## FirstEnergy Upgrades to Support Portfolio Proposals

#### **General Information**

Proposing entity name Confidential Information

Does the entity who is submitting this proposal intend to be the Confidential Information Designated Entity for this proposed project?

Company proposal ID Confidential Information

PJM Proposal ID 232

Project title FirstEnergy Upgrades to Support Portfolio Proposals

Project description

This proposal encompasses project components that are intended to support the portfolio proposals that are submitted by FirstEnergy and other entities. This proposal is not intended to resolve all of the violations posted in the window, but to address the non-regional facility violations not fully addressed by the portfolio proposals. The proposal is an 'a la carte' of projects that may be selected

as needed to address violations in the FirstEnergy zones.

Email Confidential Information

Project in-service date 12/2029

Tie-line impact No

Interregional project No

Is the proposer offering a binding cap on capital costs?

Additional benefits Confidential Information

### **Project Components**

- 1. Doubs No. 1 500/230 kV Transformer Terminal Upgrades
- 2. Doubs No. 2 500/230 kV Transformer Terminal Upgrades
- 3. Belmont Flint Run 500 kV Line Terminal Upgrades

- 4. Edinburg Strasburg 138 kV Line Terminal Upgrades
- 5. Albright Cross School 138 kV Line Terminal Upgrades
- 6. Bartonville Stephenson 138 kV Line Terminal Upgrades
- 7. Double Toll Gate Millville 138 kV Line Terminal Upgrades
- 8. Meadow Brook Bartonville 138 kV Line Terminal Upgrades
- 9. Rebuild the Powell Mt Sutton 138 kV Line
- 10. Stonewall Millville 138 kV Line Upgrades
- 11. Flint Run No. 1 and No. 2 500/138 kV Transformer Replacements

#### **Substation Upgrade Component**

Component title Doubs No. 1 500/230 kV Transformer Terminal Upgrades

Project description Confidential Information

Substation name Doubs

Substation zone 201

Substation upgrade scope Replace (1 Lot) of limiting conductor. Install (1 Lot) of connectors. Replace existing 230 kV surge

arrestors.

#### Transformer Information

None

New equipment description All new equipment will exceed the ratings of the transformer.

Substation assumptions All work will be accomplished within the boundaries of the substation.

Real-estate description No real estate acquisition is required.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$431,867.29

Component cost (in-service year) \$453,396.00

**Substation Upgrade Component** 

Component title Doubs No. 2 500/230 kV Transformer Terminal Upgrades

Project description Confidential Information

Substation name Doubs

Substation zone 201

Substation upgrade scope Replace limiting conductor on the Doubs No. 2 500/230 kV Transformer.

**Transformer Information** 

None

New equipment description All new equipment will exceed the ratings of the transformer.

Substation assumptions All work will be accomplished within the boundary of the substation.

Real-estate description No real estate acquisition is required.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$404,683.51

Component cost (in-service year) \$424,563.00

**Substation Upgrade Component** 

Component title Belmont - Flint Run 500 kV Line Terminal Upgrades

Project description Confidential Information

Substation name Belmont (Bus # 235102), Flint Run (Bus # 235235)

Substation zone 201

Substation upgrade scope Replace the 500 kV wave traps, one at Belmont Substation and one at Flint Run Substation.

**Transformer Information** 

None

New equipment description New wave traps to be rated at 5000 A.

Substation assumptions All work to be performed within the boundary of the substation.

Real-estate description This project will have no impact on real estate.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$888,491.54

Component cost (in-service year) \$994,529.00

**Substation Upgrade Component** 

Component title Edinburg - Strasburg 138 kV Line Terminal Upgrades

Project description Confidential Information

Substation name Strasburg (Bus #235513)

Substation zone 201

Substation upgrade scope Install (1 Lot) of grounding wire and connectors. Replace (1 Lot) of Foundations for replacement of

Circuit Switcher with MOAB Disconnect Switch. Replace (1) 138 kV Line trap. Replace (1) 138 kV Linerupter Circuit Switcher, with (1) 138 kV MOAB Disconnect Switch. Install (1 Lot) of Conductors

and Connectors for Jumpers.

**Transformer Information** 

None

New equipment listed in scope to exceed the ratings of the transmission line conductor.

Substation assumptions All work to be performed within the boundary of the substation.

Real-estate description There will be no impact to real estate.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$608,431.82

Component cost (in-service year) \$675,256.00

Substation Upgrade Component

Component title Albright - Cross School 138 kV Line Terminal Upgrades

Project description Confidential Information

Substation name Albright (Bus # 235120), Beryl (Bus # 235518)

Substation zone 201

Substation upgrade scope At Albright Substation: - Replace 138 kV breaker leads. At Beryl: - Replace two 138 kV switches. Transformer Information None New equipment description New 138 kV switches and breaker leads to exceed the ratings of the transmission line conductor. Substation assumptions All work will be performed within the boundary of the substation. No real estate acquisition is required. Real-estate description Construction responsibility Confidential Information Benefits/Comments Confidential Information Component Cost Details - In Current Year \$ Engineering & design Confidential Information Permitting / routing / siting **Confidential Information** ROW / land acquisition Confidential Information Materials & equipment **Confidential Information** Construction & commissioning Confidential Information Construction management Confidential Information Overheads & miscellaneous costs Confidential Information Contingency Confidential Information Total component cost \$579,355.68 Component cost (in-service year) \$610,385.05 **Substation Upgrade Component** 

Confidential Information

Bartonville - Stephenson 138 kV Line Terminal Upgrades

Component title

Project description

Substation name Bartonville (Bus #235444)

Substation zone 201

Substation upgrade scope Install (1 Lot) of Foundations and Substation Stone. Install (1 Lot) of Grounding Wire and Connectors. Install (1 Lot) of Below Grade Conduit. Replace (1) Existing 138 kV Circuit Switcher,

with (1) 138 kV 3-Phase MOAB Disconnect Switch Replace (1 Lot) of limiting conductor. Install (1

Lot) of Conductors and Connectors for Jumpers Install (1) surge arrestor

Transformer Information

None

New equipment description New equipment listed in scope description to exceed the ratings of the transmission line conductor.

Substation assumptions All work will be performed within the boundary of the substation.

Real-estate description There will be no impact to real estate.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$795,601.81

Component cost (in-service year) \$850,756.00

#### **Substation Upgrade Component**

Component title Double Toll Gate - Millville 138 kV Line Terminal Upgrades

Project description Confidential Information

Substation name Millville (Bus #235486), Old Chapel (Bus 3235498)

Substation zone 201

Substation upgrade scope At Millville: Install (1 Lot) of Grounding Wire and Connectors. Install (1 Lot) of Below Grade Conduit.

Replace limiting 1024.5 ACSR with conductor. Replace (1) Circuit Breaker Replace (2) 138 kV, 1200A GOAB Disconnect Switches. Install (1 Lot) of Conductors and Connectors for Jumpers

**Transformer Information** 

None

New equipment listed in scope description to exceed the transmission line conductor ratings.

Substation assumptions All work to be performed within the boundary of the substation.

Real-estate description

There will be no impact to real estate.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$1,763,549.08

Component cost (in-service year) \$1,968,348.00

**Substation Upgrade Component** 

Component title Meadow Brook - Bartonville 138 kV Line Terminal Upgrades

Project description Confidential Information

Substation name Meadow Brook (Bus #2345483), Bartonville (Bus #235444)

Substation zone 201

Substation upgrade scope

At Meadow Brook: Install (1 Lot) of Grounding Wire and Connectors. Replace (1 Lot) of limiting
1272 ACSR. Replace (1) 138kV Wave Trap. Install (1 Lot) of Conductors and Connectors for
Jumpers. Install (1) 138 kV surge arrestor. At Bartonville: Install (1 Lot) of Grounding Wire and
Connectors. Replace (1 Lot) of limiting conductor. Replace (2) 138 kV MOAB Disconnect Switches.

Install (1 Lot) of Conductors and Connectors for Jumpers. Install (1) surge arrestor.

Transformer Information

None

New equipment description New equipment listed in scope description to exceed the transmission line conductor ratings.

Substation assumptions All work to be performed within the boundary of the substation.

Real-estate description There will be no real estate impact.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$1,016,419.94

Component cost (in-service year) \$1,071,355.00

Transmission Line Upgrade Component

Component title Rebuild the Powell Mt - Sutton 138 kV Line

Project description Confidential Information

Impacted transmission line Powell Mt - Sutton 138 kV Line

Point A Powell Mt (Bus #235389)

Point B Sutton (Bus #235411)

Point C

Terrain description The existing terrain is very hilly and mountainous with multiple long spans crossings valleys.

**Existing Line Physical Characteristics** 

Operating voltage 138 kV

Conductor size and type 4/0 ACSR 6/1

Hardware plan description The existing hardware will not be utilized, as this line will be fully rebuilt.

Tower line characteristics The existing line is single circuit construction on wood multi-pole structures.

**Proposed Line Characteristics** 

Designed Operating

Voltage (kV)	138.000000	138.000000						
	Normal ratings	Emergency ratings						
Summer (MVA)	308.000000	376.000000						
Winter (MVA)	349.000000	445.000000						
Conductor size and type	954 ACSR 45/7 STR							
Shield wire size and type	OPGW SFPOC SFSJ-J-6641							
Rebuild line length	23 mi							
Rebuild portion description	The entire Powell Mt - Sutton 138 kV Line will be	rebuilt.						
Right of way	e entire Powell Mt - Sutton 138 kV Line will be rebuilt.  additional right of way will be required.  nfidential Information							
Construction responsibility	Confidential Information							
Benefits/Comments	Confidential Information							
Component Cost Details - In Current Year \$								
Engineering & design	Confidential Information							
Permitting / routing / siting	Confidential Information							
ROW / land acquisition	Confidential Information							
Materials & equipment	Confidential Information							
Construction & commissioning	Confidential Information							
Construction management	Confidential Information							
Overheads & miscellaneous costs	Confidential Information							
Contingency	Confidential Information							
Total component cost	\$59,013,730.10							
	<b>^</b>							

\$66,703,726.00

Component cost (in-service year)

#### Transmission Line Upgrade Component

Component title Stonewall - Millville 138 kV Line Upgrades

Project description Confidential Information

Impacted transmission line Stonewall - Feagans Mill 138 kV Line, Feagans Mill - Mechanicstown 138 kV Line, Mechanicstown -

Millville 138 kV Line

Point A Stonewall (Bus # 235512)

Point B Feagans Mill (Bus # 235465)

Point C Millville (Bus # 235486)

Terrain description The terrain is primarily flat.

**Existing Line Physical Characteristics** 

Operating voltage 138 kV

Conductor size and type 556.5 ACSR 26/7

Hardware plan description

The single-circuit Stonewall - Feagans Mill 138 kV Line, Feagans Mill - Mechanicstown 138 kV Line, and Mechanicstown - Millville 138 kV Line will be rebuilt as double-circuit structures with 500 kV and

138 kV as part of the b3800 project series. Therefore, new hardware will be utilized.

Tower line characteristics

The existing line is constructed on single circuit wood and light duty steel multi-pole structures.

Proposed Line Characteristics

Designed Operating

Voltage (kV) 138.000000 138.000000

Normal ratings Emergency ratings

Summer (MVA) 448.000000 516.000000

Winter (MVA) 448.000000 543.000000

Conductor size and type 795 ACSS 26/7

Shield wire size and type 7#8 Alumoweld

Rebuild line length 0.8 mi

Rebuild portion description

The single-circuit Stonewall - Feagans Mill 138 kV Line, Feagans Mill - Mechanicstown 138 kV Line, and Mechanicstown - Millville 138 kV Line will be rebuilt as double-circuit structures with 500 kV and

138 kV as part of the b3800 project series. This scope of work will rebuild the remainder of the transmission line, which consists of the transmission line conductor that enters each respective

substation. All existing structures will be replaced with double-circuit steel monopoles.

Right of way

The scope of work will take place in the existing right of way, so no additional right of way

acquisition is required.

Construction responsibility Confidential Information

Benefits/Comments Confidential Information

Component Cost Details - In Current Year \$

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$4,712,287.85

Component cost (in-service year) \$5,244,370.70

Substation Upgrade Component

Component title Flint Run No. 1 and No. 2 500/138 kV Transformer Replacements

Project description	Confidential Information					
Substation name	Flint Run (Bus # 235235)					
Substation zone	201					
Substation upgrade scope	Install (1 Lot) of Grounding concontainment. Install (2) 500/136 the two existing 500/138kV trainstall (2) 500/138kV trainstall (2) 500/138kV trainstall (3) 500/138kV trainstall (3) 500/138kV trainstall (4) 500/138kV trainstall (4) 500/138kV trainstall (5) 500/138kV trai	8kV transformers		undations. Install new oil all. Revise relay settings. Remove		
Transformer Information						
	Name		Capacity (MVA	A)		
Transformer	Flint Run No. 1 500/138 kV Tra	insformer	800/1040 MVA	A SN/SE		
	High Side	Low Side		Tertiary		
Voltage (kV)	500	138		13.2		
	Name		Capacity (MVA	A)		
	Flint Run No. 2 500/138 kV Transformer		800/1040 MVA	A SN/SE		
Transformer	Flint Run No. 2 500/138 kV Tra					
Transformer	Flint Run No. 2 500/138 kV Tra	Low Side		Tertiary		
Transformer  Voltage (kV)				Tertiary		
	High Side	Low Side	ed capacity.	•		
Voltage (kV)	High Side 500 Two new 500/138 kV transform	Low Side  138  ners with increase		•		
Voltage (kV)  New equipment description	High Side  500  Two new 500/138 kV transform - Firewall will be needed No	Low Side  138 ners with increase relay replacemen		13.2		
Voltage (kV)  New equipment description  Substation assumptions	High Side  500  Two new 500/138 kV transform - Firewall will be needed No needed.	Low Side  138 ners with increase relay replacemen		13.2		
Voltage (kV)  New equipment description  Substation assumptions  Real-estate description	High Side  500  Two new 500/138 kV transform - Firewall will be needed No needed.  No additional real estate is req	Low Side  138 ners with increase relay replacemen		13.2		

Engineering & design Confidential Information

Permitting / routing / siting Confidential Information

ROW / land acquisition Confidential Information

Materials & equipment Confidential Information

Construction & commissioning Confidential Information

Construction management Confidential Information

Overheads & miscellaneous costs Confidential Information

Contingency Confidential Information

Total component cost \$27,256,322.62

Component cost (in-service year) \$31,327,547.66

## **Congestion Drivers**

None

## **Existing Flowgates**

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	СКТ	Voltage	TO Zone	Analysis type	Status
2024W1-GD-S107	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S388	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S62	238184	AF2-356 TAP	235492	01MTZION	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S763	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S416	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S237	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S238	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer IPD	Included
2024W1-IPD-S202	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S235	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer IPD	Included

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1-IPD-S236	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer IPD	Included
2024W1-IPD-S241	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer IPD	Included
2024W1-IPD-S242	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer IPD	Included
2024W1-IPD-S239	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer IPD	Included
2024W1-IPD-S240	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer IPD	Included
2024W1-GD-S764	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S391	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S790	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S327	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S71	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S200	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S233	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S201	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S234	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S198	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S204	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-GD-S394	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S248	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S249	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S246	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S247	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S252	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S250	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S251	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S332	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S331	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S776	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S779	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1-IPD-S244	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S212	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer IPD	Included
2024W1-IPD-S245	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S210	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S243	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer IPD	Included
2024W1-GD-S101	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S786	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S182	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S181	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S174	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S295	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-W28	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Winter IPD	Included
2024W1-GD-S371	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S175	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S296	235296	01BAYS	235389	01POWELM	1	138	201	Summer IPD	Included
2024W1-GD-S787	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S173	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-IPD-S294	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S113	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S299	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S761	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S176	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S297	235296	01BAYS	235389	01POWELM	1	138	201	Summer IPD	Included
2024W1-IPD-W30	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Winter IPD	Included
2024W1-GD-S762	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S177	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S298	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-W29	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Winter IPD	Included

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1-GD-S288	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S289	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S286	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S287	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-N1-ST88	238184	AF2-356 TAP	235492	01MTZION	1	138/138	201/201	Summer Thermal	Included
2024W1-GD-S788	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-N1-ST89	238184	AF2-356 TAP	235492	01MTZION	1	138/138	201/201	Summer Thermal	Included
2024W1-GD-S3	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S892	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S775	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S191	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S192	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S185	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S383	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S893	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S183	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S789	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S184	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S319	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S189	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S352	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S40	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S160	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S281	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S161	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S282	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S158	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S159	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	СКТ	Voltage	TO Zone	Analysis type	Status
2024W1-IPD-S280	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S162	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S153	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S274	235296	01BAYS	235389	01POWELM	1	138	201	Summer IPD	Included
2024W1-GD-S4	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S875	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S773	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S781	235431	01WOLFRN	235437	01SUTT T	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S440	235431	01WOLFRN	235437	01SUTT T	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S156	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S277	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S785	235431	01WOLFRN	235437	01SUTT T	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S157	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S154	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-GD-S782	235431	01WOLFRN	235437	01SUTT T	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S155	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-GD-S765	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S23	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S171	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-IPD-W25	235492	01MTZION	235518	01WESTVA	1	138	201	Winter IPD	Included
2024W1-IPD-S172	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-IPD-S290	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S291	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-W27	235492	01MTZION	235518	01WESTVA	1	138	201	Winter IPD	Included
2024W1-IPD-W26	235492	01MTZION	235518	01WESTVA	1	138	201	Winter IPD	Included
2024W1-IPD-S163	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S284	235296	01BAYS	235389	01POWELM	1	138	201	Summer IPD	Included
2024W1-GD-S774	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1-IPD-S164	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-GD-S454	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S283	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S288	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S289	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S401	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S66	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S214	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer IPD	Included
2024W1-GD-S405	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S215	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer IPD	Included
2024W1-N1-ST87	238184	AF2-356 TAP	235492	01MTZION	1	138/138	201/201	Summer Thermal	Included
2024W1-GD-S403	235389	01POWELM	235296	01BAYS	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S213	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer IPD	Included
2024W1-N1-ST80	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201/201	Summer Thermal	Included
2024W1-N1-ST81	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201/201	Summer Thermal	Included
2024W1-IPD-S259	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S257	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S258	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S413	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S218	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer IPD	Included
2024W1-IPD-S219	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-GD-S778	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S217	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer IPD	Included
2024W1-IPD-S222	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-IPD-S255	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S256	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S220	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-IPD-S253	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2024W1-IPD-S254	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-N1-ST8	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Summer Thermal	Included
2024W1-N1-ST11	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer Thermal	Included
2024W1-IPD-S225	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-IPD-S226	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-N1-ST9	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer Thermal	Included
2024W1-GD-S345	238184	AF2-356 TAP	235492	01MTZION	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S223	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-N1-ST10	235518	01WESTVA	237506	01CROSSCHOOL	1	138/138	201/201	Summer Thermal	Included
2024W1-IPD-S224	235492	01MTZION	238184	AF2-356 TAP	1	138	201	Summer IPD	Included
2024W1-IPD-S149	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S270	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S150	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S271	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S147	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-GD-S874	235492	01MTZION	235518	01WESTVA	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S148	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S269	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S151	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S272	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S152	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S229	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-GD-S32	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S230	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S263	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-GD-S348	238184	AF2-356 TAP	235492	01MTZION	1	138	201	Summer Gen Deliv	Included
2024W1-GD-S29	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer Gen Deliv	Included
2024W1-IPD-S227	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included

FG#	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	СКТ	Voltage	TO Zone	Analysis type	Status
2024W1-IPD-S228	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-GD-S359	235235	01FLINTRUN	235100	01FLINTRN	1	500/138	201	Summer Gen Deliv	Included
2024W1-IPD-S145	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S266	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-IPD-S146	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S267	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included
2024W1-N1-ST6	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Summer Thermal	Included
2024W1-IPD-S231	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-N1-ST7	235492	01MTZION	235518	01WESTVA	1	138/138	201/201	Summer Thermal	Included
2024W1-GD-S358	235235	01FLINTRUN	235100	01FLINTRN	2	500/138	201	Summer Gen Deliv	Included
2024W1-IPD-S144	235492	01MTZION	235518	01WESTVA	1	138	201	Summer IPD	Included
2024W1-IPD-S232	235518	01WESTVA	237506	01CROSSCHOOL	1	138	201	Summer IPD	Included
2024W1-IPD-S265	235296	01BAYS	235431	01WOLFRN	1	138	201	Summer IPD	Included

# New Flowgates

**Confidential Information** 

## **Financial Information**

Capital spend start date 01/2025

Construction start date 04/2026

Project Duration (In Months) 59

## **Additional Comments**

Please call or email with any questions.