Swap 345kV transmission line at Green Acres, rebuild University Park to Olive 345kV lines

General Information

Proposing entity name	Business Confidential Information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	Business Confidential Information
PJM Proposal ID	644
Project title	Swap 345kV transmission line at Green Acres, rebuild University Park to Olive 345kV lines
Project description	1. Outside of the Green Acres substation, swap the NIPSCO Green Acre Tap towers from the St. John - Green Acres - Olive line to the University Park - Olive line to create a University Park - Green Acres - Olive line and St. John - Olive line. 2. Rebuild the NEET owned University (IN/IL border) - Green Acres 345 kV line with 2x1033 Curlew ACSS. 3. Reconductor NEETMA IN 6.95 miles of existing Crete to St John line. NEETMA portion goes from IL/IN State Line to St. John substation owned by NIPSCO. The line will be reconductored using 2x1033 Curlew ACSS HS. Upgrade is for reconductor only (Tower replacement will be part of supplemental project # s2509). 4. Reconductor ComEd's section of existing line from IN State Line to Crete with 2x1277 ACSR. 5. Reconductor ComEd 12.68 miles of existing line from Crete - E Frankfort 345 kV line with 2x1277 ACSR conductor rated 2058/2381 WN/WE. 6. Reconductor ComEd 5.41 miles of existing line from University Park to E Frankfort 345 kV line with 2x1277 Conductor with 2x1277 ACSR conductor rated 2058/2381 WN/WE. 7. Reconductor ComED section of existing line of University - Olive with 2x1277 ACSR conductor rated 2058/2381 WN/WE. 8. Upgrade the limiting element at Stillwell or Dumont substation to increase the rating of the Stillwell -Dumont line to match conductor rating (1408/1887/1780/2143 for SN/SE/WN/WE for PJM side). 9. Upgrade the existing terminal equipment (substation conductor) at St. John on the existing Crete to St. John 345 kV line with bundled 2x1590 ACSR Lapwing rated 2239/2390 WN/WE. 10. Upgrade the existing terminal equipment (substation conductor) at Green Acres on the existing St. John to Green Acres 345 kV line with bundled 2x1590 ACSR Lapwing rated 2239/2390 WN/WE
Email	amanda.gittens@nexteraenergy.com
Project in-service date	12/2026
Tie-line impact	Yes

Interregional project	Yes
Interregional RTO name	MISO
Interregional cost allocation evaluation	No
Evaluated in interregional analysis under PJM Tariff or Operating Agreement provisions	No
Specify analysis and applicable Tariff or Operating Agreement provisions	
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Project addressing reliability and market efficiency needs documented by PJM. While this project is interregional in that there are transmission components in both MISO and PJM, the need that is being addressed is only a PJM need.

Project Components

1. Green Acres Substation transmission lines swap upgrades
2. Rebuild Uni (IN/IL border)-Green Acres 345 kV TL
3. Reconductor Crete - St. John-NEETMA 345 kV TL upgrade
4. Crete - St. John-ComEd 345 kV TL upgrade
5. E Frankfort - Crete -ComEd 345 kV TL upgrade
6. E Frankfort - Uni North 345kV TL Upgrade
7. Uni North - Uni-Olive IN/IL section 345kV TL Upgrade
8. Stillwell - Dumont 345 kV TL substation limiting element rating upgrade
9. St. Johns substation terminal equipment upgrade
10. Green Acres substation terminal equipment upgrade

Transmission Line Upgrade Component

Component title	Green Acres Substation transmission lines swap upgrades
Project description	Business confidential information.

Impacted transmission line	Crete – St John – Green Acres – Olive, University Park – Olive
Point A	Green Acres
Point B	Olive
Point C	Not Applicable
Terrain description	The terrain along the transmission line right-of-way (ROW) is predominantly silt loam and clay loam soils with gentle slopes, and about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 670 feet to 721 feet MSL. Minor vegetation clearing is anticipated to be required for the project. The existing land use adjacent to the ROW is primarily cultivated crops.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	Single 1414 kcmil paper expanded ACSR per phase
Hardware plan description	Four new structures will be installed to accommodate the southern University Park – Olive line being cut into the Green Acres substation. Tubular steel structures of similar design to the approved supplemental project will be used and bundled 1033 kcmil ACSS conductor installed. 345kV hardware, with the same design as the supplemental project will be installed on the new section of line.
Tower line characteristics	This section of line will have recently replaced with tubular steel double circuit monopoles due to the supplemental project.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	2050.000000	2495.000000
Winter (MVA)	2193.000000	2621.000000
Conductor size and type	1033.5 kcmil Curlew ACSS HS: 2C Bundle	

Shield wire size and type	Reuse OPGW from supplemental project
Rebuild line length	0 mile
Rebuild portion description	Outside of the Green Acres substation, swap the NEETMA IN circuits. Two (2) 3-pole tubular steel structures will be used to cut the southern circuit into Green Acres, and two (2) new intermediate structures will be installed between the line and station. The proposed swap will result in the North Circuit going from Crete to St John to Olive and the South Circuit going from University Park to Green Acres to Olive.
Right of way	Existing ROW will be used to support the circuit swap at Green Acres.
Construction responsibility	Business Confidential Information
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM's.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$1,976,000.00
Component cost (in-service year)	$2,080,000.00

Transmission Line Upgrade Component

Component title	Rebuild Uni (IN/IL border)-Green Acres 345 kV TL
Project description	Business confidential information

Impacted transmission line	University Park Sub to Olive 345 kV line
Point A	University Park Sub
Point B	Green Acres Tap
Point C	Not Applicable
Terrain description	The terrain along the transmission line right-of-way (ROW) is predominantly silt loam and clay loam soils with gentle slopes, and about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 670 feet to 721 feet MSL. Minor vegetation clearing anticipated for the project. The existing land use adjacent to the ROW is primarily cultivated crops and developed lands.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	Single 1414 kcmil paper expanded ACSR per phase
Hardware plan description	NEET MA IN has received approval for a supplemental project that involves replacing aging infrastructure between of an existing double circuit 345 kV line. This rebuild represents a portion of the supplemental project # s2509 that is necessary to address the PJM reliability issue, which only involves rebuild the Uni (IN/IL border)-to Green Acres section of the 345 kV line.
Tower line characteristics	NEET MA IN has received approval for a supplemental project that involves replacing aging infrastructure between of an existing double circuit 345 kV line. This rebuild represents a portion of the supplemental project # s2509 that is necessary to address the PJM reliability issue, which only involves rebuild the Uni (IN/IL border)-to Green Acres section of the 345 kV line.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	2050.000000	2495.000000
Winter (MVA)	2193.000000	2621.000000

Conductor size and type	1033.5 kcmil Curlew ACSS HS: 2C Bundle
Shield wire size and type	Reuse OPGW from supplemental project
Rebuild line length	13.7 miles
Rebuild portion description	Line will be rebuilt as part of the supplemental project utilizing tubular steel monopoles in existing ROW replacing aging lattice towers. Tangent structures will be direct embedded with angles and deadend on drilled piers. New hardware and conductor will be installed as part of the rebuild.
Right of way	Segment 1: This approximately 7 mile segment, starting from the Illinois/Indiana state line heading East crosses mostly agricultural and developing residential area to St. John Substation. The right of way varies in width but averages 140’ and crosses 14 roadways (public and community) and two railroads. Segment 2: This approximately 6.7 mile stretch to the NE crosses mostly agricultural land and 12 roadways.
Construction responsibility	Business Confidential Information
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM’s Generation Deliverability Process.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$40,000,211.00
Component cost (in-service year)	$41,920,211.00

Transmission Line Upgrade Component

Component title	Reconductor Crete - St. John-NEETMA 345 kV TL upgrade
Project description	Business confidential information
Impacted transmission line	Crete Bus to St John Bus 345 kV line
Point A	Crete Bus
Point B	St John Bus
Point C	Not Applicable
Terrain description	The terrain along the transmission line right-of-way (ROW) is predominantly silt loam and clay loam soils with gentle slopes, and about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 670 feet to 721 feet MSL. Minor vegetation clearing anticipated for the project. The existing land use adjacent to the ROW is primarily cultivated crops and developed lands.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	Single 1414 kcmil paper expanded ACSR per phase
Hardware plan description	NEET MA IN has received approval for a supplemental project that involves replacing aging infrastructure between of an existing double circuit 345 kV line. This reconductor represents a portion of the supplemental project that is necessary to address the PJM reliability issue, which only involves reconductoring the Crete-St. John section of the 345 kV line.
Tower line characteristics	NEET MA IN has received approval for a supplemental project that involves replacing aging infrastructure between of an existing double circuit 345 kV line. This reconductor represents a portion of the supplemental project that is necessary to address the PJM reliability issue, which only involves reconductoring the Crete-St. John section of the 345 kV line.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000

	Normal ratings	Emergency ratings
Summer (MVA)	2050.000000	2495.000000
Winter (MVA)	2193.000000	2621.000000
Conductor size and type	1033.5 kcmil Curlew ACSS HS: 2C Bundle	
Shield wire size and type	Reuse OPGW from supplemental project	
Rebuild line length	7 miles	
Rebuild portion description	Line will be rebuilt as part of the supplemental project utilizing tubular steel monopoles in existing ROW replacing aging lattice towers. Tangent structures will be direct embedded with angles and deadend on drilled piers. New hardware and conductor will be installed as part of the rebuild.	
Right of way	Segment 1: This approximately 7 mile segment, starting from the Illinois/Indiana state line heading East crosses mostly agricultural and developing residential area to St. John Substation. The right of way varies in width between 100 and 150 feet and crosses 14 roadways (public and community) and two railroads.	
Construction responsibility	Business confidential information.	
Benefits/Comments	Resolves market efficiency and reliability issues identified per PJM's Generation Deliverability Process.	

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.

Total component cost	$1,990,250.00
Component cost (in-service year)	$2,095,000.00

Transmission Line Upgrade Component

Component title	Crete - St. John-ComEd 345 kV TL upgrade
Project description	Business confidential information
Impacted transmission line	Crete Bus to St John Bus 345 kV line
Point A	Crete Bus
Point B	St John Bus
Point C	Not Applicable
Terrain description	The terrain along the transmission line right-of-way (ROW) is relatively flat with about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 670 feet to 725 feet MSL. Minor vegetation clearing anticipated for the project. The existing land use adjacent to the ROW is primarily cultivated crops and developed lands.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	Single 1414 kcmil paper expanded ACSR per phase
Hardware plan description	Unknown
Tower line characteristics	Lattice structure towers built in 1950’s

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1679.000000	2058.000000

Winter (MVA)	2091.000000	2381.000000
Conductor size and type	1277 kcmil ACSR: 2C Bundle	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	4.97 miles	
Rebuild portion description	4.97 miles going from Crete Substation to IL/IN State line	
Right of way	This approximately 5 mile segment from the IL/IN state line that runs west to the Crete substation crosses mostly agricultural land and crosses 7 roadways and utilizes existing ROW.	
Construction responsibility	ComEd	
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM’s Generation Deliverability Process.	

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$6,454,500.00
Component cost (in-service year)	$7,121,321.20

Transmission Line Upgrade Component

Component title	E Frankfort - Crete -ComEd 345 kV TL upgrade

Project description	Business confidential information
Impacted transmission line	East Frankfort Sub to Crete Sub 345 kV line
Point A	East Frankfort Sub
Point B	Crete Sub
Point C	Not Applicable
Terrain description	The terrain along the transmission line right-of-way (ROW) is relatively flat with about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 726 feet to 780 feet MSL. Minor vegetation clearing anticipated for the project. The existing land use adjacent to the ROW is primarily cultivated crops and developed lands.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	Single 1414 kcmil paper expanded ACSR per phase
Hardware plan description	Unknown
Tower line characteristics	Lattice structure towers built in 1950’s

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1679.000000	2058.000000
Winter (MVA)	2091.000000	2381.000000
Conductor size and type	1277 kcmil ACSR: 2C Bundle	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	12.68 miles	

Rebuild portion description	Reconductor ComEd 12.68 miles of existing line from E Frankfort - Crete 345 kV line.
Right of way	Segment 1: This 6.4 mile segment starts in Franklin Township, IL exiting the East Frankfort substation and following a ROW that varies in width between 200 and 150 ft in width southeast to the Canadian National railroad line .25 mile beyond the existing Woodhill substation. This segment is mostly all agricultural and crosses 17 roadways and 2 railroads. Segment 2: This 6.2 mile stretch heads east from the Canadian National rail line, crossing mostly agricultural lands before reaching the Crete substation. This segment crosses 9 roadways and 1 railroad.
Construction responsibility	ComEd
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM's Generation Deliverability Process.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$16,484,000.00
Component cost (in-service year)	$18,195,251.60

Transmission Line Upgrade Component

Component title	E Frankfort - Uni North 345kV TL Upgrade
Project description	Business confidential information
Impacted transmission line	University Park Sub to East Frankfort Sub 345 kV line

Point A	University Park Sub
Point B	East Frankfort Sub
Point C	Not Applicable
Terrain description	The terrain along the transmission line right-of-way (ROW) is relatively flat with about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 737 feet to 780 feet MSL. Minor vegetation clearing anticipated for the project. The existing land use adjacent to the ROW is primarily cultivated crops and developed land.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	Single 1414 kcmil paper expanded ACSR per phase
Hardware plan description	Unknown
Tower line characteristics	Lattice structure towers built in 1950’s

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1679.000000	2058.000000
Winter (MVA)	2091.000000	2381.000000
Conductor size and type	1277 kcmil ACSR: 2C Bundle	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	5.41 miles	
Rebuild portion description	Reconductor ComEd 5.41 miles of existing line from E Frankfort - Uni 345 kV line.	

Right of way	This 5.4-mile segment starts at the University Park substation and heads NW crossing mostly agricultural lands, crosses 15 roads and 1 railroad. This segment varies in width between 200 and 250 ft.
Construction responsibility	ComEd
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM's Generation Deliverability Process.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$7,033,000.00
Component cost (in-service year)	$7,765,000.00

Transmission Line Upgrade Component

Component title	Uni North - Uni-Olive IN/IL section 345kV TL Upgrade
Project description	Business confidential information
Impacted transmission line	University Park Sub to Olive Sub 345 kV line
Point A	University Park Sub
Point B	Olive Sub

Point C	Not Applicable
Terrain description	The terrain along the transmission line right-of-way (ROW) is predominantly silt loam and clay loam soils with gentle slopes, and about 94% of the ROW having a ground slope of 4% or less. Elevations along the ROW range from about 685 feet to 705 feet MSL. Minor vegetation clearing anticipated for the project. The existing land use adjacent to the ROW is primarily cultivated crops and developed land.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	Single 1414 kcmil paper expanded ACSR per phase
Hardware plan description	Unknown
Tower line characteristics	Lattice structure towers built in 1950’s

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	345.000000	345.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1679.000000	2058.000000
Winter (MVA)	2091.000000	2381.000000
Conductor size and type	1277 kcmil ACSR: 2C Bundle	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	12.21 miles	
Rebuild portion description	Reconductor ComEd section of 12.21 miles of existing University to Olive line 345 kV from Uni to Uni (II/IL) border section.	

Right of way	Segment 1: This 1.1 mile segment starts in at the University Park substation and following a ROW that varies in width between 150 and 200 ft in width southeast to the Canadian National railroad line .25 mile beyond the existing Woodhill substation. This segment crosses 4 roadways and 1 railroad. Segment 2: This 11 mile stretch heads east from the Canadian National rail line, crossing mostly agricultural lands to the IL/IN border. This segment crosses 14 roadways and 1 railroad.
Construction responsibility	ComEd
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM's Generation Deliverability Process.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$15,827,777.70
Component cost (in-service year)	$17,475,145.60

Substation Upgrade Component

Component title	Stillwell - Dumont 345 kV TL substation limiting element rating upgrade
Project description	Business confidential information
Substation name	Existing substation name where the upgrade will take place. Stillwell or Dumont 345 kV TL
Substation zone	NIPS to AEP

Substation upgrade scope	Upgrade the limiting element at Stillwell or Dumont substation to increase the rating of the Stillwell -Dumont line to t match conductor rating (1408/1887/1780/2143 for SN/SE/WN/WE for PJM side)

Transformer Information

None

New equipment description	Upgrade the limiting element at Stillwell or Dumont substation to increase the rating of the Stillwell -Dumont line to match conductor rating (1408/1887/1780/2143 for SN/SE/WN/WE for PJM side)
Substation assumptions	Upgrade of limiting element possible without any substation expansion. Either AEP or NIPSCO' scope of work. In service date should occur in fall 2027 to accommodate overload in summer 2027
Real-estate description	No substation expansion anticipated.
Construction responsibility	AEP
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM's process.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,520,404.02

Substation Upgrade Component

Component title	St. Johns substation terminal equipment upgrade
Project description	Business confidential information
Substation name	St Johns 345 kV
Substation zone	NIPSCO
Substation upgrade scope	Upgrade the existing terminal equipment (substation conductor) at St. John on the existing Crete to St. John 345 kV line with bundled 2x1590 ACSR Lapwing rated 2239/2390 WN/WE.

Transformer Information

None

New equipment description	Upgrade the existing terminal equipment (substation conductor) at St. John on the existing Crete to St. John 345 kV line with bundled 2x1590 ACSR Lapwing rated 2239/2390 WN/WE.
Substation assumptions	Upgrade has been evaluated to be feasible per supplemental project supplemental project # s2509.
Real-estate description	No substation expansion anticipated.
Construction responsibility	NIPSCO
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM's process.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.
Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.

Total component cost	$2,000,000.00
Component cost (in-service year)	$2,208,161.61

Substation Upgrade Component

Component title	Green Acres substation terminal equipment upgrade
Project description	Business confidential information
Substation name	Existing substation name where the upgrade will take place. Green Acres
Substation zone	NIPSCO
Substation upgrade scope	Upgrade the existing terminal equipment (substation conductor) at Green Acres on the existing St. John to Green Acres 345 kV line with bundled 2x1590 ACSR Lapwing rated 2239/2390 WN/WE.

Transformer Information

None

New equipment description	Upgrade the existing terminal equipment (substation conductor) at Green Acres on the existing St. John to Green Acres 345 kV line with bundled 2x1590 ACSR Lapwing rated 2239/2390 WN/WE.
Substation assumptions	Upgrade has been evaluated to be feasible per supplemental project supplemental project # s2509.
Real-estate description	No substation expansion anticipated.
Construction responsibility	NIPSCO
Benefits/Comments	Resolves reliability and market efficiency issues identified per PJM's process.

Component Cost Details - In Current Year $

Engineering & design	Detailed cost breakdown is business confidential information.
Permitting / routing / siting	Detailed cost breakdown is business confidential information.
ROW / land acquisition	Detailed cost breakdown is business confidential information.
Materials & equipment	Detailed cost breakdown is business confidential information.
Construction & commissioning	Detailed cost breakdown is business confidential information.

Construction management	Detailed cost breakdown is business confidential information.
Overheads & miscellaneous costs	Detailed cost breakdown is business confidential information.
Contingency	Detailed cost breakdown is business confidential information.
Total component cost	$2,000,000.00
Component cost (in-service year)	$2,208,161.61

Congestion Drivers

None

Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
MDW1-GD-S1620	255113	17STILLWELL	243219	05DUMONT	1	345	205/217	Summer Gen Deliv	Included
MDW1-ME-01	255113	17STILLWELL	243219	05DUMONT	1	345	205/217	Market Efficiency	Included
MDW1-ME-02	274804	UNIV PK N;RP	243229	05OLIVE	1	345	205/222	Market Efficiency	Included
MDW1-GD-W392	274804	UNIV PK N;RP	243229	05OLIVE	1	345	205/222	Winter Gen Deliv	Included
MDW1-GD-W393	274804	UNIV PK N;RP	243229	05OLIVE	1	345	205/222	Winter Gen Deliv	Included
MDW1-GD-W309	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W404	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W419	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-ME-04	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Market Efficiency	Included
MDW1-GD-W172	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W171	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W188	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W190	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W185	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W332	270728	E FRANKFO; B	274750	CRETE EC ;BP	1	345	222	Winter Gen Deliv	Included
MDW1-GD-W331	270728	E FRANKFO; B	274750	CRETE EC ;BP	1	345	222	Winter Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
MDW1-ME-03	270728	E FRANKFO; B	274750	CRETE EC ;BP	1	345	222	Winter Gen Deliv	Included

New Flowgates

None

Financial Information

Capital spend start date	01/2023
Construction start date	09/2025
Project Duration (In Months)	47

Additional Comments

None