



Sub Regional RTEP Committee PJM West

January 11, 2019

- The following definitions explain the basis for excluding flowgates and/or projects from the competitive planning process and designating projects to the incumbent Transmission Owner.
- Flowgates/projects excluded from competition will include the underlined language on the corresponding slide.
 - Immediate Need Exclusion: Due to the immediate need of the violation (3 years or less), the timing required for an RTEP proposal window is infeasible. As a result, the local Transmission Owner will be the Designated Entity. - Operating Agreement, Schedule 6 § 1.5.8(m)
 - Below 200kV: Due to the lower voltage level of the identified violation(s), the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(n)
 - FERC 715 (TO Criteria): Due to the violation need of this project resulting solely from FERC 715 TO Reliability Criteria, the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(o)
 - Substation Equipment: Due to identification of the limiting element(s) as substation equipment, the driver(s) for this project are excluded from the competitive proposal window process. As a result, the local Transmission Owner will be the Designated Entity - Operating Agreement, Schedule 6 § 1.5.8(p)



EKPC Transmission Zone: Baseline Project Cancellation

Reason for the cancellation: These projects are not identified within 10 year planning horizon for past two years due to load forecast updates in the area.

Upgrade Id	Description	TEAC Date	TEAC Cost (\$M)
b2711	Install 25.5 MVAR 69 kV capacitor at Sewellton Junction 69 kV substation	11/5/2015	0.4
b2730	Upgrade Denny - Gregory Tap 69 kV line facility	2/11/2016	0.72
b2781	Increase Maximum Operating Temperature of Davis - Nicholasville 69kv line section 266.8 MCM conductor to 284°F (LTE of 266°F).	5/31/2017	0
b2782	Increase the maximum operating temperature of Plumville - Rectorville 69kV line section 266.8 MCM conductor to 212°F (LTE of 185°F).	5/31/2017	0
b2784	Increase overcurrent relay at West Berea 138/69kV to at least 139 MVA Winter LTE	5/31/2017	0
b2786	Increase Williamstown cap bank to 11.225 MVAR	5/31/2017	0.02
b2903	Raise the V-low setting for Summer Shade 69 kV cap bank to 1.01 pu.	6/30/2017	0
b2904	Raise the V-low setting for Newby 69 kV cap bank to 0.955 pu	6/30/2017	0
b2905	Resize the Albany 69 KV capacitor bank from 8.4 to 13.776 MVAR.	6/30/2017	0.09



EKPC Transmission Zone: Baseline Project Cancellation

Upgrade Id	Description	TEAC Date	TEAC Cost (\$M)
b2909	Increase the MOT of the EKPC Elizabethtown - Tharp Tap 69 kV line section (1.7 miles) to 302°F. (LTE at 284°F)	6/30/2017	0.2
b2911	Upgrade the overcurrent relay setting associated with Powell County 138-69 kV transformer to at least 139 MVA Winter LTE.	6/30/2017	0
b2916	Upgrade the existing metering CTs (Quantity of 2) associated with the East Bardstown - KU Bardstown Industrial Tap 69 kV line section to 1200 A, at least 100 MVA Winter LTE; and upgrade the existing East Bardstown bus and jumpers from 4/0 to 500 MCM Copper	6/30/2017	0.25
b2917	Replace the existing 100 MVA 138-69 kV transformer bank at the West Berea substation with a 150 MVA transformer.	6/30/2017	1.725
b2918	Upgrade the 4/0 bus and jumpers associated with the West Berea Jct. – Three Links Jct 69 kV line to 500 MCM copper or equivalent equipment at the Three Links Jct. substation.	6/30/2017	0.15
b2919	Install a 69 kV, 15.31 MVAR capacitor bank at South Anderson substation.	6/30/2017	0.365
b2920	Rebuild Boone - Big Bone Tap 69 kV line section using 556.5 MCM ACTW conductor (6.3 miles).	6/30/2017	3.625



EKPC Transmission Zone: Supplemental Project Cancellation

Upgrade Id	Description	TEAC Date	TEAC Cost (\$M)	Reason for Cancellation
s1251	Build a new Miller's Creek substation at 161kV next to the existing 69kV substation and a new 0.6 mile 161kV tap line from the new substation to the KU Delvinta – EK Beattyville – EK Powell County 161kV line section, transfer distribution circuits to new substation and remove old 69kV substation.	1/5/2017		LG&E/KU projects in the area address EKPC 2.2 reliability concerns.
s1363	Increase the MOT of the Oakdale Jct.-Oakdale 69 kV line section (10.5 miles) to 167°F.	6/30/2017		The line section is retired after the s0914 1 project.



EKPC Transmission Zone Baseline Project Replacement

B2337– Project Replacement

Cancel B2337: Increase the size of the existing Cedar Grove 69 kV, 10.8 MVAR capacitor bank to 20.41 MVAR

Estimated Cost: \$0.06M

Required IS Date: 6/1/2018

Reason for the Replacement Change:

Operation concerns on the potential voltage issue with larger bank at Cedar Grove.

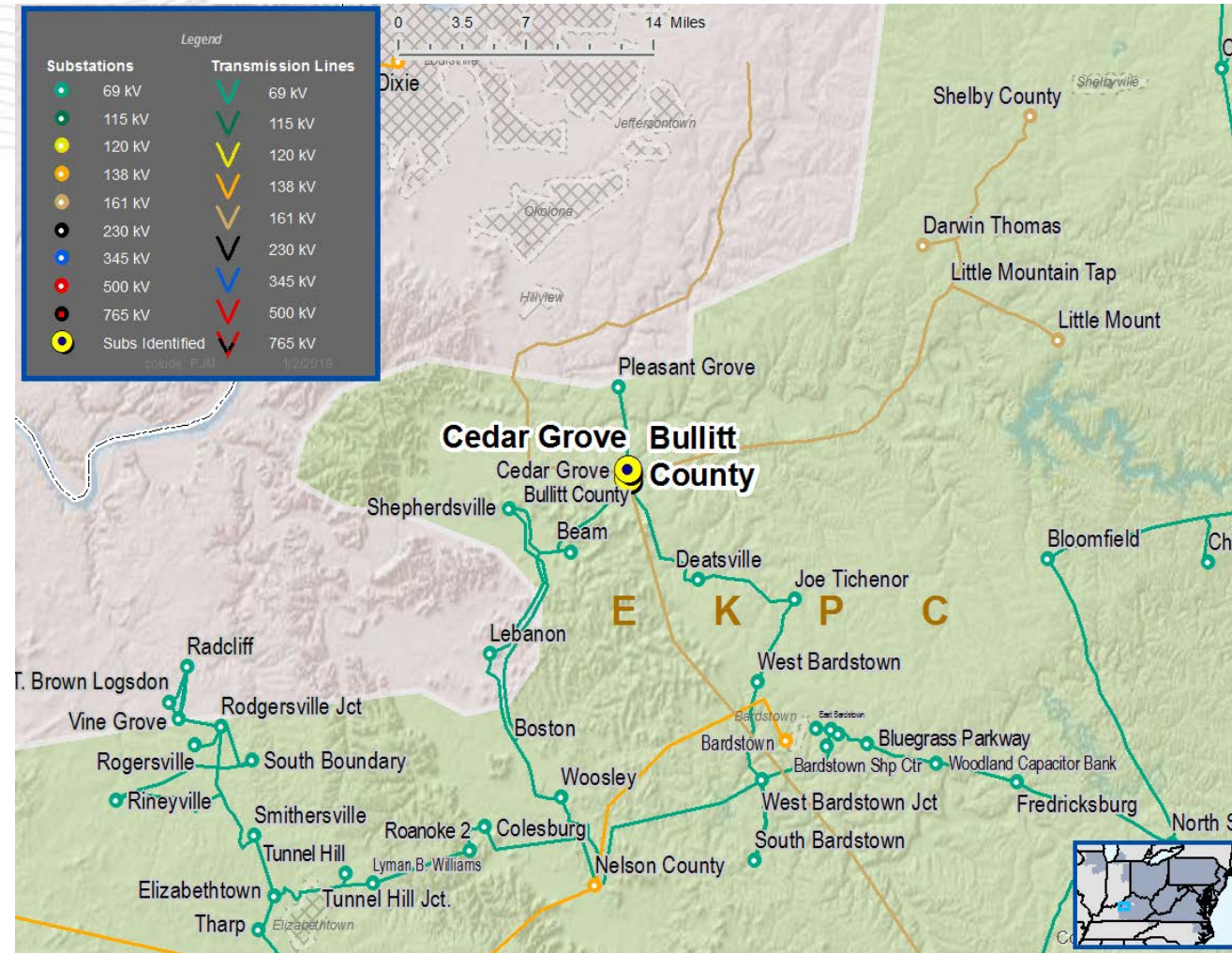
Replaced By: Move Greenbriar 69kV, 12.0 MVAR capacitor bank to Bullitt Co 69kV substation (B3094)

Estimated Project Cost: \$0.3M

Required IS Date: 6/1/2018

Projected IS Date: 6/1/2019

Status: Engineering





AEP Transmission Zone Baseline Scope Change

B2889.* Scope Change:

B2889.* Previously Presented: 4/21/2017 and 5/31/2017 Western SRTEAC

Scope changes (Highlighted in Red):

Cliffview Wolf Glade Station: Establish 138kV bus. Install ~~two one~~ 138/69kV XFR (130 MVA), ~~six five~~ 138kV CBs (40kA 3000A) and ~~four three~~ 69kV CBs (40kA 3000A) to replace Cliffview station. (B2889.1)

Cliffview Line-Wolf Glade 138 kV Extension: Tap the existing Pipers Gap – Jubal Early 138kV line section. Construct double circuit in/out (~2 miles) to newly established 138kV bus, utilizing 795 26/7 ACSR conductor. (B2889.4)

Byllesby – Wythe 69kV: Retire all 13.77 miles (1/0 CU) of this circuit (~4 miles currently in national forest). (B2889.2)

Galax – Wythe 69kV: Retire 13.53 miles (1/0 CU section) of line from Lee Highway down to Byllesby. This section is currently double circuited with Byllesby – Wythe 69kV. Terminate the southern 3/0 ACSR section into the newly opened position at Byllesby 69kV, creating a new Galax – Byllesby 69kV circuit.. (B2889.3)

Jubal Early Station: Install one 138/69kV XFRs (90 MVA), one 138 kV circuit switcher, two 138kV CBs (40kA 3000A), establish a 69 kV bus, install three 69kV CBs (40kA 3000A). (B2889.5)

Cliffview 69 kV Extension: Extend the existing double circuit Cliffview 69 kV line (0.5 mile) to the new Wolf Glade Station. (B2889.6)

Original Cost: \$30.0M

New Cost: \$37.0M

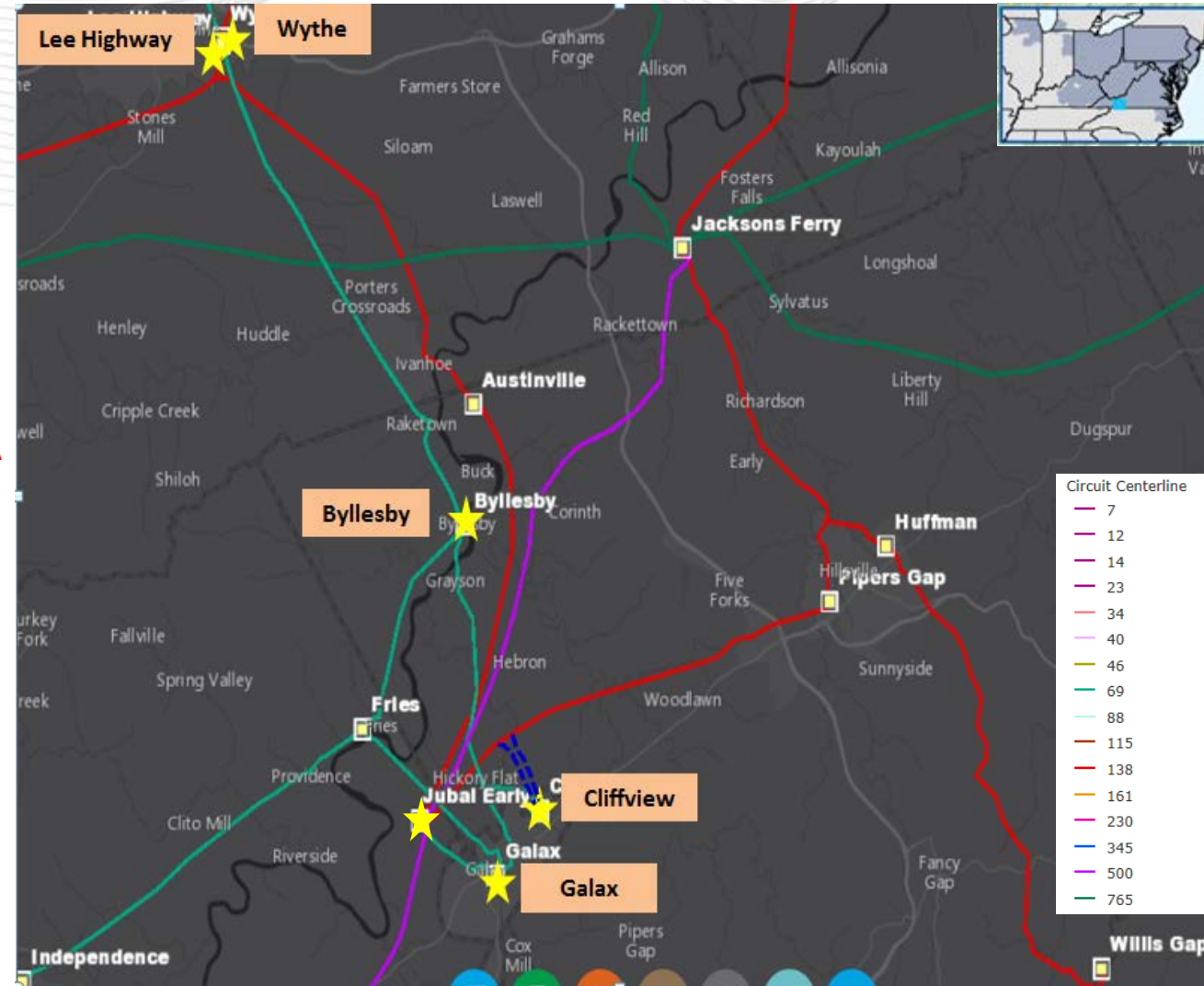
Reason for the Change:

Cliffview is being rebuilt as Wolf Glade station due to space constraints at the existing Cliffview station – there’s no room to add any additional breakers there, so the station is rebuilt in the clear. The second transformer is being moved to Jubal Early due to high (>80%) loading on the Wolf Glade-Byllesby line and some space constraints at Wolf Glade. Using the second transformer at Jubal Early gets it closer to the loads as well, rather than at Wolf Glade

Required IS Date: 6/1/2021

Projected IS Date: 6/1/2021

Status: Scoping



First Review

Baseline Reliability Projects



Problem Statement:

Planning Criteria:

TO criteria violations in the Bluffton, Ohio area have been identified in the 2022 Summer RTEP model.

N-1 Voltage Deviation:

The DTR, McIntosh, Woodcock Sw, Cory, S. Mt Cory, E Mt Cory, Rawson & N Woodcock 34.5 kV buses experience voltage deviations ranging from 8.1% to 11.2% for the following contingencies:

- AEP_P4_#7765_05NFINDL 138_B'
- AEP_SUBT_P1-3_#703_05N WOODCK 69.0_1
- AEP_SUBT_P2-2_#703_05N WOODCK 69.0_1
- AEP_P1-2_#5136
- AEP_P2-2_#10113_05NFINDL 138_1
- AEP_P4_#9513_05E LIMA 138_A1
- AEP_SUBT_P4_#1262_05N WOODCK 69.0_A

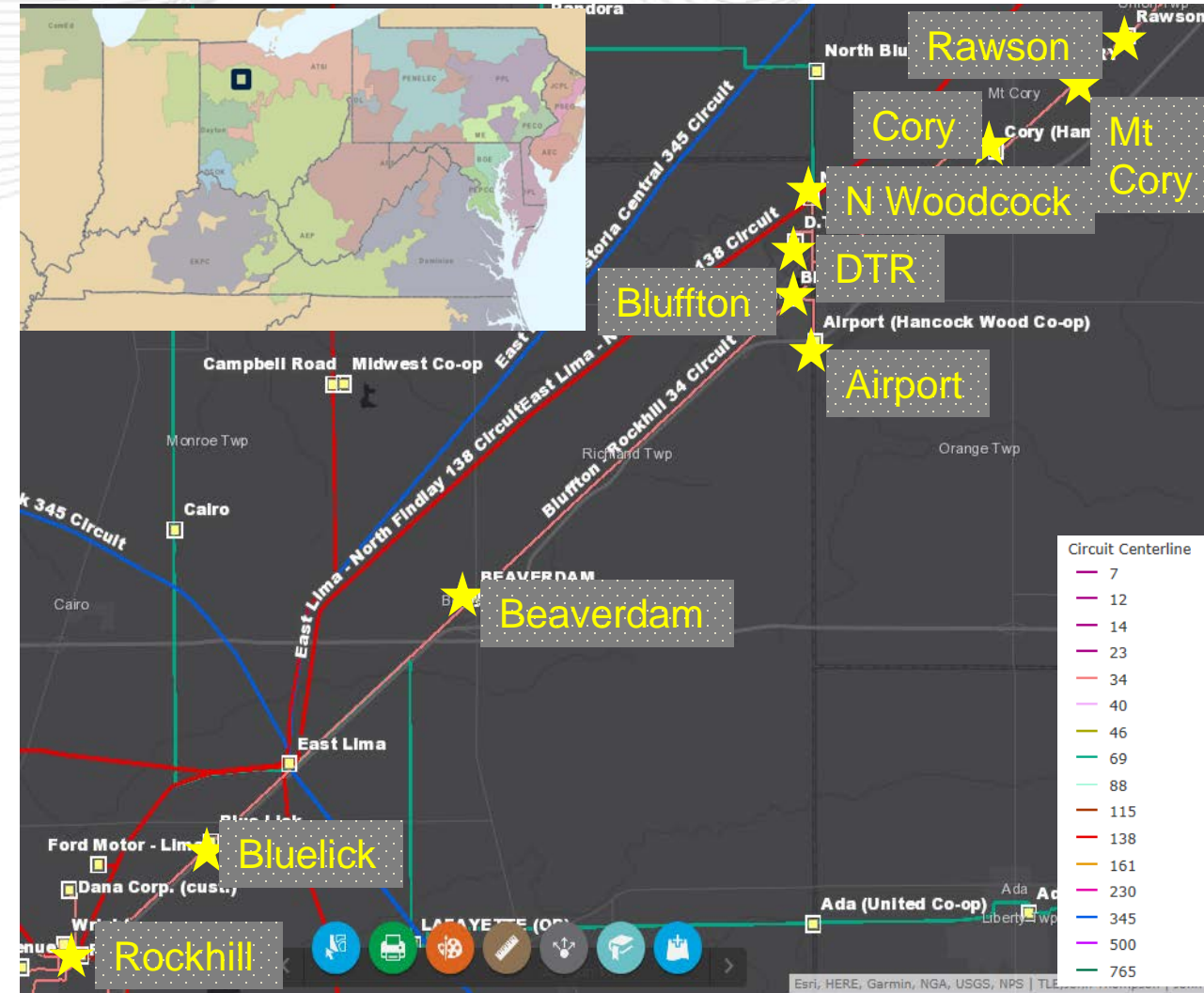
N-1-1 Voltage Magnitude:

Voltages at Bluffton, Airport, Beaverdam, Bluelick, and Rockhill 34.5 kV buses range from 0.78. - 0.85 pu for the following N-1-1 contingency pair:

E Lima – Ford Lima 138 kV ckt + Rockhill 138/34.5 kV T1 (or T2)

Voltages at DTR, McIntosh, Woodcock Sw, Cory, S Mt Cory E Mt Cory, and Rawson 34.5 kV buses range from 0.88 - 0.89 pu for the following N-1-1 contingency pair:

E. Lima – N. Findlay 138 kV ckt + New Liberty 138/34.5 kV transformer



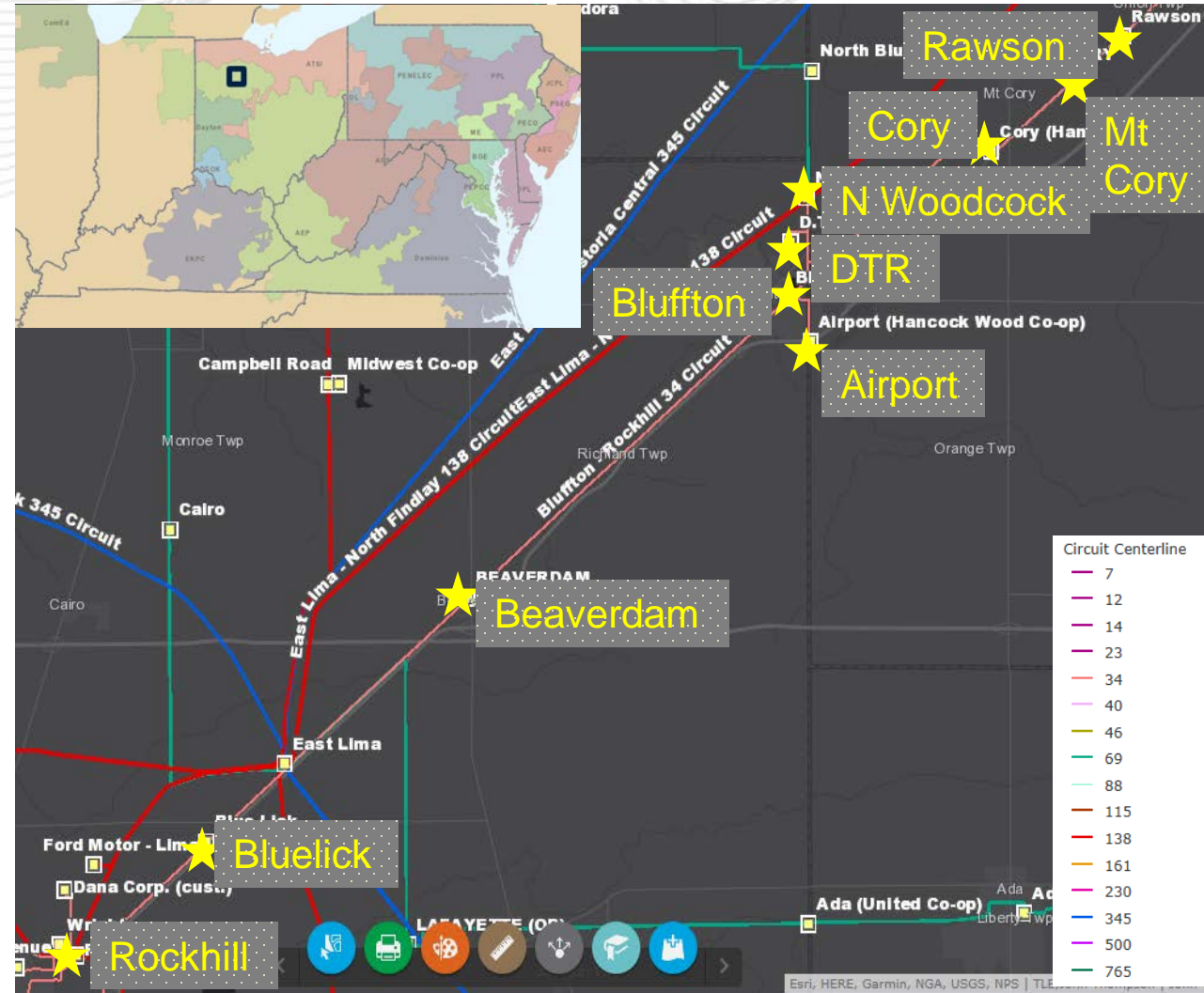
N-1-1 Voltage Deviation:

Voltage deviations at Bluffton, Airport, Beaverdam, Bluelick, and Rockhill 34.5 kV buses range from 15.8% - 17.8% for the following N-1-1 contingency pair:
E Lima – Ford Lima 138 kV + Rockhill 138/34.5 kV T1 (or T2)

Voltage deviations at DTR, McIntosh, Woodcock Sw, Cory, S. Mt Cory, E Mt Cory, Rawson, and N Woodcock 34.5 kV buses range from 8% - 13.18% for the following N-1-1 contingency pairs:

- AEP_SUBT_P1-3_#1070_05NEWLIB 138_1 & AEP_SUBT_P1-3_#703_05N WOODCK 69.0_1
- AEP_SUBT_P1-3_#1070_05NEWLIB 138_1 & AEP_P1-2_#5136
- AEP_SUBT_P1-2_#2267 & AEP_SUBT_P1-3_#703_05N WOODCK 69.0_1
- AEP_SUBT_P1-2_#2267 & AEP_P1-2_#5136
- AEP_P1-2_#7758 & AEP_SUBT_P1-3_#703_05N WOODCK 69.0_1
- AEP_P1-2_#7758 & AEP_P1-2_#5136
- AEP_SUBT_P1-3_#705_05FINDLC 138_1 & AEP_SUBT_P1-3_#703_05N WOODCK 69.0_1
- AEP_SUBT_P1-3_#705_05FINDLC 138_1 & AEP_P1-2_#5136
- AEP_P1-4_05FINDLAY C 34.500 & AEP_SUBT_P1-3_#703_05N WOODCK 69.0_1
- AEP_P1-4_05FINDLAY C 34.500 & AEP_P1-2_#5136
- AEP_SUBT_P1-3_#2237_05EBERSO 138_1 & AEP_SUBT_P1-3_#703_05N WOODCK 69.0_1
- AEP_SUBT_P1-3_#2237_05EBERSO 138_1 & AEP_P1-2_#5136

...and 75 other pairs.





Potential Solution:

Build a new Boutwell 138/69/34.5 kV Station cutting into the East Lima – New Liberty 138 kV. Build a new single circuit 69 kV (34.5 kV operated) line connecting the Hancock Wood Airport delivery point with the new Boutwell 138/69/34 kV Station (approx. 3 miles). **Estimated Trans Cost: \$19 M**

Total Estimated Transmission Cost: \$19 M

Alternatives: Close the N.O. switch at Bluffton 34.5 kV (towards Woodcock) and rebuild approx 18 miles of 34.5 kV line. This alternative was not chosen due to higher costs.

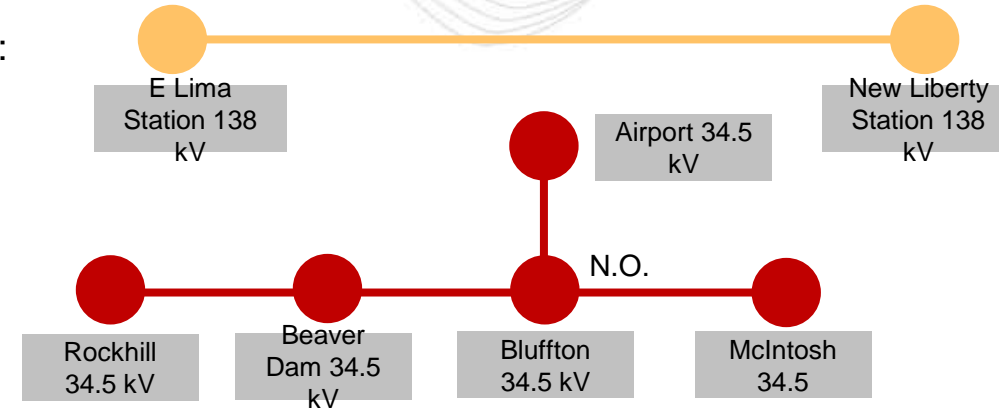
Required In-service: 6/1/2022

Projected In-service: 06/01/2021

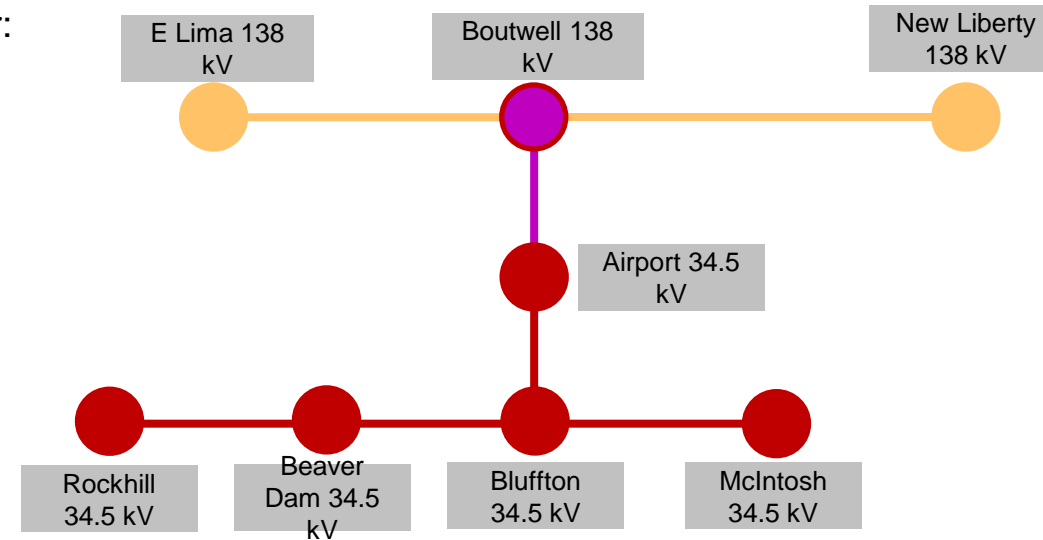
Project Status: Scoping/ Engineering

Legend	
500 kV	
345 kV	
138 kV	
69 kV	
34.5 kV	
23 kV	
New	

Before:



After:





TO Planning Criteria Violations:

In the 2022 PJM Winter RTEP, a TO Criteria violation was identified due to exceeding the thermal emergency rating (106% of the 66 MVA thermal emergency rating) on Chemical transformer #2 under a N-1-1 contingency condition involving the loss of the Chemical transformer #6 (which includes the loss of XFR #4, Chemical – Turner 138 kV line and Chemical – Ortin 138 kV, due to the loss of 138 kV bus #1) paired with the loss of the Capitol Hill – Chemical 138 kV line (which includes the loss of XFR #1, due to it's existing configuration on the line).

Potential Solution:

Replace 138kV MOAB switch "YY" with a new 138kV circuit switcher on the high side of Chemical XFR #6.

Total Estimated Transmission Cost: \$0.7M

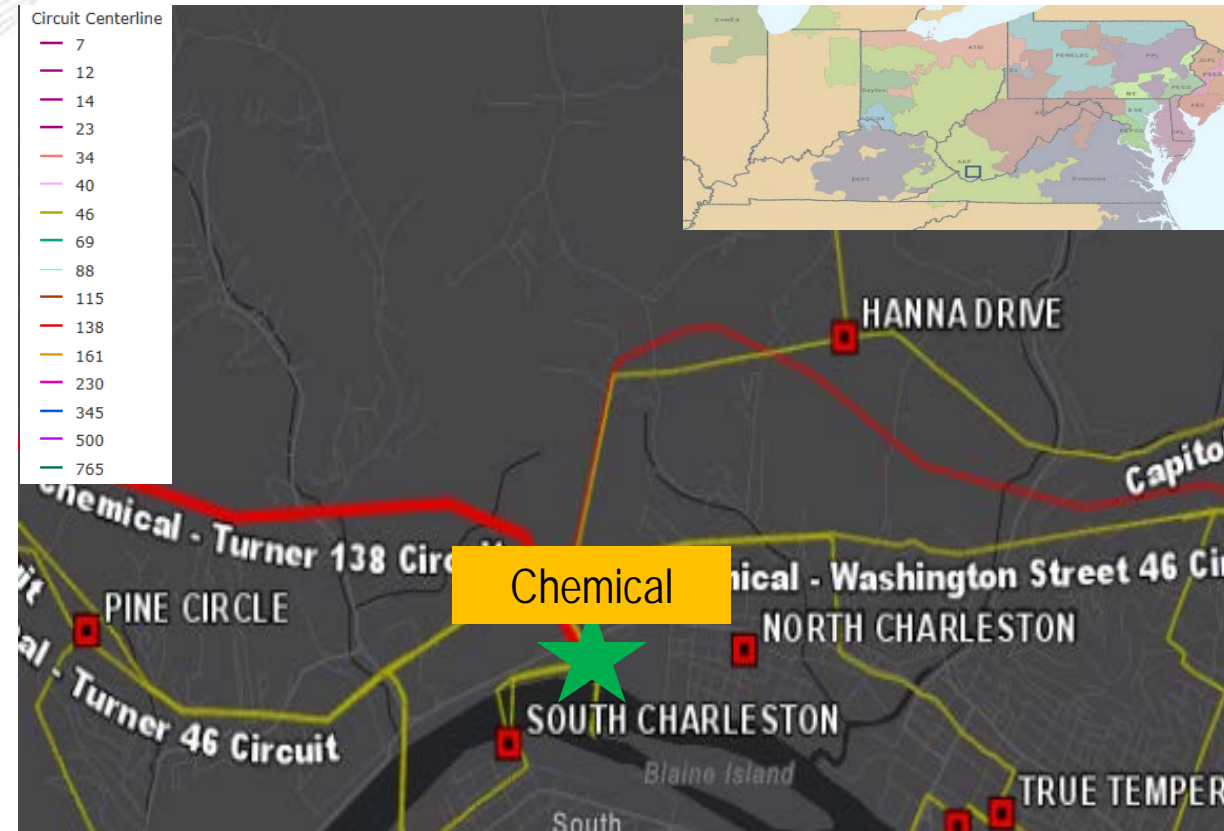
Alternatives:

Replace the existing Chemical transformer #2 with a new, higher capacity, 138/46 kV transformer. **Estimated Cost: \$2.5M**

Required In-service: 12/1/2022

Projected In-service: 12/1/2022

Project Status: Scoping





Fort Robinson – Moccasin Gap 69 kV Line Section Replacements

TO Planning Criteria Violations:

The Fort Robinson – Moccasin Gap 69 kV line section (~5 miles) will load to 105% (2023 RTEP) of its winter emergency rating (48 MVA) for the loss of the Hill – Gate City 69 kV line section.

The line will also overload for loss of the Hill 138/69/34.5 kV transformer or the Clinch River – Nagel 138 kV circuit

Potential Solution:

Rebuild the 1/0 Cu. conductor sections (~1.5 miles) of the Fort Robinson - Moccasin Gap 69 kV line section (~5 miles) utilizing 556 ACSR conductor and upgrade existing relay trip limit (WN/WE: 63 MVA , line limited by remaining conductor sections).

Estimated Cost: \$3.0 M

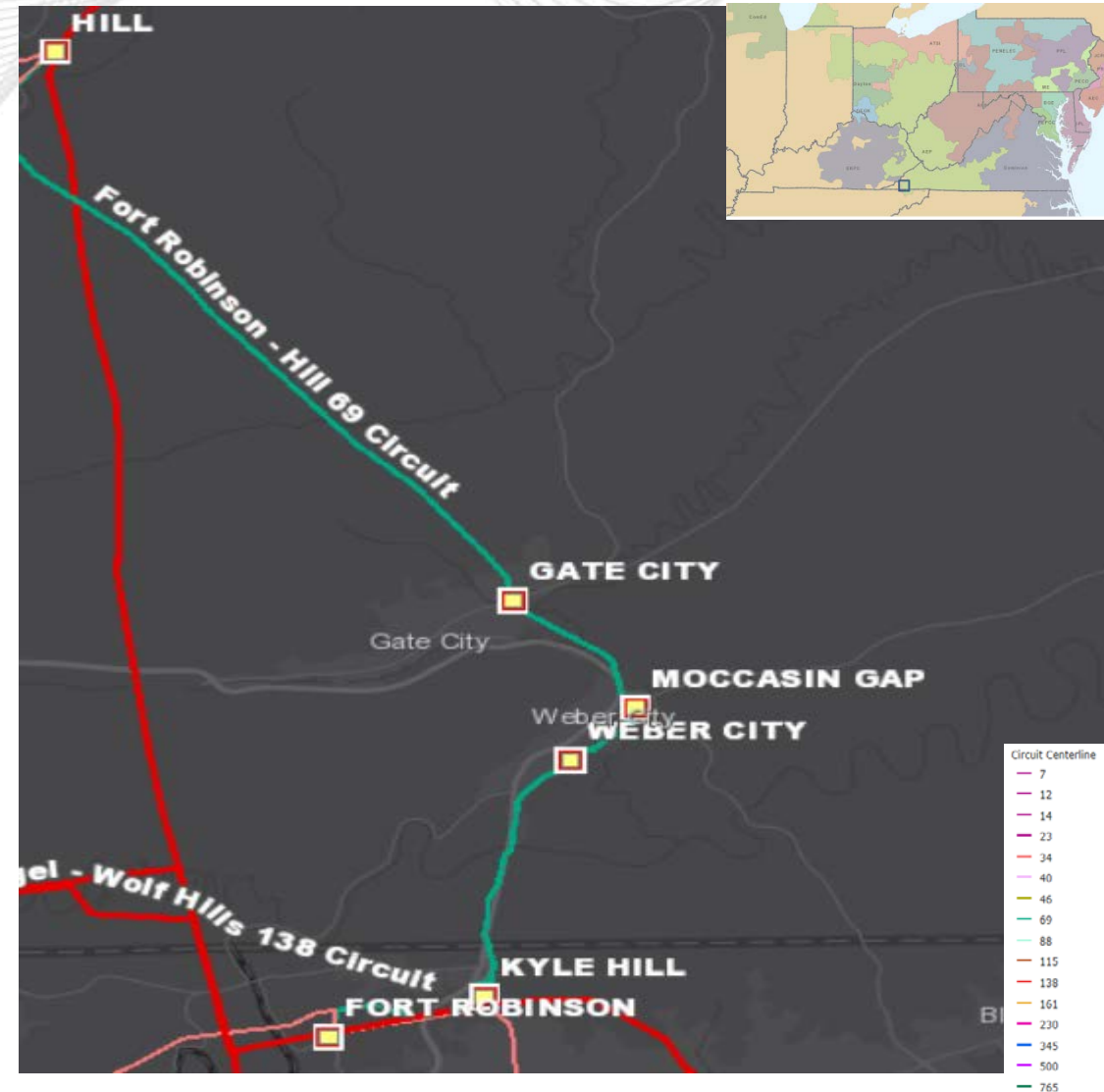
Alternative:

No cost effective transmission alternative identified

Required IS Date: 12/1/2023

Projected In-service: 9/1/2022

Project Status: Scoping

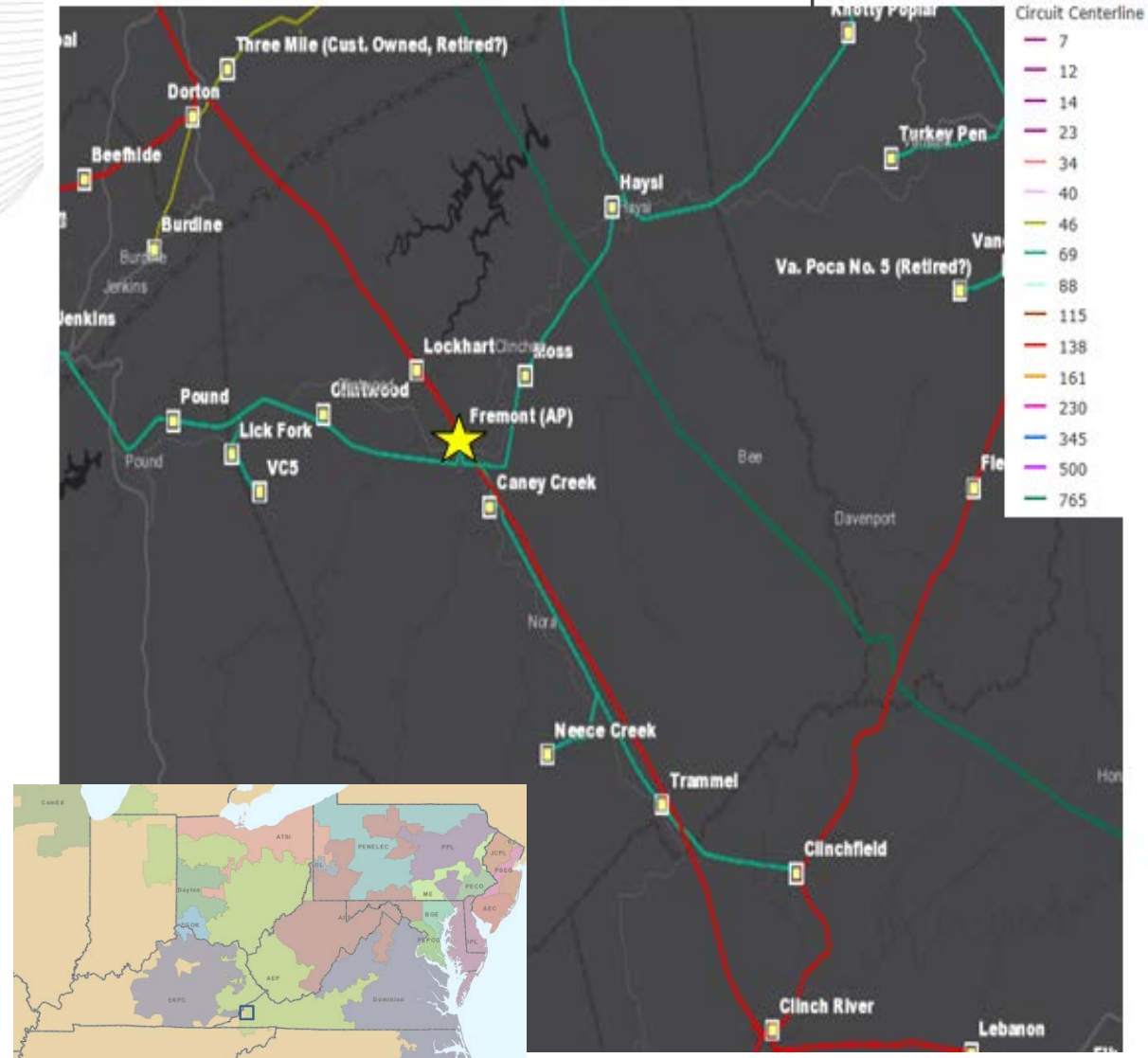


TO Planning Criteria Violations:

The existing Fremont 138/69 kV transformers #1 and #2 (both 1957 vintage) will overload to ~120% (2022 RTEP) of their winter emergency rating (70 MVA) for loss of the Garden Creek – Clinch River 138 kV circuit paired with a loss of one of the aforementioned 138/69 kV transformers at Fremont.

The existing Fremont 138/69 kV transformers #1 and #2 (both 1957 vintage) will overload to ~111% (2022 RTEP) of their winter emergency rating (70 MVA) for loss of the Clinchfield 138/69 kV transformer paired with a loss of one of the aforementioned 138/69 kV transformers at Fremont.

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Potential Solution:

Replace existing 50 MVA 138/69 kV transformers #1 and #2 (both 1957 vintage) at Fremont station with new 130 MVA 138/69 kV transformers. **Estimated Cost: \$4.1 M**

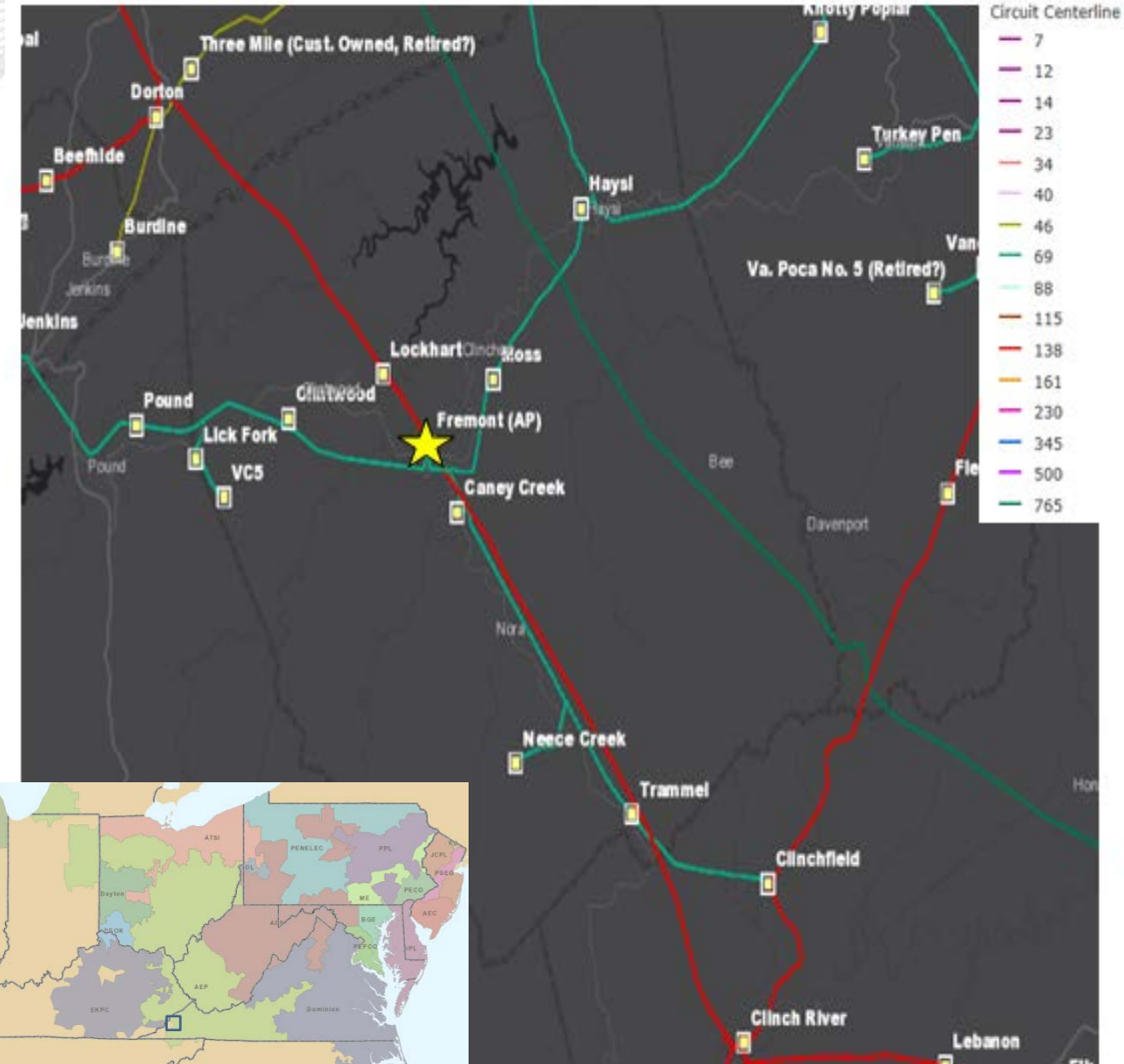
Alternative:

Install 138 kV circuit breakers and a second 138/69 kV transformer at Clinchfield station. A significant expansion would be required at Clinchfield station in order to install the new equipment. The current Clinchfield station is constructed as a tiered station with two yards separating the 138 kV and 69 kV equipment due to the severe elevation changes of the land surrounding the station. The substantial costs associated with grading or relocating the station to make this alternative work keep it from being considered a cost effective solution.

Required In-service: 12/1/2022

Projected In-service: 12/1/2020

Project Status: Scoping

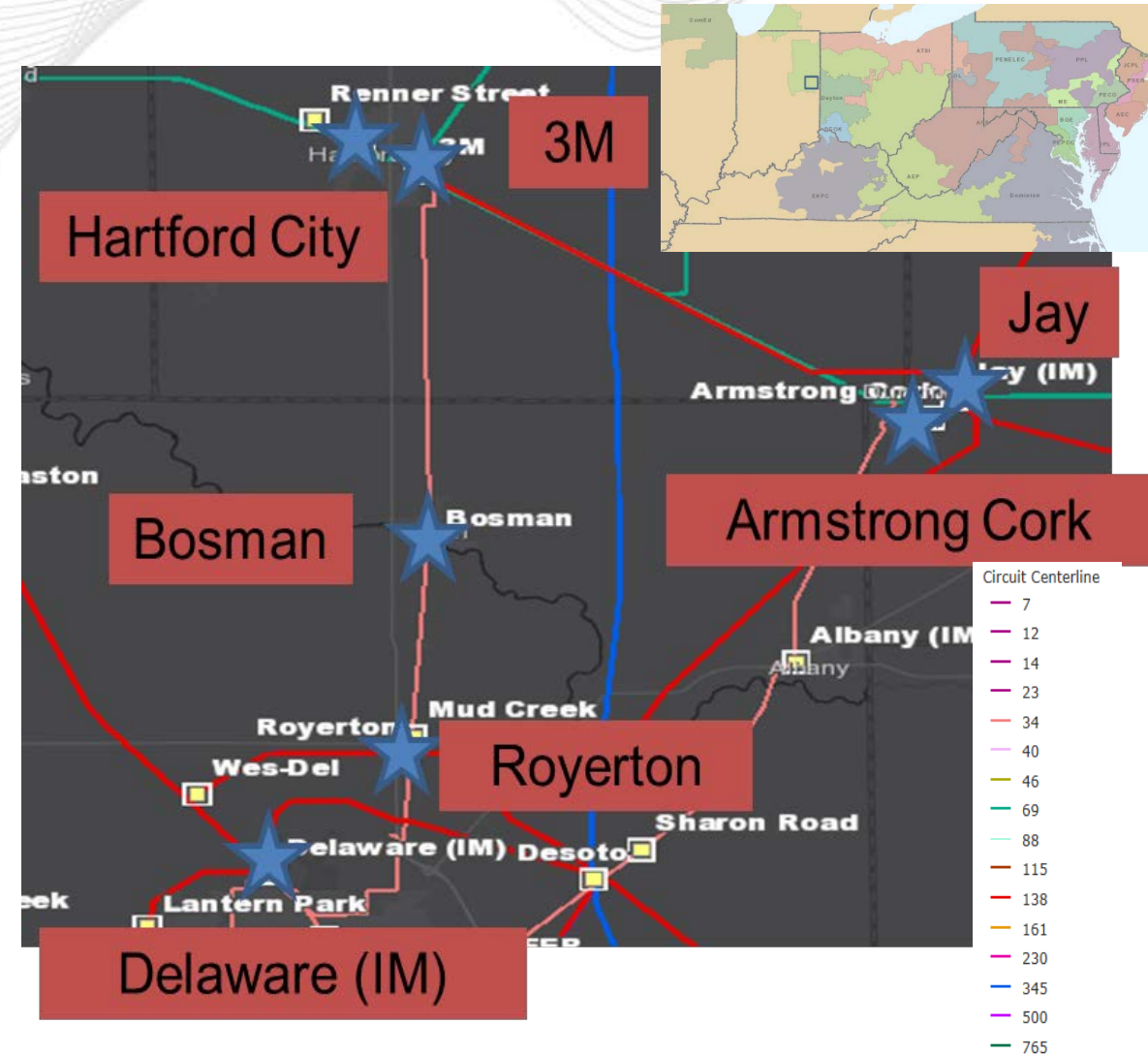


TO Planning Criteria Violations

The following overloads were identified in the 2022 and 2023 RTEP Summer case with corrected Armstrong Cork load model (about 10MW more).

For loss of the Jay and Deer Creek 138/69/34.5kV banks, the following overloads occur.

- Delaware – Bosman 34.5kV: 147% overload of the 23MVA 3/0 CU conductor and 125% overload of the 27MVA 4/0 CU conductor
- Bosman – Hartford 34.5kV: 105% overload of the 23MVA 3/0 CU conductor.
- Upon loss of Deer Creek 138/69/34.5kV transformer and Bosman – Delaware 34.5kV line, the following overloads occur:
 - Armstrong Cork – Fulkerson 69kV line overloads 113% past it's 46MVA 3/0 CU and 103% past its 50MVA 4/0 ACSR ratings.
 - Fulkerson – 3M 104% past its 46MVA 3/0 CU rating
- This issue has been verified by the high amount of PCLLRW's in the area. This area has received PCLLRW's on 2/26/2018 (2 different instances this day due to Deer Creek 138/69/34.5kV transformer being out.), 2/6/2018, 1/9/2018, 7/24/17, 7/14/17 for loss of Jay transformer with several of these PCLLRW's lasting multiple days.



Need Number: AEP-2018-IM004 (Needs presented in 10/26/2018 SRTEAC)

Process Stage: Solution Meeting 1/11/2019

Supplemental Project Driver: Equipment Condition/Performance/Risk

Specific Assumptions Reference: AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8)

Problem Statement:

Bosman-Delaware 34.5kV

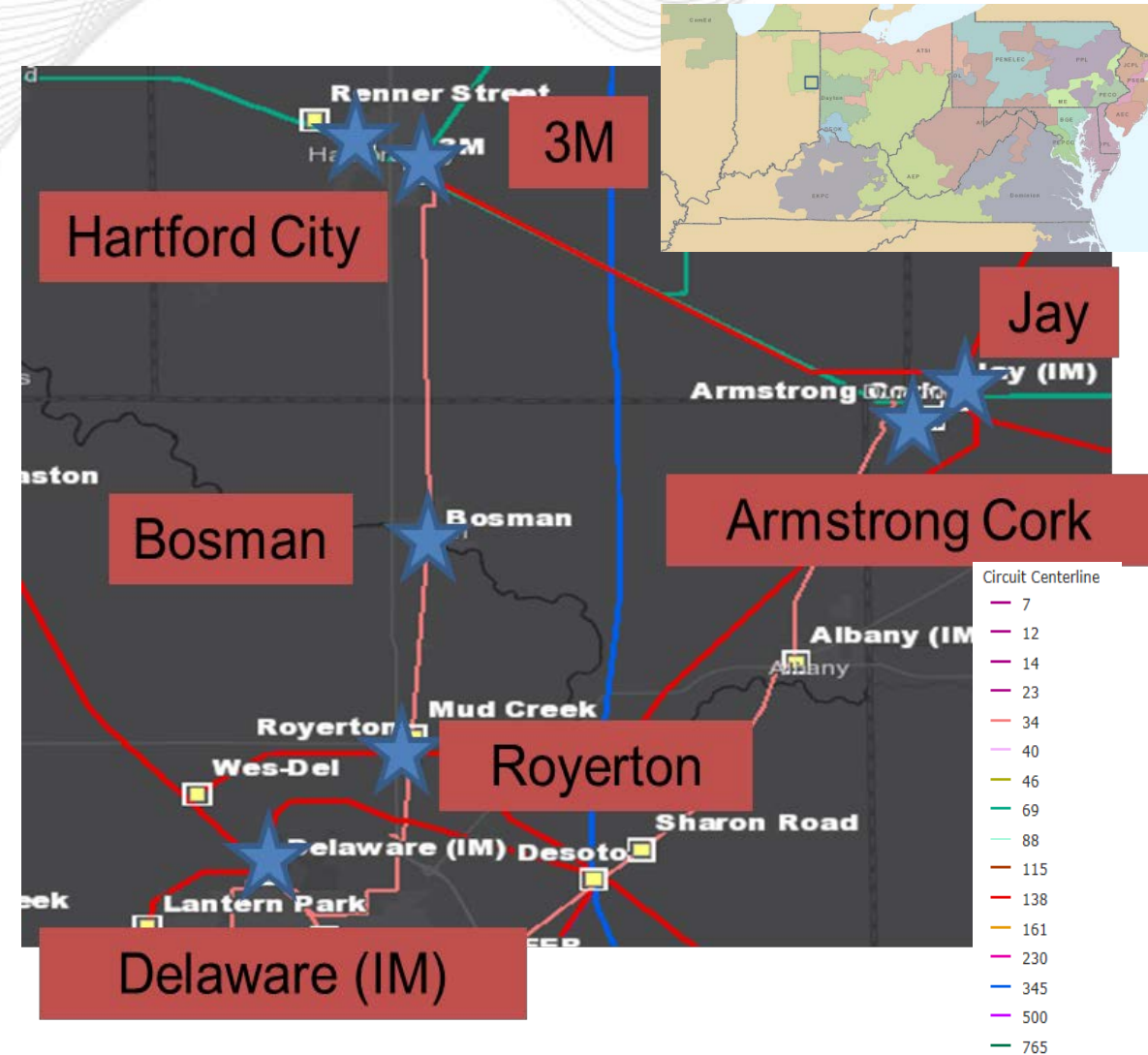
- 1950's wood crossarm construction
- 3/0 copper conductor.
- It's subject to 45 category A conditions
- It's subject to 39 category B conditions

Bosman 34.5kV Station

- Transformer 1-1956 vintage
 - High levels of carbon dioxide dissolved in the oil.
 - Several fault events between 300-700 degrees Celsius which has caused short circuit strength breakdown
- Breakers "N" and "M"
 - 1970 FK oil type breakers with no oil containment.
 - Fault Operations: CB N(38) CB M(76) – Recommended (10)
- Station currently resides in the regulatory floodway which presents safety and reliability risks.

Hartford City 69/34.5kV Station

- Transformer 1-1963 vintage
 - Elevated levels of Ethylene and Ethane dissolved in the oil.
 - Subject to multiple fault events exceeding 700 degrees Celsius which led to short circuit strength breakdown





Proposed Solution (Baseline):

Royerton

Install a 138/69kV transformer. Install a 69kV bus with one 69kV breaker toward Bosman station. Rebuild the 138kV portion into a ring bus configuration built for future breaker and a half with 4 138kV breakers **Estimated Trans Cost: \$10.251M**

Bosman/Strawboard

Rebuild this station in the clear across the road to move it out of the flood plain and bring it up to 69kV standards. **Estimated Trans Cost: \$4.474M**

Delaware

Retire Breaker L and re-purpose M for the Jay line. **Estimated Trans Cost: \$0.176M**

Hartford City

Retire all 34.5kV equipment. Re-purpose breaker M for the Bosman line 69kV exit.

Estimated Trans Cost: \$0.875 M

Jay

Rebuild the 138kV portion of this station as a 6 breaker, breaker and a half station re-using the existing breakers “A”, “B” and “G”. Rebuild the 69kV portion of this station as a 6 breaker ring bus re-using the 2 existing 69kV breakers. Install a new 138/69kV transformer.

Estimated Trans Cost: \$18.732 M

Hartford City – Jay

Rebuild the 69kV Hartford City – Armstrong Cork line but instead of terminating it into Armstrong Cork, terminate it into Jay station. **Estimated Trans Cost: \$21.12M**

Armstrong Cork – Jay #2

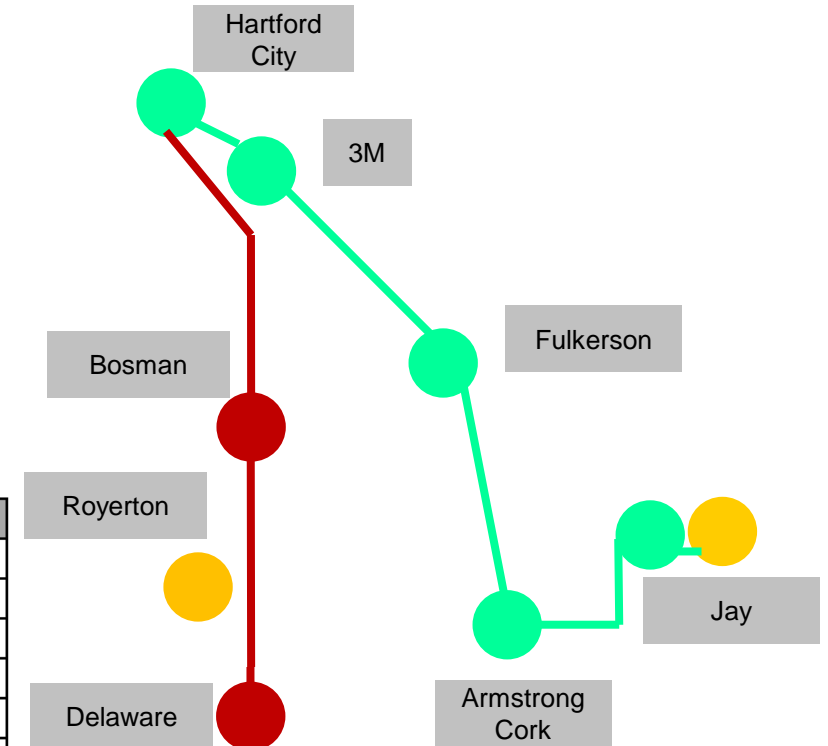
Build a new 69kV line from Armstrong Cork – Jay station. **Estimated Trans Cost: \$2.347M**

Delaware – Bosman

Rebuild the 34.5kV Delaware – Bosman line as the 69kV Royerton – Strawboard line.

Retire from Royerton – Delaware station. **Estimated Trans Cost: \$12.78 M**

Legend	
500 kV	
345 kV	
138 kV	
69 kV	
34.5 kV	
23 kV	
New	





Alternatives:

Alternate 1:

Build a 138kV line out to a location west of Armstrong Cork station and build a 138/69kV station connecting the new 138kV line to the rebuilt Hartford City – Armstrong Cork line. This would be in lieu of building Jay station out. The alternative would cost roughly the same with the increased risk and community impact associated with rebuilding through Dunkirk.

Alternate 2:

Extend two 138kV lines out from Jay to bring Armstrong onto the 138kV network. This solution would still require rebuilding Strawboard – Royerton as well as Hartford – Jay. Instead of expanding the 69kV yard, AEP would have to further expand the 138kV yard, and would have to rebuild the customer station. This would introduce increased costs to the project and would greatly increase the risk as AEP would now be dependent on the customer for the project’s schedule.

Alternate 3:

Build the Hartford – Jay line to 138kV standards with the intent of eventually energizing Deer Creek – Hartford – Jay at 138kV and providing a step down at Hartford City. While this would help the area voltages, it would require that AEP rebuild several stations. Some of which are less than 10 years old, and some of which don’t have enough room to support a 138kV source.

At this time, this idea did not seem prudent.

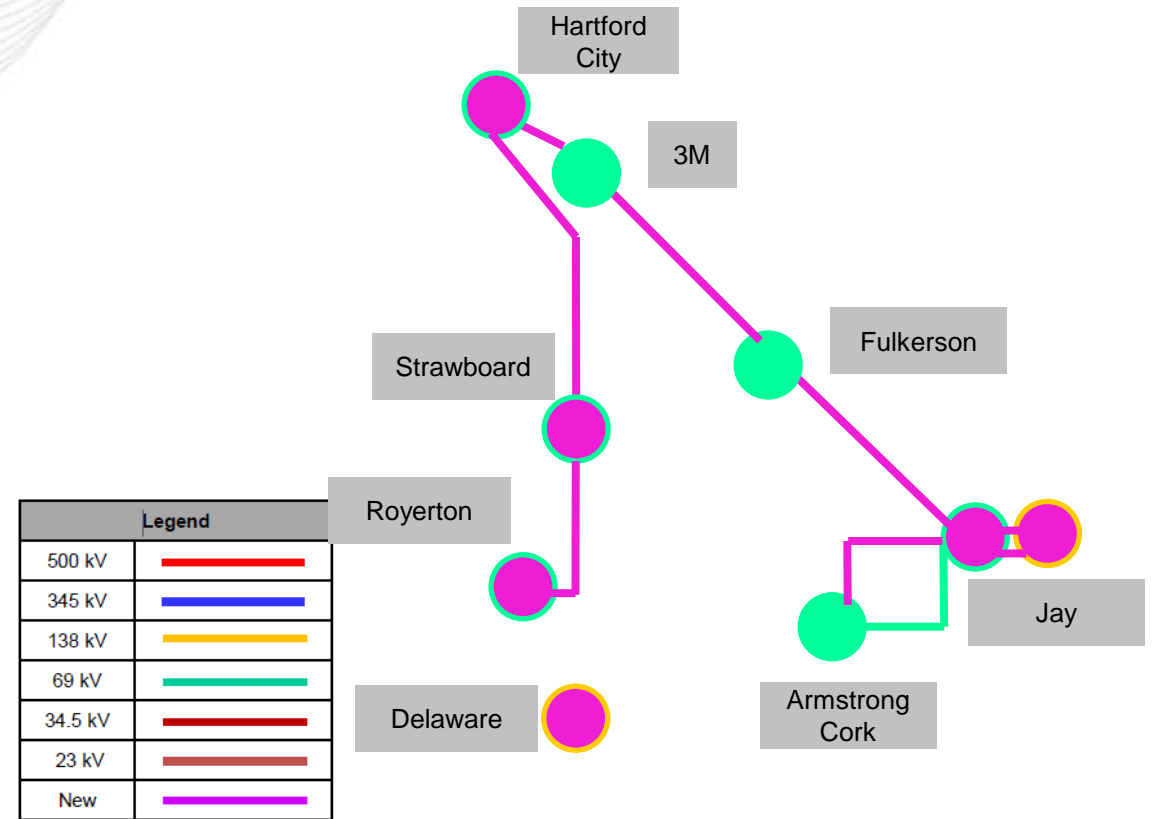
Total Estimated Transmission Baseline* Cost: \$70.75M

Required IS Date: 6/1/2022

Projected IS Date: 6/1/2022

Project Status: Scoping

*Note that the baseline solution addresses all the supplemental needs (AEP-2018-IM004), so no supplemental estimates are provided.





AEP Transmission Zone: Baseline Holston Circuit Switcher Installation

TO Planning Criteria Violations:

In the 2022 PJM Summer Case, TO criteria thermal violations exist in the Kingsport 34.5 kV sub-transmission network for the outage of the 138/34.5 kV transformer #5 at Holston paired with the loss of the Nagel – Reedy Creek 138 kV circuit:

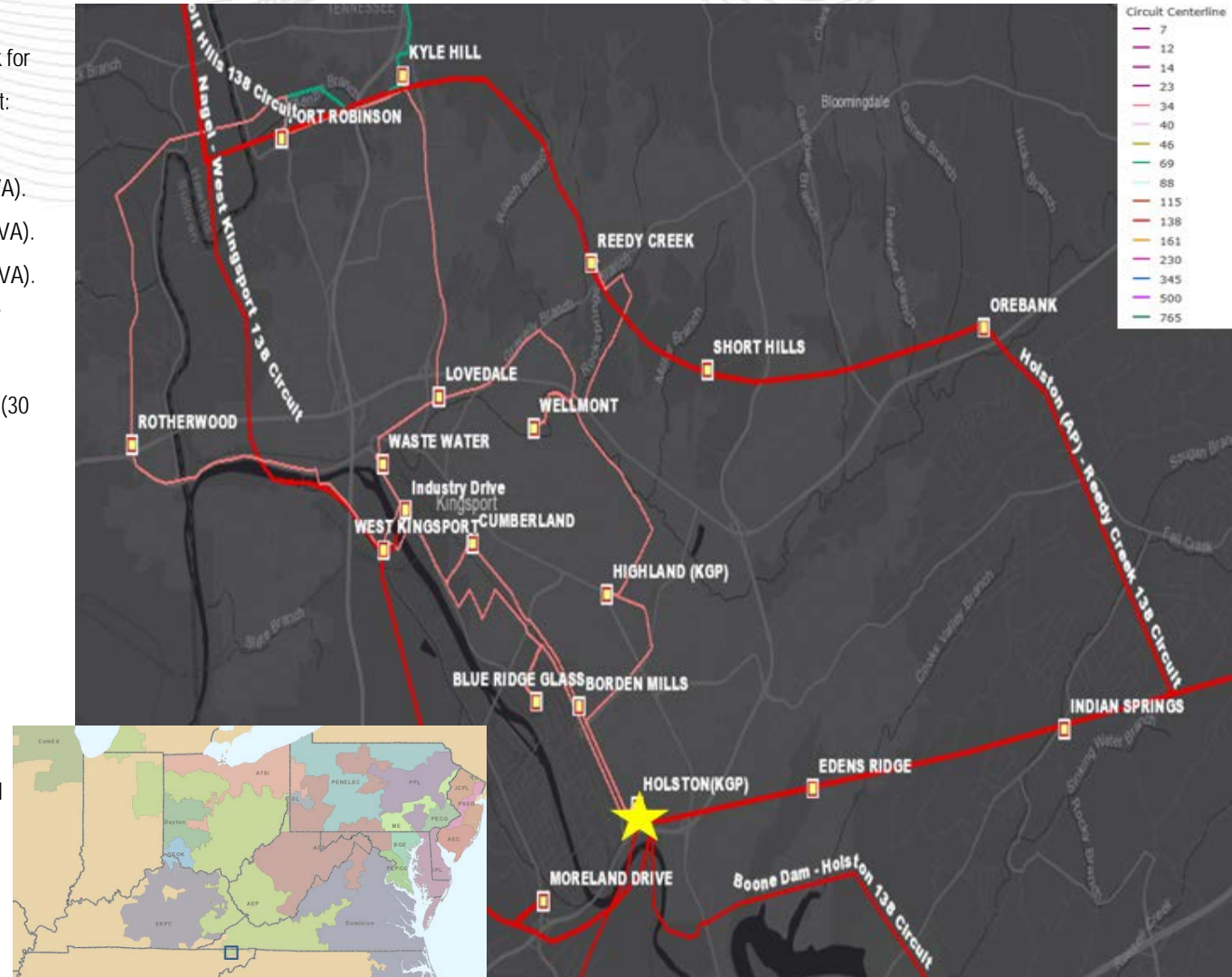
- The Holston – Highland 34.5 kV line section (~2.5 mi.) will load to 130% of its summer emergency rating (27 MVA).
- The Lovedale – Arbutus S.S. 34.5 kV line section (~1.8 mi.) will load to 154% of its summer emergency rating (35 MVA).
- The Lovedale – Waste Water 34.5 kV line section (~1.0 mi.) will load to 115% of its summer emergency rating (30 MVA).
- The Lovedale – Kyle Hills Sw. 34.5 kV line section (~2.2 mi.) will load to 106% of its summer emergency rating (35 MVA).
- The Reedy Creek – Arbutus S.S. 34.5 kV line section (~1.6 mi.) will load to 177% of its summer emergency rating (37 MVA).
- The West Kingsport – Waste Water 34.5 kV line section (~ 0.7mi.) will load to 116% of its summer emergency rating (30 MVA).
- The West Kingsport 138/34.5 kV transformer #1 will load to 106% of its summer emergency rating (60 MVA).
- The Reedy Creek 138/69/34.5 kV transformer #1 will load to 106% of its summer emergency rating (39 MVA).

Voltage Magnitude issues are also observed for the same contingency pair at the following stations in the area: Orebank (0.63 pu), Short Hills (0.63 pu), and Reedy Creek 69 kV (0.71 pu)

Voltage Deviation issues are also observed for the same contingency pair at the following stations in the area: Orebank (44%), Short Hills (44%), Reedy Creek 69 kV (40%), Highland (13%), Wellmont (16%), Lovedale (11%), and Waste Water (10%)

The contingency pair listed above resulted in a non-convergence scenario within the 2022 Winter Case.

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Potential Solution:

Install a 138 kV 3000A 40 kA circuit switcher on the high side of the existing 138/34.5 kV transformer #5 at Holston station.

Estimated Cost: \$0.7 M

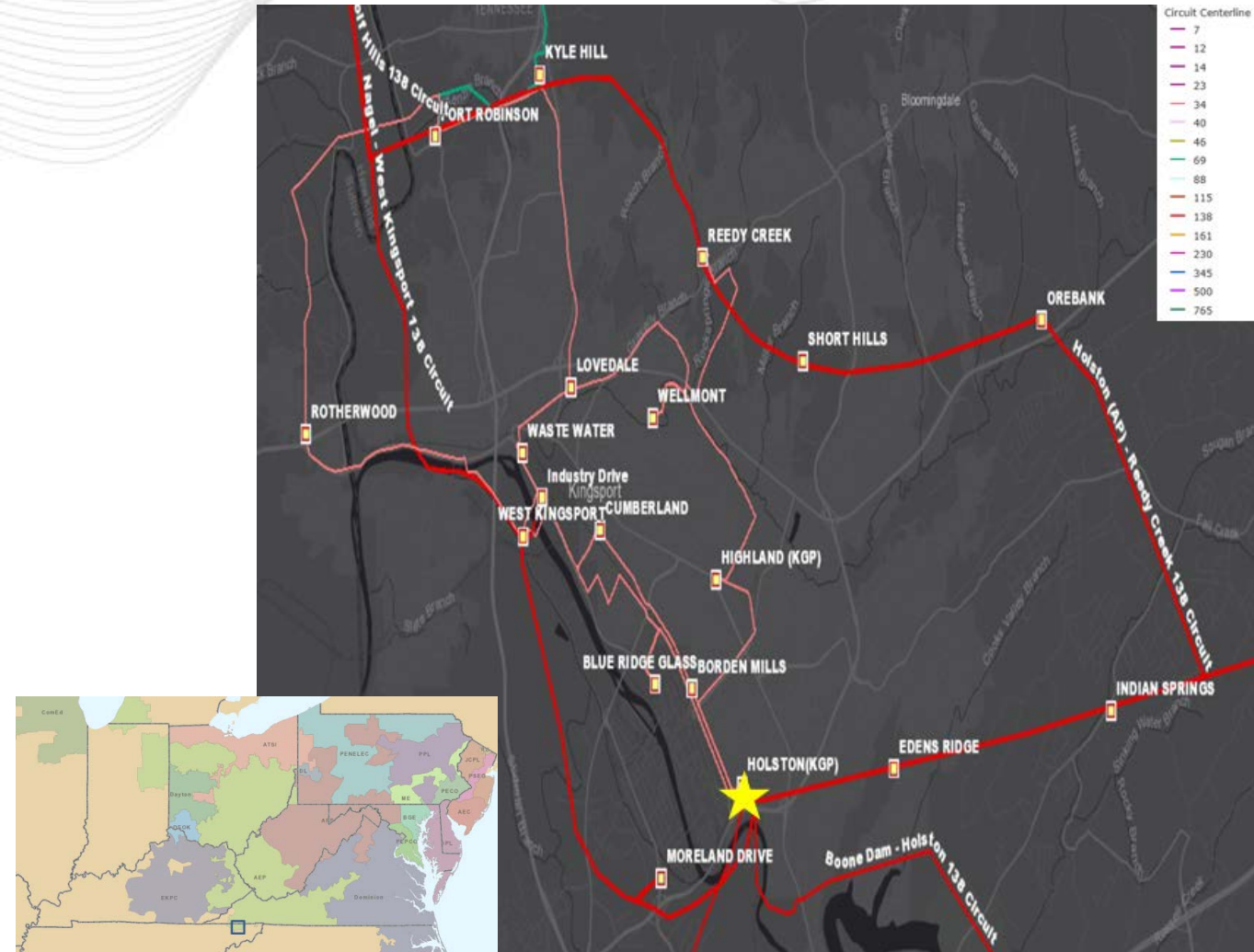
Alternative:

No cost effective transmission alternative identified.

Required In-service: 6/1/2022

Projected In-service: 6/1/2022

Project Status: Scoping



TO Planning Criteria Violations:

In the 2022 PJM Winter Case, TO criteria low voltage magnitude and drop violations occur at Stuart station on the 69 kV bus for the loss of the Fielddale – Stuart 69 kV circuit. The Stuart 69 kV bus voltage drops by 8.5% to 0.89 p.u.

Potential Solution:

Increase the size of the existing capacitor bank at Stuart from 10.8 MVAR to 23 MVAR.

Estimated Cost: \$0.5 M

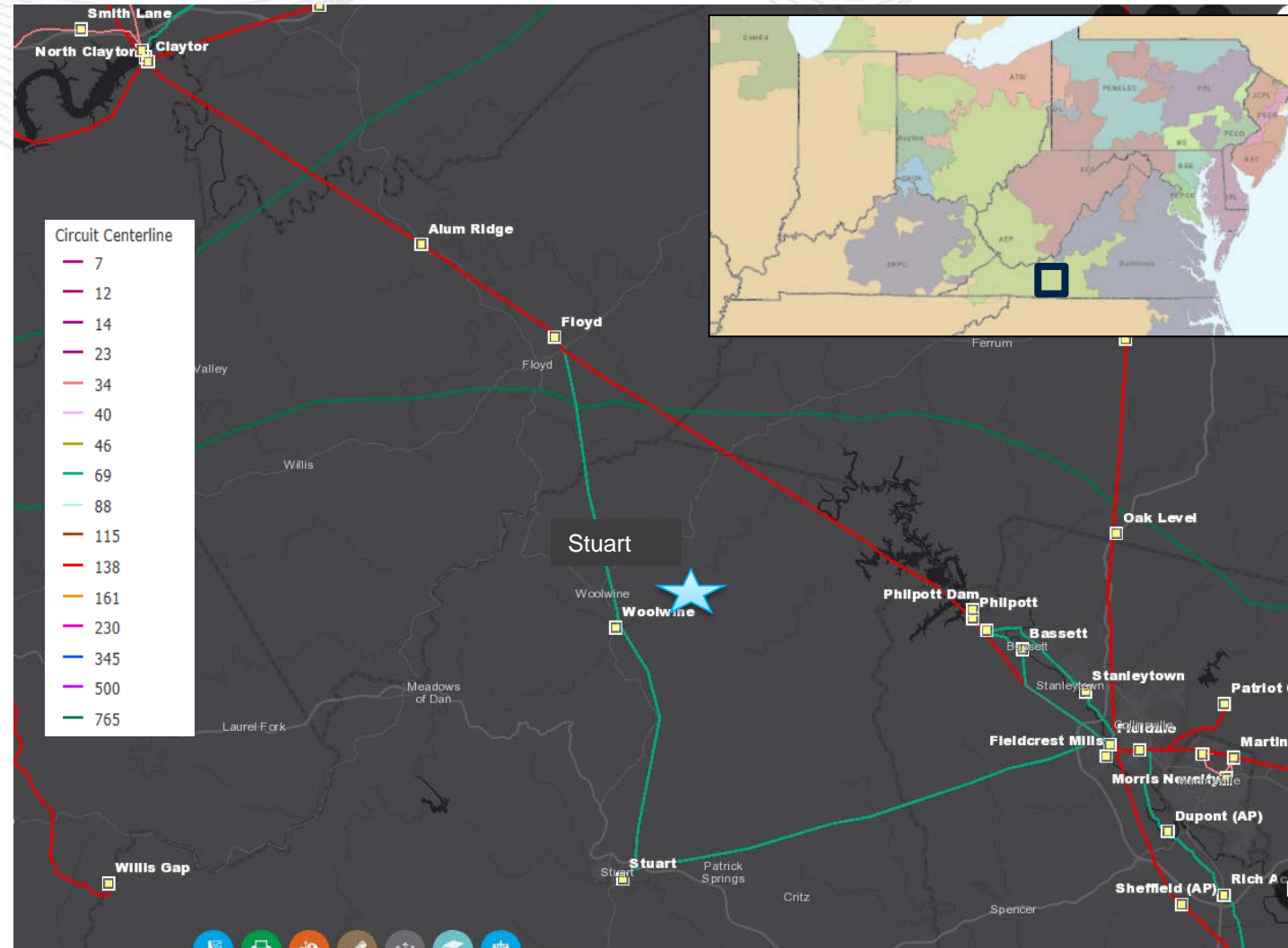
Alternatives:

No cost effective alternative was identified

Required In-service: 12/1/2022

Projected In-service: 6/1/2021

Project Status: Conceptual



Second Review

Baseline Reliability Projects

Previously Presented on 11/29/2018 SRTEAC

Problem Statement:

TO Planning Criteria Violations:

In the 2022 RTEP Winter Case, thermal violation on the Lakine – Racine 69 kV circuit (146% of 56 MVA emergency rating) under N-1-1 conditions including the loss of the Gavin – Meigs 69 kV circuit plus the loss of the future Leon – Ripley 138 kV circuit (previously Leon – Ravenswood 69 kV circuit).

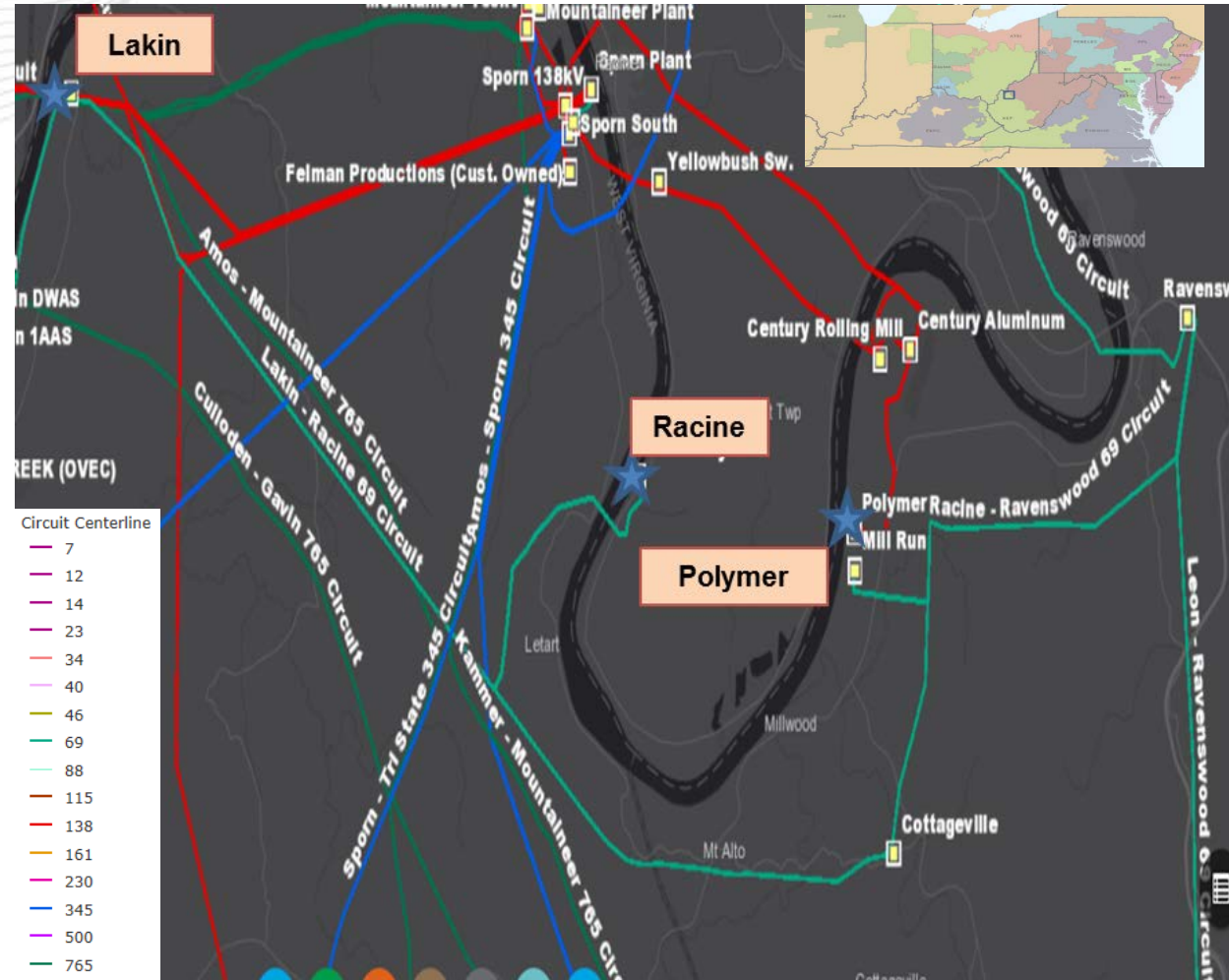
Selected Solution:

Rebuild Lakine – Racine Tap 69 kV line section (9.2 miles) to 69 kV standards, utilizing 795 26/7 ACSR conductor (W.N. 162 MVA, W.E. 202 MVA). (B3095) Estimated Cost: \$23.9M

Required In-service: 12/1/2022

Projected In-service: 6/1/2022

Project Status: Scoping



Supplemental Project Old Process Transition

Supplemental Project (s1083) – Scope change

Original Scope (Presented 11/20/2015 Western STREAC): Construct a new West Deer 138/23kV substation, which is radially fed from the Pine Creek substation by a newly constructed 138kV transmission line designated as Pine Creek-West Deer (Z-105). Install a new substation at West Deer.

New Scope: Loop the existing Cheswick-North (Z-56) 138kV circuit into the newly constructed West Deer 138kV/23kV substation. The looped transmission sources will be re-established as Cheswick-West Deer (Z-56) and North-West Deer (Z-156). Install a four (4) breaker 138kV ring bus at the West Deer substation. The newly constructed portion of the Z-56 and Z-156 138kV transmission circuits will use 795 ACSS/TW 20/7 conductor.

Reason for Change:

A change in scope is recommended because during the transmission line siting process for the radial Pine Creek-West Deer 138kV line a more effective and efficient route was identified .

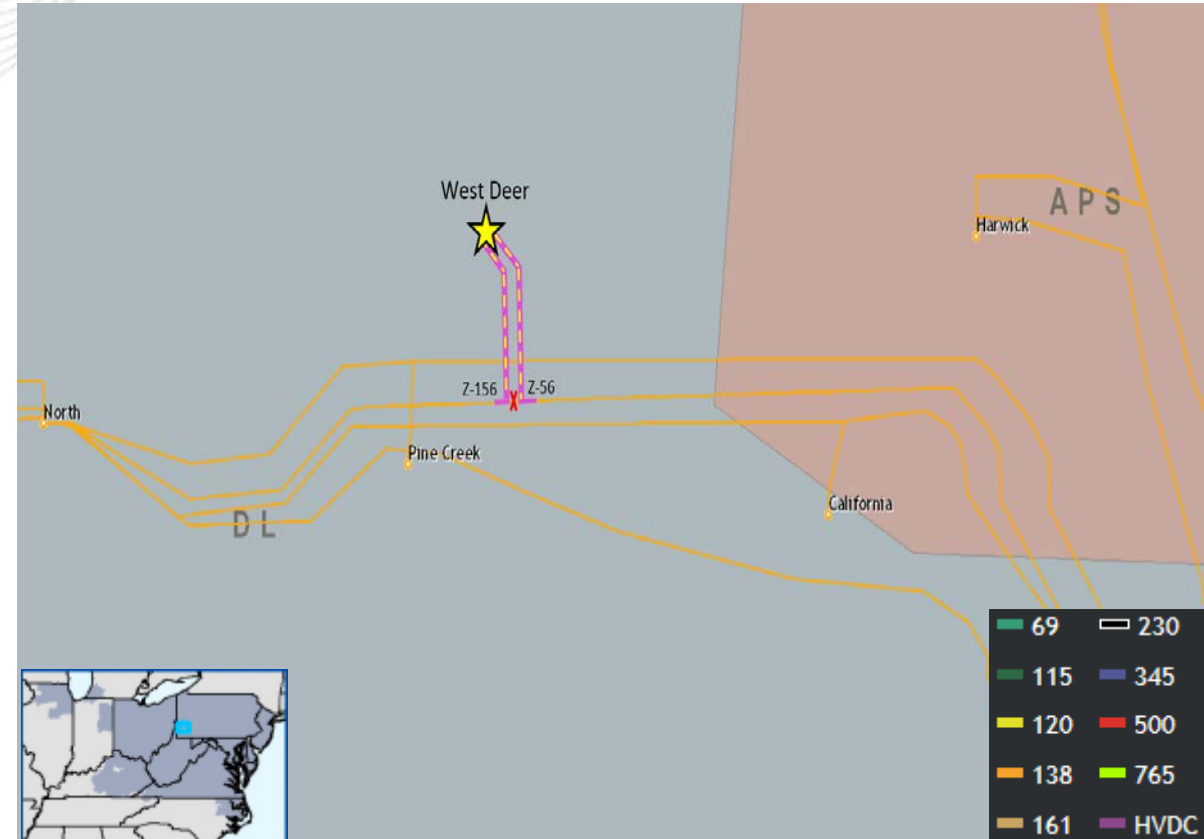
Original Estimated Project Cost: \$10.6M

New Estimated Project Cost: \$29M

Original Projected IS Date: 6/1/2019

New Projected IS Date: 10/31/2021

Status: Engineering



Next Steps

Upcoming Western SRRTEP Dates

West	Start	End
2/20/2019	12:00	4:00
3/28/2019	12:00	4:00
4/23/2019	12:00	4:00
5/20/2019	12:00	4:00

Questions?



Revision History

- 1/4/2019 – V1 – Original version posted to pjm.com
- 1/7/2019 – V2 – Slide #6: Change 2nd Required IS Date to Projected IS Date
 - Slide #7: Add Original Cost and New Cost
- V3 – Slide #7: Add \$ value to Original Cost and New Cost
- 1/9/2019 – V4 – Slide #4: Delete B2940
- 1/10/2019 – V5 – Slide #20: Add line miles
 - Slide #21: Change Projected IS Date 6/1/2022
- 1/14/2019 – V6 – Slide #12: Change Chemical – Carbide to Chemical – Turner
 - Slide #18/19: Change Supplemental/Baseline to Baseline
 - Slide #18: Add split costs
 - Slide #7: Updated Map