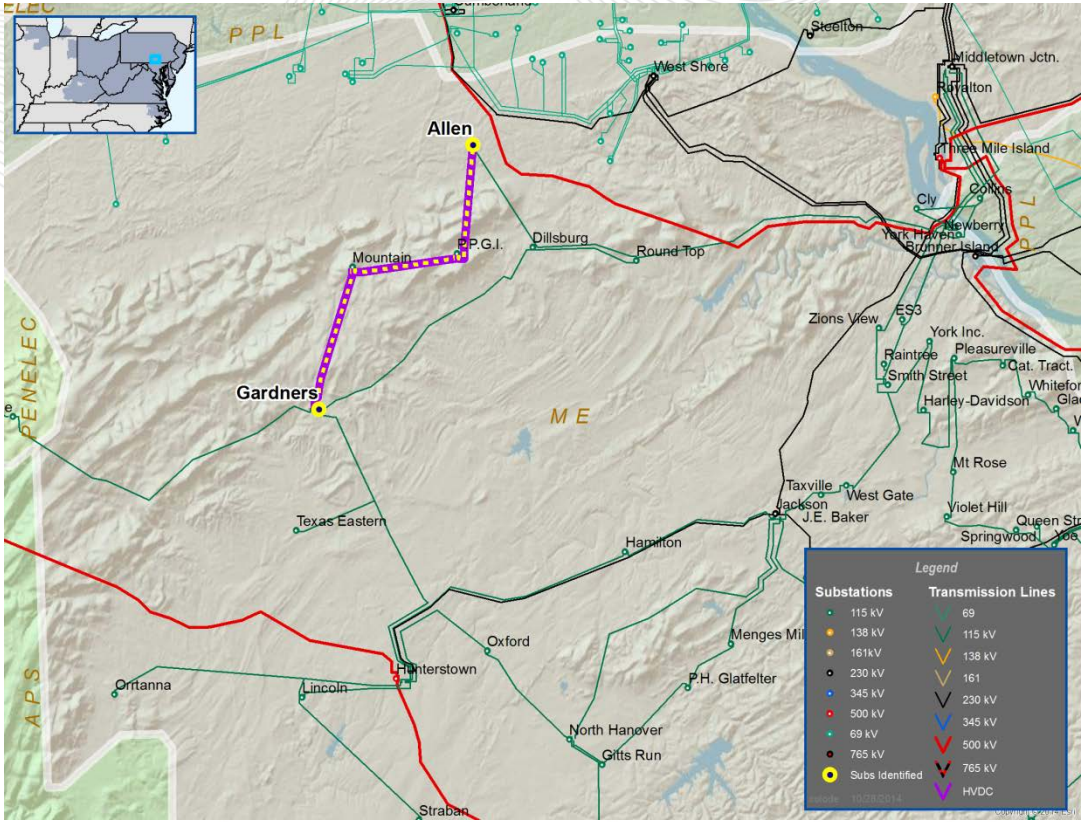
JCPL Transmission Zone

- FE Planning Criteria Violation :
- The Allenhurst to Elberon (V74) 34.5 kV circuit is overloaded for the loss of the Bath Avenue – Long Branch (V74) 34.5 kV circuit.
- The Bath Avenue – Long Branch (V74) 34.5 kV circuit is overloaded for the loss of the Allenhurst to Elberon (V74) 34.5 kV circuit.



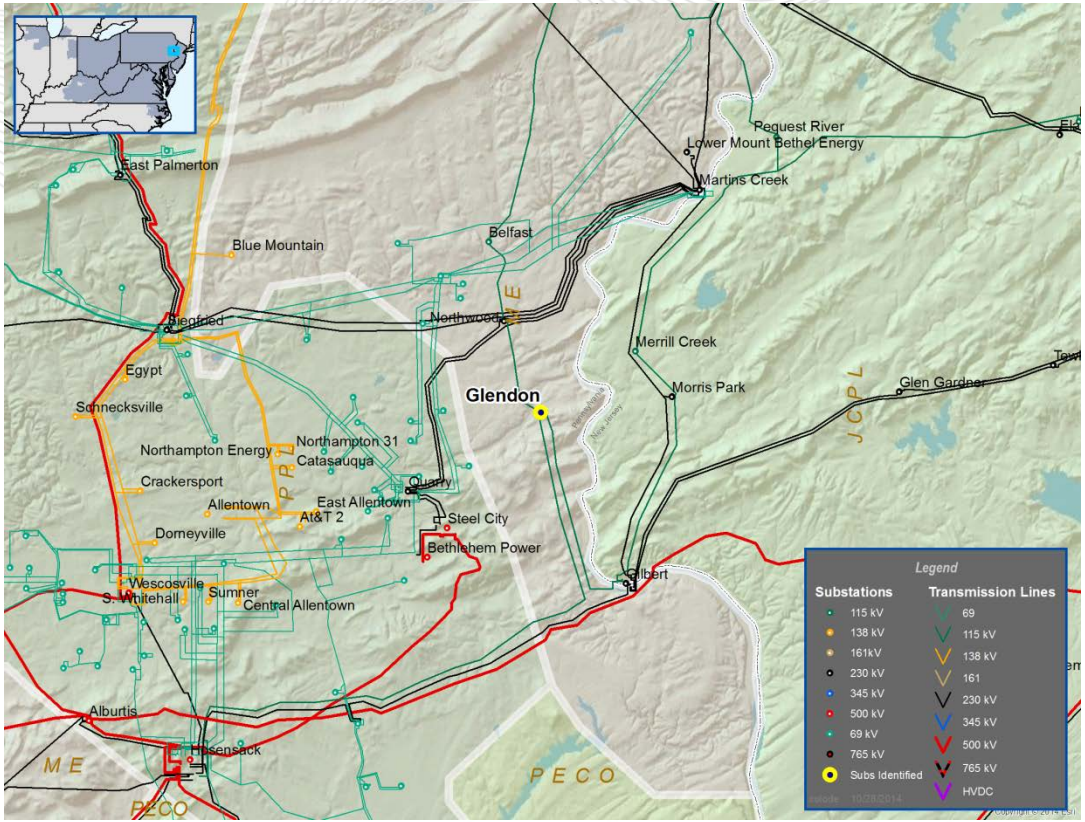
MetEd Transmission Zone

- N-1-1 Voltage Violation:
- Voltage drop violation in the Allen and Gardner vicinity for the N-1-1 contingency loss of the Hunterstown – Texas Eastern – Gardner and Middletown Jct. – Collins – Newberry – Round Top 115 kV circuits.



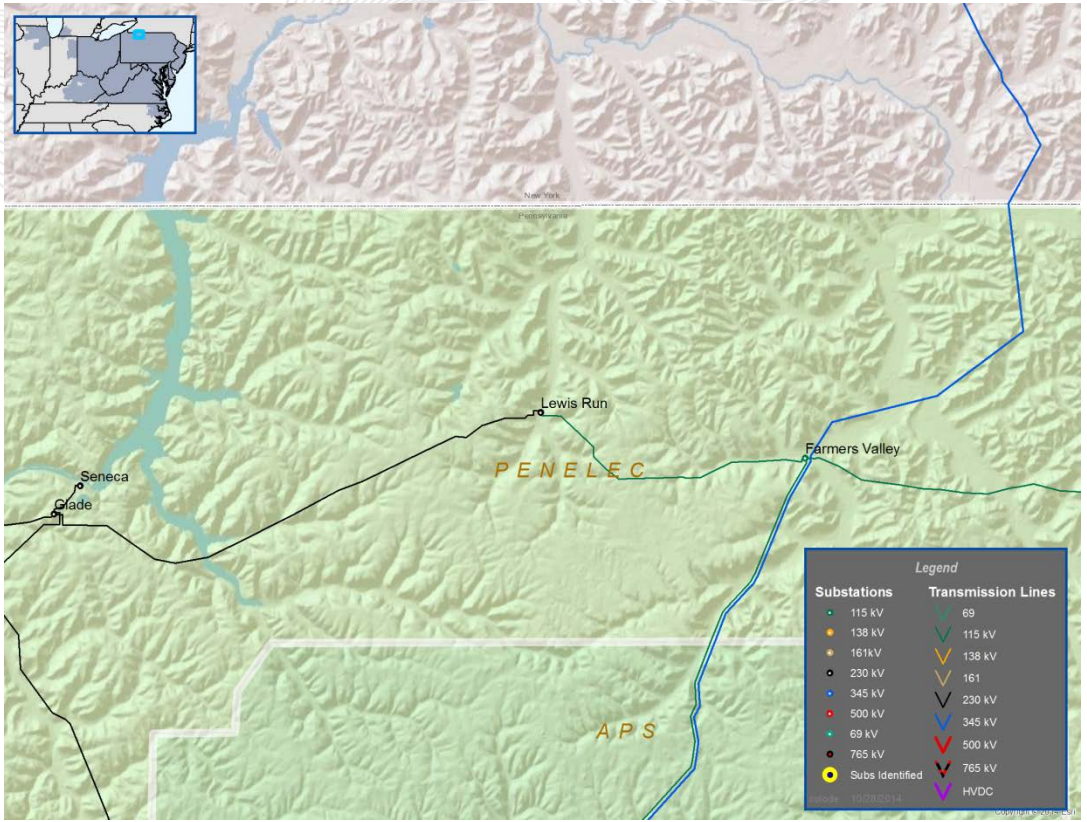
MetEd Transmission Zone

- N-1-1 Voltage Violation:
- Voltage drop and voltage magnitude violations at the Glendon 115 kV station for the N-1-1 contingency loss of the Northwood – Quary 230 kV circuit, Northwood 230/115 kV transformer, and Portland – North Bangor 115 kV circuit.



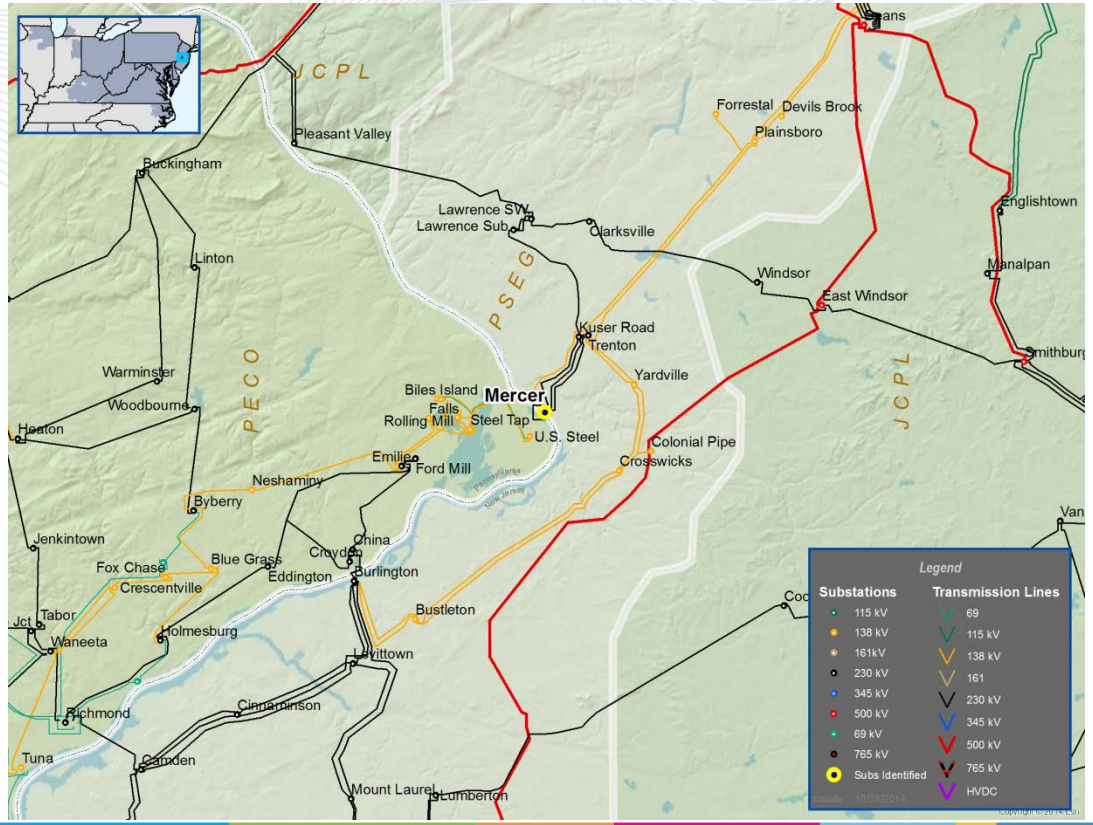
PenElec Transmission Zone

- Light Load Reliability Criteria Voltage Violation:
- High voltage violations in the PierceBrook vicinity for several contingencies.



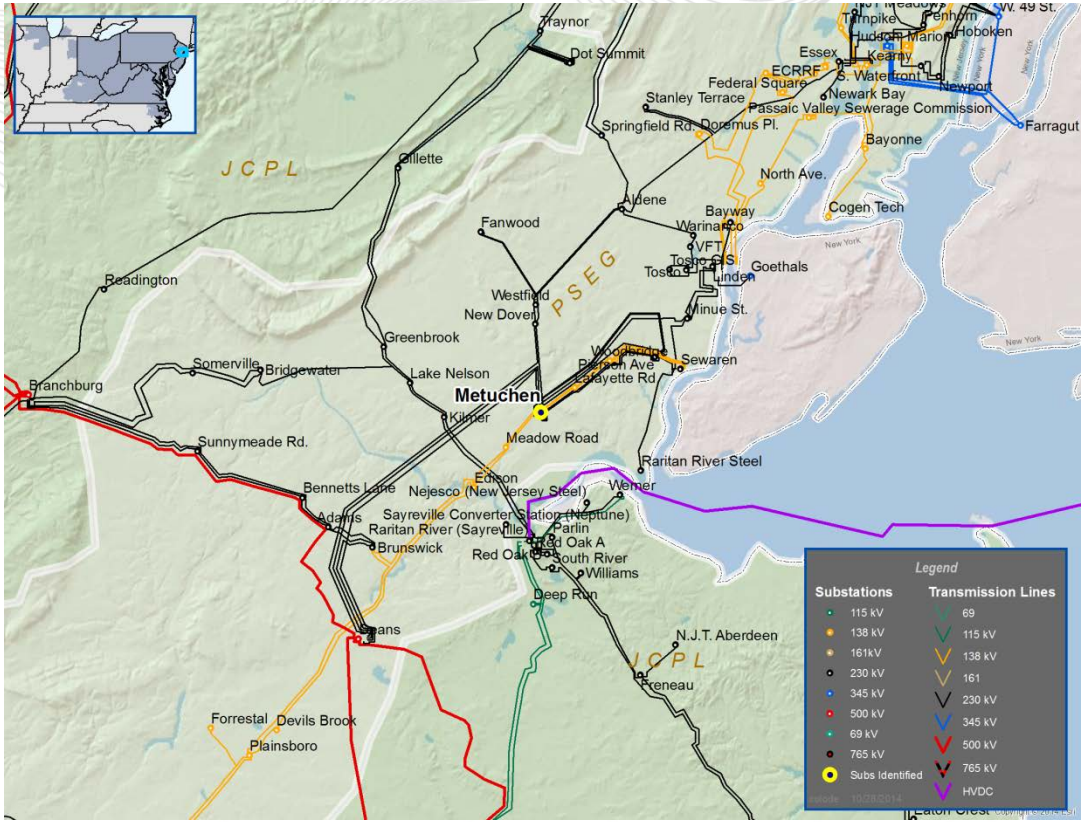
PSEG Transmission Zone

- Light Load Reliability Criteria Voltage Violation:
- High voltage violations in the Mercer vicinity for the loss of the Mercer – Kuser Rd. – Lawrence 230 kV circuit (A2201).



PSEG Transmission Zone

- N-1-1 Voltage Violation:
- Voltage drop violations in the Metuchen vicinity for several N-1-1 contingencies.



2014 RTEP Proposal Window 3 (Long Term)

Scope of 2014/15 RTEP Long Term Proposal Window

- **Reliability Criteria**
  - 15 Year Reliability Analysis
  - Long Term Transmission Owner Criteria

- **Market Efficiency Criteria**
  - Market Efficiency Congestion
  - Limiting Facilities in Reliability Pricing Model (RPM)

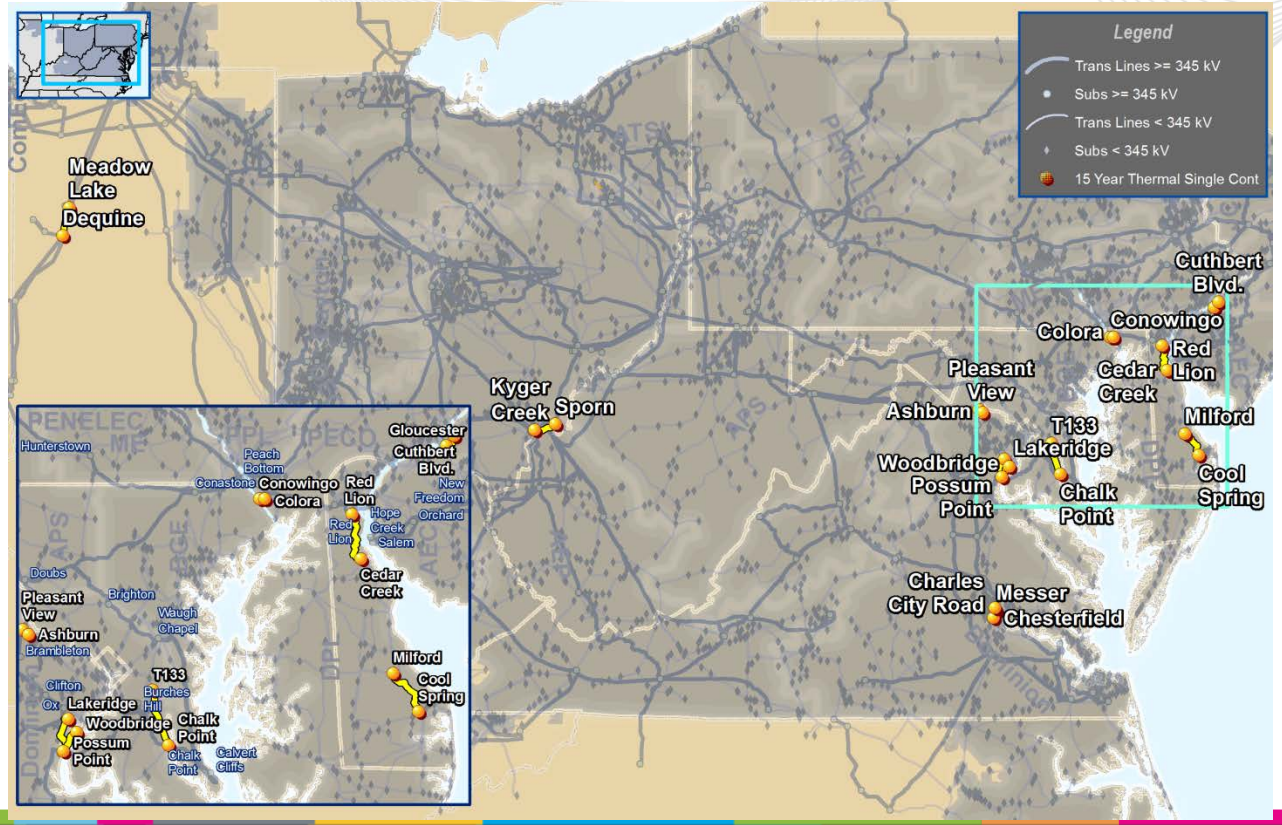
15 Year Reliability Analysis Result Using 2022 Case

15 Year Results Using 2022 Case – NERC Category B Single Contingency

FG#	Fr Bus	Fr Name	To Bus	To Name	CKT	KVs	Areas	100% Year	Contingency	TEST	Conductor Rating (MVA)*
15Y-S1	232004	MILF_230	232001	COOLSPGS	1	230/230	DPL	2022	'CKT 23034'	Load Deliverability - DPL South LDA	678
15Y-S2	314074	6POSSUM	314057	6LAKERD	1	230/230	Dominion	2029	'LN 2022'	Generator Deliverability	595.02
15Y-S3	314228	6MESSER	314225	6CHARCTY	1	230/230	Dominion	2022	'LN 259'	Generator Deliverability	375.06
15Y-S4	314072	6PL VIEW	314004	6ASHBURN	1	230/230	Dominion	2023	'LN 203'	Generator Deliverability	716.28
15Y-S5	314074	6POSSUM	314096	6WOODB A	1	230/230	Dominion	2026	'LN 2001'	Generator Deliverability	678.68
15Y-S6	314287	6CHSTF B	314228	6MESSER	1	230/230	Dominion	2022	'LN 259'	Generator Deliverability	375.06
15Y-S7	248005	06KYGER	242528	05SPORN	2	345/345	OVEC/AEP	2022	'349_B2_TOR21'	Generator Deliverability	971
15Y-S8	223983	CHALK230	292453	T133TAP1	1	230/230	PEPCO	2022	'PP42A'	Generator Deliverability	730
15Y-S9	223983	CHALK230	292453	T133TAP1	2	230/230	PEPCO	2022	'PP40A'	Generator Deliverability	730
15Y-S10	219110	GLOUCSTR_2	219755	CUTHBERT_4	2	230/230	PSEG	2029	'L_C-2308_LT'	Generator Deliverability	711
15Y-S11	213519	CONOWG01	231006	COLOR_PE	1	230/230	PECO/DPL	2029	'220-03/* $ CHESCO $ 220-03 $ L'	Generator Deliverability	577
15Y-S12	231004	RL_230	232002	CEDAR CK	1	230/230	DPL	2022	'CKT 23033X'	Load Deliverability - DPL South LDA	678
15Y-S13	243217	05DEQUIN	243878	05MEADOW	1	345/345	AEP	2027	'6490_B2_TOR16000'	Generator Deliverability	971
15Y-S14	243217	05DEQUIN	243878	05MEADOW	2	345/345	AEP	2027	'6472_B2_TOR15258'	Generator Deliverability	971

*All potential violations are conductor limted

15 Year Reliability Analysis Result Using 2022 Case - Single Contingencies



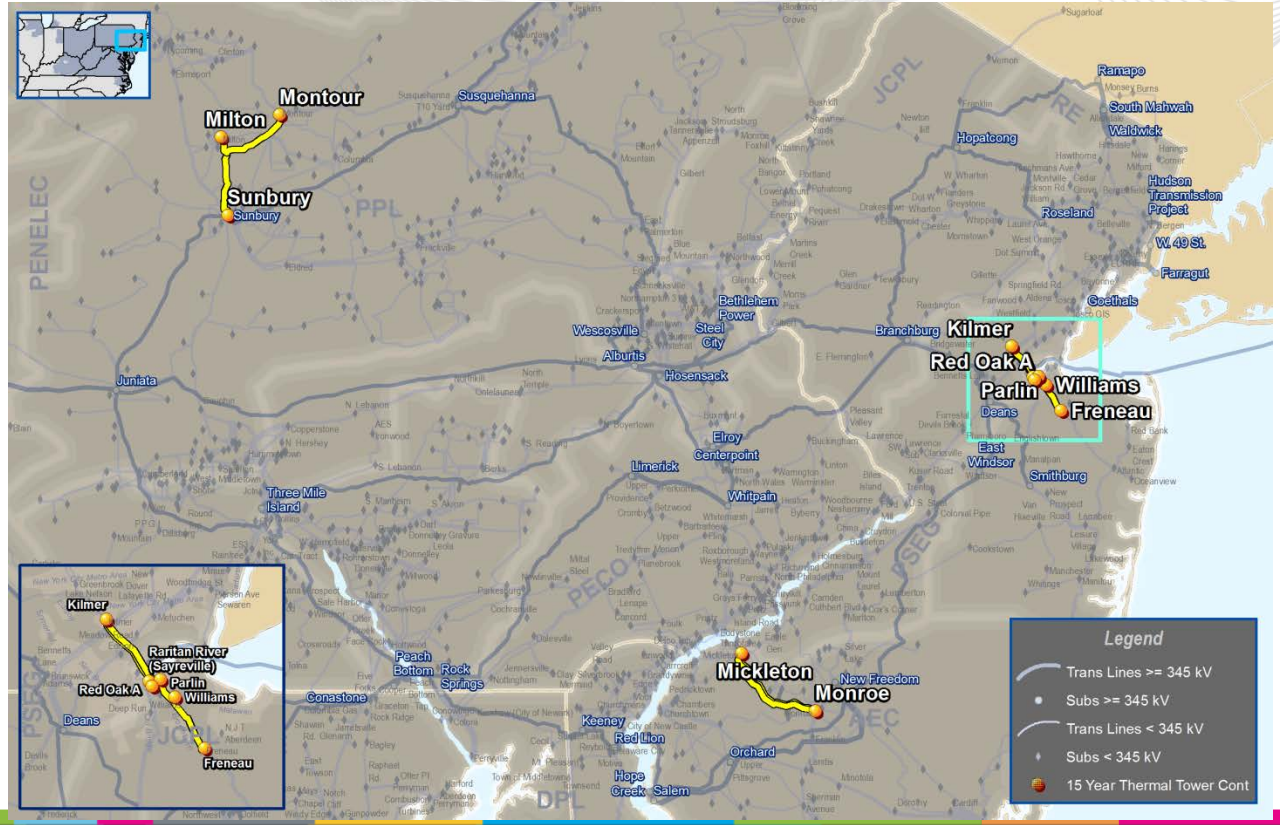
15 Year Reliability Analysis Result Using 2022 Case

15 Year Results Using 2022 Case – NERC Category C5 Double Circuit Towerline Contingency

FG#	Fr Bus	Fr Name	To Bus	To Name	CKT	KVs	Areas	100% Year	Contingency	TEST	Conductor Rating (MVA)*	
~~15Y-T1~~	~~208034~~	~~MILT~~	~~208109~~	~~SUNB~~	~~1~~	~~230/230~~	~~PPL~~	~~2022~~	~~'PL100484'~~	~~Generator Deliverability~~	~~730~~	Removed as part of V3 after the window open
15Y-T2	228401	MCKLTON	228402	MONROE	1	230/230	AE	2022	'V2274+P2242_LT'	Generator Deliverability	446	
15Y-T3	228401	MCKLTON	228402	MONROE	2	230/230	AE	2022	'V2274+P2242_LT'	Generator Deliverability	446	
~~15Y-T4~~	~~208040~~	~~MONT~~	~~208034~~	~~MILT~~	~~1~~	~~230/230~~	~~PPL~~	~~2022~~	~~'PL100484'~~	~~Generator Deliverability~~	~~802~~	Removed as part of V3 after the window open
15Y-T5	206305	28RAR RVR	218331	KILMER_I	1	230/230	JCPL/PSEG	2028	'C5_CNJ-DCT-#4'	Generator Deliverability	869	
15Y-T6	206298	28WILLIAMS	206292	28FRENEAU	1	230/230	JCPL	2029	'37PS_B'	Generator Deliverability	869	
15Y-T7	206322	28PARLIN	206298	28WILLIAMS	1	230/230	JCPL	2028	'37PS_B'	Generator Deliverability	869	
15Y-T8	206314	28RED OAKA	206305	28RAR RVR	1	230/230	JCPL	2028	'C5_CNJ-DCT-#4'	Generator Deliverability	869	

*All potential violations are conductor limted

15 Year Reliability Analysis Result Using 2022 Case - Tower Contingencies

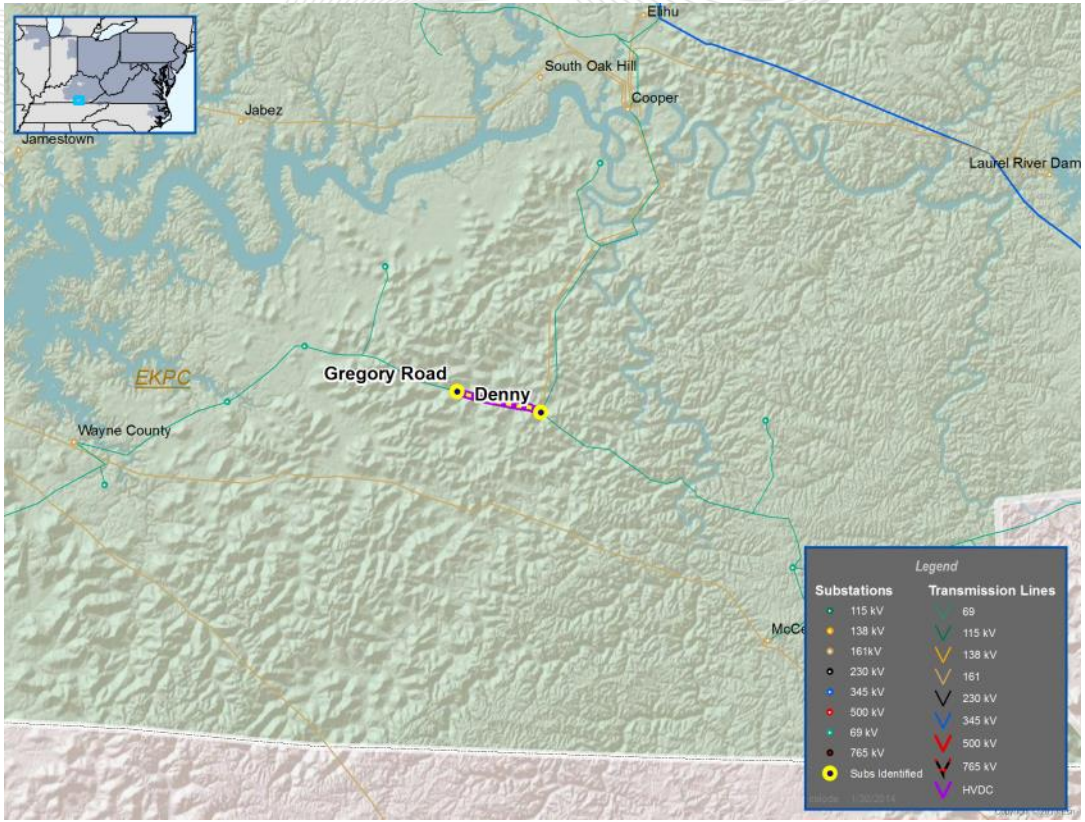


EKPC Transmission Zone

- **EKPC Criteria Violation**
- Long Term Transmission Owner Criteria

- Overload of the Denny-Gregory Road Jct. 69 kV line during an outage of the Wayne County 161/69 kV transformer with LGE/KU's Mill Creek Unit #4 off.

- Violation Date: 6/1/2020



Light Load Analysis

2019 RTEP Light Load Analysis

- Current Status
  - 2019 Light Load Reliability Criteria case and contingencies distributed to the TOs for review
  - Continue to incorporated topology and contingency updates
  - Ran preliminary generator deliverability (thermal), and N-1 (thermal/voltage) results

- Next Steps
  - Complete quality control check analysis and finalize the result
  - Present the 2019 Light Load violations to a RTEP Proposal Window for solutions

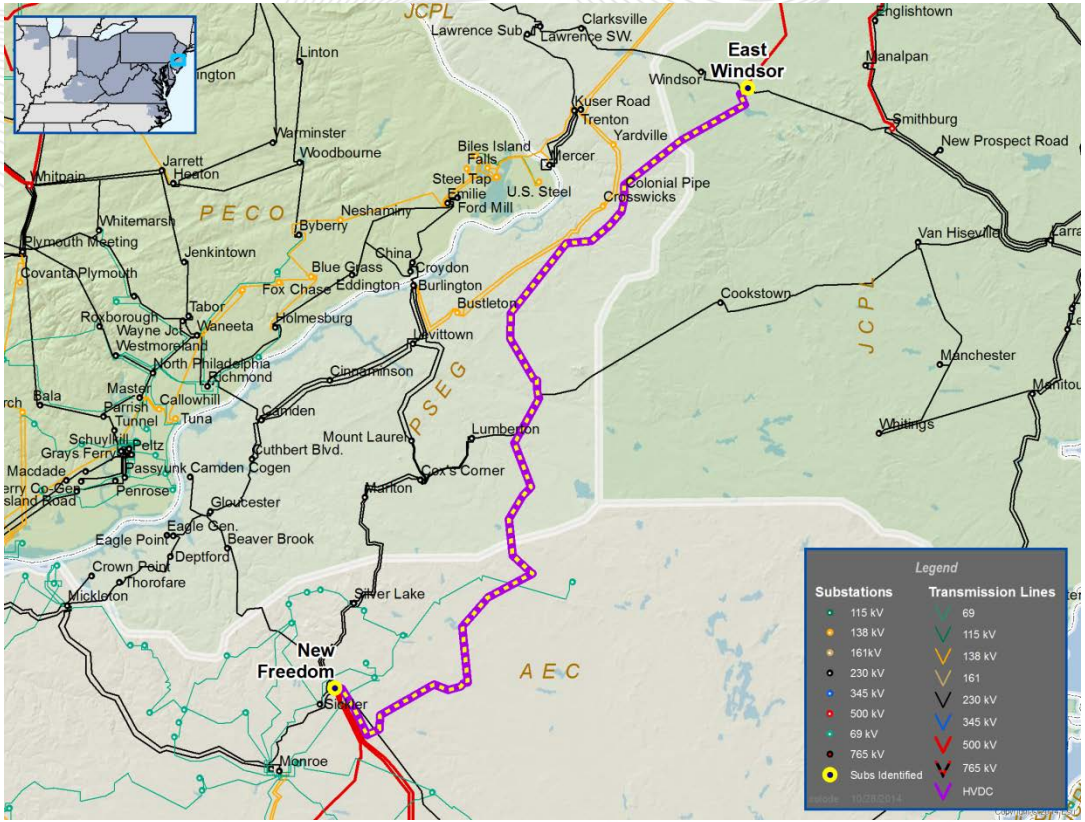
Supplemental Projects

PSE&G Transmission Zone

- Supplemental Project:
- Obtain Land in Westhampton Township to increase the ROW of sections of the 5038 line from New Freedom - East Windsor. (S0700)
- Estimated Project Cost:

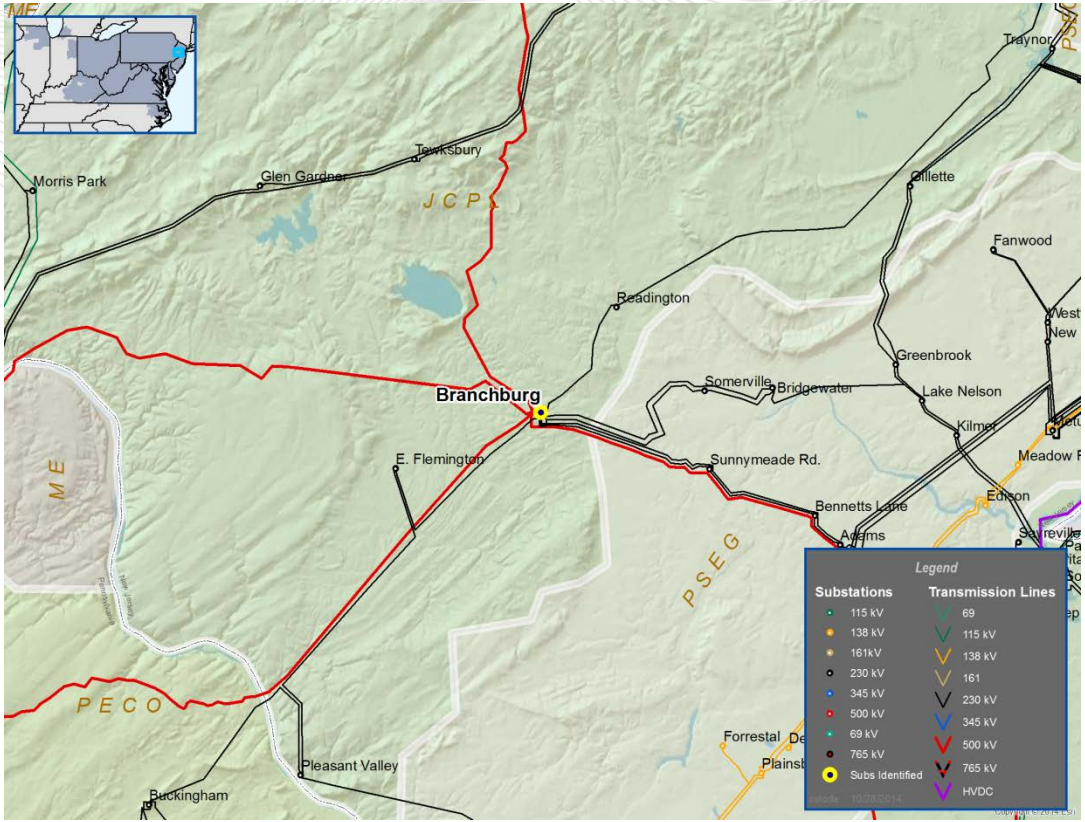
  $ 1.0 M
- Projected IS Date:

  6/1/2014



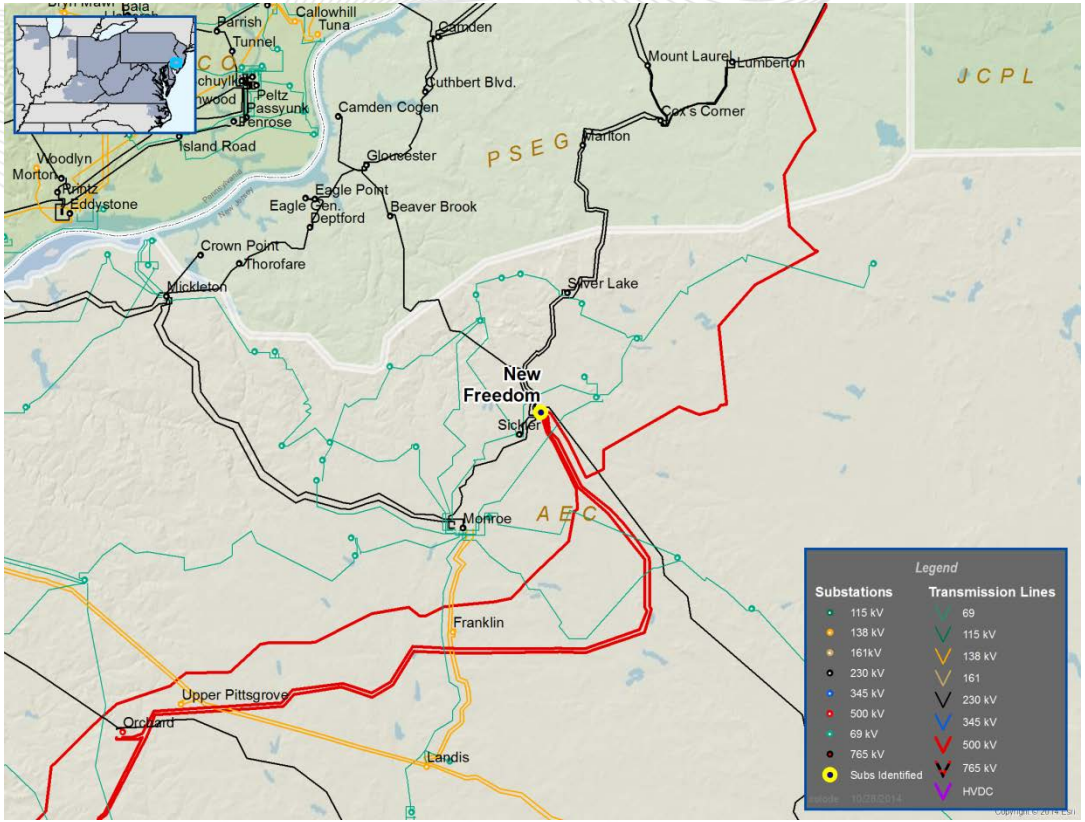
PSE&G Transmission Zone

- Supplemental Project:
- The Branchburg – Deans 500 kV line (5019) crosses over the Branchburg – E Flemington 230 kV line (I-2209) at the Branchburg station. Eliminate the 5019 Line Crossing over I-2209 at Branchburg by replacing the 230 kV with underground solid dielectric cable . (S0701)
- Estimated Project Cost:
  $ 6.0 M
- Projected IS Date:
  3/31/2015



PSE&G Transmission Zone

- Supplemental Project:
- New Freedom: extensive damage in main drain line that runs along 500 kV transformers and empties into oil/water separator tank. Upgrade New Freedom (500 kV) Oil/Water separator system. (S0854)
- Estimated Project Cost:
  $ 1.9 M
- Projected IS Date:
  12/31/2015



Artificial Island Update

Artificial Island Update

- Recent meetings the Artificial Island finalists and a FERC Administrative Law Judge (ALJ) are complete
- Engaged consultants to perform a Subsynchronous Resonance (SSR) study and constructability study
- Staff continues to evaluate the proposals

Artificial Island Next Steps

- December 4th, 2014 TEAC
  - Review updated Artificial Island evaluation
- January 8th, 2015 TEAC
  - Recommend Artificial Island solution to the PJM TEAC
- February 2015 PJM Board
  - Recommend Artificial Island solution to the PJM Board

RTEP Next Steps

RTEP Next Steps

- Recommend Artificial Island solution
- Present 2015 RTEP Assumptions
- Discuss 2015 RTEP Scenario Studies
- Evaluate and recommend solutions for RTEP Proposal Window #2

Questions?

Email: RTEP@pjm.com

- Revision History
  - Version 1: Original version posted to the PJM TEAC on 11/10/2014
  - Version 2: Corrected Date on Slide 1, Corrected typo on slide 12 to show “November 2014” on 11/13/2014