

S1 Non-Greenfield Proposal Package

General Information

Proposing entity name	Company confidential and proprietary information.
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Company confidential and proprietary information.
Company proposal ID	Company confidential and proprietary information.
PJM Proposal ID	608
Project title	S1 Non-Greenfield Proposal Package
Project description	This proposal addresses several upgrades of existing ComEd facilities. This proposal focuses primarily on replacing overloaded assets within ComEd on an asset-by-asset basis (e.g. reconductoring/rebuilding existing lines, replacing terminal equipment, line cut-ins, etc.).
Email	Company confidential and proprietary information.
Project in-service date	06/2031
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Company confidential and proprietary information.

Project Components

1. 345kV L11124 Electric Junction Blue to Lombard Blue, Increase Capacity
2. 345kV L11124 Electric Junction Blue to Lombard Blue- Electric Junction Substation Component
3. 345kV L11124 Electric Junction Blue to Lombard Blue- Lombard Substation Component
4. 345kV L11604 Goodings Grove Red to Lockport Red, Increase Capacity with ACSS
5. L11604 Goodings Grove Red to Lockport Red, Lockport Substation Component

6. 345kV L10801 Lockport to Lisle Blue, Increase Capacity with ACSS
7. 345kV L10801 Lockport Blue to Lisle Blue, Lockport Substation Component.
8. 345kV L10801 Lockport Blue to Lisle Blue, & 345kV L10322 Lisle Red to Lombard Red, Lisle Substation Component.
9. 345kV L10802 Lockport to Lisle Red, Increase Capacity with ACSS
10. 345kV L10802 Lockport Red to Lisle Red, Lockport Substation Component.
11. 345kV L10322 Lisle to Lombard Red, Increase Capacity with ACSS
12. 345KV L15616 Cherry Valley to Prairie, rebuild and Increase Capacity
13. 345KV L15616 Cherry Valley to Prairie, Cherry Valley Substation Component.
14. 345kV L97104 Prairie to Silver Lake, Increase Capacity
15. 345kV L97104 Prairie to Silver Lake, Silver Lake Substation Component.
16. 345kV L93505 Kendall County Energy Center to Dresden Blue, Capacity Increase
17. 345kV L11617 Goodings Grove to Lockport Blue, Increase Capacity with ACSS
18. 345kV L11617 Goodings Grove to Lockport Blue, Capacity Increase- Substation Component
19. 345kV L11601 East Frankfort to Gooding Grove Blue, Capacity Increase- East Frankfort Substation Component
20. 345kV L11602 East Frankfort to Gooding Grove Red, Capacity Increase- East Frankfort Substation Component
21. 138kV L1603 Round Lake to Antioch Tap Red and L1603 Antioch to Round Lake Beach Tap Red, Increase Capacity
22. 138kV L1607 Round Lake to Antioch Tap Blue and L1607 Antioch to Round Lake Beach Tap Blue, rebuild and reconductor
23. 138kV L5103 Bedford Park to Clearing Tap Blue, Increase Capacity
24. 138kV L5103 Bedford Park to Clearing Tap Blue, Bedford Park Substation Component
25. 138kV L7910 Spaulding to Bartlett Tap Blue, Increase Capacity
26. 138kV L7910 Spaulding to Bartlett Tap Blue, Increase Capacity, Spaulding Substation Component
27. 138kV L10302 York Center Tap to Butterfield Tap Red, Increase Capacity
28. 138kV L12016 Lombard to Glendale Heights Tap Blue, Increase Capacity, reconductor with ACSS
29. 138kV L12016 Lombard to Glendale Heights Tap Blue, Increase Capacity, Lombard Substation Component
30. 138kV L12015 Lombard to Glendale Heights Tap Red, and Glendale Heights Tap to Nordic Tap, Increase Capacity, reconductor with ACSS
31. 138kV L12015 Lombard to Glendale Heights Tap Red, Increase Capacity, Lombard Substation Component
32. 345kV L12005 Lombard to Des Plaines Blue, Increase Capacity, reconductor with ACSS
33. 345kV L12005 Lombard to Des Plaines Blue, Increase Capacity, Lombard Substation Component
34. 138kV L4203 Silver Lake to Wilson Rd Tap Red, and Wilson Road Tap to Round Lake Tap Red, Rebuild and Increase Capacity

35. 345kV L12002 Lombard to Itasca Red, Increase Capacity with ACSS
36. 345kV L12002 Lombard to Itasca Red, Increase Capacity- Lombard Substation Component
37. Install 345/138kV TR84 at Elk Grove
38. Cut 345kV L10111 and L10112 Itasca to Des Plaines Red and Blue into 345kV Elk Grove, create new L10111 and L10112 Itasca to Elk Grove, Red and Blue, create new L18418 and L18419 Elk Grove to Des Plaines, Red and Blue
39. Cut 345kV L10111 and L10112 Itasca to Des Plaines Red and Blue into 345kV Elk Grove, create new L10111 and L10112 Itasca to Elk Grove, Red and Blue, create new L18418 and L18419 Elk Grove to Des Plaines, Red and Blue- Elk Grove Substation Component
40. Install 2-138kV Phase Shifters at Itasca
41. Install New 138kV L14613 from Sandwich to Plano
42. Install New 138kV L14613 from Sandwich to Plano- Sandwich Substation Component
43. Install New 138kV L14613 from Sandwich to Plano- Plano Substation Component
44. 345kV L12002 Lombard to Itasca Red, Increase Capacity- Itasca Substation Component
45. 345kV L10802 Lockport Red to Lisle Red, Lisle Substation Component.
46. 345kV L10322 Lisle Red to Lombard Red, Lombard Substation Component.
47. 345kV L10111 and L10112 from Itasca to Elk Grove Red and Blue, Increase Capacity

Transmission Line Upgrade Component

Component title	345kV L11124 Electric Junction Blue to Lombard Blue, Increase Capacity
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L11124 Electric Junction Blue to Lombard Blue
Point A	345kV Electric Junction Blue
Point B	345kV Lombard Blue
Point C	
Terrain description	The line is in existing ComEd right-of-way over flat terrain. The terrain is bordering industrial, residential, and open lands. There are 3 railroad crossings and 5 major road crossings.
Existing Line Physical Characteristics	
Operating voltage	345

Conductor size and type	2156 KCMIL ACSR	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	ComEd proposes rebuilding as opposed reconductoring on the existing towers for the following reasons: . The line is around 60 years old and is near the end of its useful life.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1386.000000	1585.000000
Winter (MVA)	1701.000000	1872.000000
Conductor size and type	2-1277.2_KCMIL_54/7_ACAR_BUNDLED	
Shield wire size and type	OPGW	
Rebuild line length	18.0	
Rebuild portion description	Remove existing 345kv double circuit steel lattice structures and replace with new 345kV double circuit steel monopole structures.	
Right of way	Utilize existing L11120/L11124 right of way.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	

Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$100,719,563.00
Component cost (in-service year)	\$111,232,764.00
Substation Upgrade Component	
Component title	345kV L11124 Electric Junction Blue to Lombard Blue- Electric Junction Substation Component
Project description	Company confidential and proprietary information.
Substation name	Electric Junction
Substation zone	ComEd
Substation upgrade scope	Remove existing 345kV L11124 terminal and line circuit breaker conductors at Electric Junction and replace with new 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductors.
Transformer Information	
None	
New equipment description	Remove existing 345kV L11124 terminal and line circuit breaker conductors at Electric Junction, install Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor from L.11124 dead-end structure to line side MODs on all three phases. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the L.11124 circuit breaker and MODs on all three phases.
Substation assumptions	None-No yard design or construction at Electric Junction that alters current layout.
Real-estate description	None-No yard design or construction at Electric Junction that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.

Component Cost Details - In Current Year \$

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$225,525.00
Component cost (in-service year)	\$251,210.00

Substation Upgrade Component

Component title	345kV L11124 Electric Junction Blue to Lombard Blue- Lombard Substation Component
Project description	Company confidential and proprietary information.
Substation name	Lombard
Substation zone	ComEd
Substation upgrade scope	Remove existing 345kV L11124 terminal and line circuit breaker conductors at Lombard and replace with new 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductors.

Transformer Information

None	
New equipment description	Remove existing 345kV L11124 terminal and line circuit breaker conductors at Lombard, install Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor from L.11124 dead-end structure to line side MODs on all three phases. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the L.11124 circuit breaker and MODs on all three phases.

Substation assumptions	None-No yard design or construction at Electric Junction that alters current layout.
Real-estate description	None-No yard design or construction at Electric Junction that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$225,525.00
Component cost (in-service year)	\$251,210.08
Transmission Line Upgrade Component	
Component title	345kV L11604 Goodings Grove Red to Lockport Red, Increase Capacity with ACSS
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L11604 Goodings Grove Red to Lockport Red,
Point A	Goodings Grove Red
Point B	Lockport Red
Point C	

Terrain description	The line is in existing ComEd L11604 Goodings Grove Red to Lockport Red, right-of-way over flat terrain. The terrain is bordering industrial, residential, and wooded lands. There are 2 railroad crossings and 3 major road crossings.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	2156kcmil Bluebird ACSR	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Double circuit 345kV lattice lowers with 2 shield wire positions. Towers are designed for Bluebird ACSR and 1000ft and 1200ft weight spans	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1665.000000	2049.000000
Winter (MVA)	2072.000000	2340.000000
Conductor size and type	2 x 795 kcmil 26/7 ACSS "Drake"	
Shield wire size and type	7#8 Alumoweld Shield Wire	
Rebuild line length	9.02	
Rebuild portion description	5 towers will require replacement and 3 towers will require modifications to accommodate the larger conductor.	
Right of way	Utilize existing ComEd L11604 ROW	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	

Component Cost Details - In Current Year \$

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$10,441,554.00
Component cost (in-service year)	\$11,564,488.00

Substation Upgrade Component

Component title	L11604 Goodings Grove Red to Lockport Red, Lockport Substation Component
Project description	Company confidential and proprietary information.
Substation name	Lockport
Substation zone	ComEd
Substation upgrade scope	Remove existing 345kV L11124 terminal and BT1-6 circuit breaker conductors at Lockport and replace with new 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductors.

Transformer Information

None	
New equipment description	Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the BT 1-6 circuit breaker and MODs on all three phases. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor from L.11604 dead-end structure to line side MODs on all three phases.

Substation assumptions	N/a- No other ongoing yard design or construction at Lockport that alters the current layout.
Real-estate description	N/a- No other ongoing yard design or construction at Lockport that alters the current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$218,141.00
Component cost (in-service year)	\$242,695.00
Transmission Line Upgrade Component	
Component title	345kV L10801 Lockport to Lisle Blue, Increase Capacity with ACSS
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L10801 Lockportto Lisle Blue
Point A	Lockport Blue
Point B	Lisle Blue
Point C	

Terrain description	The line is in existing ComEd right-of-way over flat terrain. The terrain is bordering industrial, residential, and wooded lands. There is one railroad crossing and one interstate highway crossing.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	2156 KCMIL ACSR	
Hardware plan description	The lattice towers are greater than 60 years old, Existing hardware will be replaced	
Tower line characteristics	Double circuit 345kV lattice towers with 2 shield wire positions. Line is double circuit with 10802. The existing conductor is 1-Bluebird ACSR with average span lengths of 650'. Existing structures are primarily type "A" (TL258) designed for Bluebird ACSR and 1000' weight spans	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1665.000000	2049.000000
Winter (MVA)	2072.000000	2340.000000
Conductor size and type	2 x 795 kcmil 26/7 ACSS "Drake"	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	12.7	
Rebuild portion description	Replace existing conductor with 2 x Drake ACSS. Replace existing shield wire and transmission hardware. About 10% of structures will be replaced, and 6% will be modified to maintain the line's integrity. Tower replacement and modification quantities were estimated based on comparing the proposed conductor to the loading schedules of the existing towers. Modification percentages are based on weight-span analysis and point load differences attributed to the larger conductor diameter and ice loading impacts. Increased conductor diameter compared to existing is approximately accounted for in original design transverse OLF buffer. Typical span lengths were used to determine sag-related risks like blowout and vertical clearances.	

Right of way	The rebuild will occur in the existing 345kV L10801/L10802 Lockport to Lisle ROW.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$14,008,244.00
Component cost (in-service year)	\$15,517,430.00
Substation Upgrade Component	
Component title	345kV L10801 Lockport Blue to Lisle Blue, Lockport Substation Component.
Project description	Company confidential and proprietary information.
Substation name	Lockport
Substation zone	ComEd
Substation upgrade scope	At Lockport substation, replace 345kV BT3-9 oil circuit breaker and associated equipment, and replace 345kV BT9-10 oil circuit breaker and associated equipment, with 2 new 345kV SF6 circuit breakers and associated equipment. This will include new relay schemes and panels at Lockport.

Transformer Information

None

New equipment description	345kV BT circuit breakers, 4000A, 63kA
Substation assumptions	Existing space is adequate for existing equipment to be removed and replaced.
Real-estate description	n/a- existing space is adequate for existing equipment to be removed and replaced.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$5,777,271.00
Component cost (in-service year)	\$6,358,760.00

Substation Upgrade Component

Component title	345kV L10801 Lockport Blue to Lisle Blue, & 345kV L10322 Lisle Red to Lombard Red, Lisle Substation Component.
Project description	Company confidential and proprietary information.

Substation name	Lisle
Substation zone	ComEd
Substation upgrade scope	At Lisle substation, replace 345kV BT2-3 manual disconnect switches with new 345kV BT2-3 motor operated disconnect switches.
Transformer Information	
None	
New equipment description	345kV BT motor operated disconnect switches 4000A, 63kA
Substation assumptions	Existing space is adequate for existing equipment to be removed and replaced. Structure supports for the new motor operated disconnects are adequate.
Real-estate description	n/a- existing space is adequate for existing equipment to be removed and replaced.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$1,061,727.00
Component cost (in-service year)	\$1,166,132.00

Transmission Line Upgrade Component

Component title	345kV L10802 Lockport to Lisle Red, Increase Capacity with ACSS	
Project description	Company confidential and proprietary information.	
Impacted transmission line	345kV L10802 Lockport Red to Lisle Red	
Point A	Lockport	
Point B	Lisle	
Point C		
Terrain description	The line is in existing L10802 Lockport to Lisle ComEd right-of-way over flat terrain. The terrain is bordering industrial, residential, and wooded lands. There is one railroad crossing and one interstate highway crossing.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	2156 KCMIL ACSR	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Double circuit 345kV lattice towers with 2 shield wire positions. Line is double circuit with 10801. The existing conductor is 1-Bluebird ACSR with average span lengths of 650'. Existing structures are primarily type "A" (TL258) designed for Bluebird ACSR and 1000' weight spans	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1665.000000	2049.000000
Winter (MVA)	2072.000000	2340.000000

Conductor size and type	2 x 795 kcmil 26/7 ACSS "Drake"
Shield wire size and type	7#8 Alumoweld with two shield wire positions
Rebuild line length	12.64
Rebuild portion description	Replace existing conductor with 2 x Drake ACSS. Replace existing shield wire and transmission hardware. About 10% of structures will be replaced, and 6% will be modified to maintain the line's integrity. Tower replacement and modification quantities were estimated based on comparing the proposed conductor to the loading schedules of the existing towers. Modification percentages are based on weight-span analysis and point load differences attributed to the larger conductor diameter and ice loading impacts. Increased conductor diameter compared to existing is approximately accounted for in original design transverse OLF buffer. Typical span lengths were used to determine sag-related risks like blowout and vertical clearances.
Right of way	The rebuild will occur in the existing 345kV L10801/L10802 Lockport to Lisle ROW.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$14,008,244.00
Component cost (in-service year)	\$15,517,430.00

Substation Upgrade Component

Component title	345kV L10802 Lockport Red to Lisle Red, Lockport Substation Component.
Project description	Company confidential and proprietary information.
Substation name	Lockport
Substation zone	ComEd
Substation upgrade scope	At Lockport substation, replace 345kV BT3-4 oil circuit breaker and associated equipment with one new 345kV SF6 circuit breaker and associated equipment. This will include new relay schemes and panels at Lockport.

Transformer Information

None	
New equipment description	345kV BT circuit breakers, 4000A, 63kA
Substation assumptions	Existing space is adequate for existing equipment to be removed and replaced.
Real-estate description	n/a- existing space is adequate for existing equipment to be removed and replaced.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.

Contingency	Company confidential and proprietary information.	
Total component cost	\$3,191,203.00	
Component cost (in-service year)	\$3,509,541.00	
Transmission Line Upgrade Component		
Component title	345kV L10322 Lisle to Lombard Red, Increase Capacity with ACSS	
Project description	Company confidential and proprietary information.	
Impacted transmission line	345kV L10322 Lisle to Lombard Red	
Point A	Lisle	
Point B	Lombard	
Point C		
Terrain description	Transmission line is on existing ComED L10322 Lisle to Lombard Red right-of-way over mostly flat terrain except one hill. Terrain borders wooded lands, a river, a golf course, and residential areas. There is one railroad crossing.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	2156 KCMIL ACSR	
Hardware plan description	Replacing all conductor and shield wire hardware assemblies. On towers being replaced, hardware will be replaced. Insulators to be polymer.	
Tower line characteristics	Transmission line consists of 3 double circuit monopoles, 2 single circuit monopoles, 67 double circuit towers and 2 single circuit towers. 10% of structures will be replaced, and 6% will be modified to maintain the line's structural integrity.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000

	Normal ratings	Emergency ratings
Summer (MVA)	1665.000000	2049.000000
Winter (MVA)	2072.000000	2370.000000
Conductor size and type	2 x 795 kcmil 26/7 ACSS "Drake"	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	9.026	
Rebuild portion description	Replace existing conductor with 2 x Drake ACSS. Replace existing shield wire and transmission hardware. About 10% of structures will be replaced, and 6% will be modified to maintain the line's integrity. Tower replacement and modification quantities were estimated based on comparing the proposed conductor to the loading schedules of the existing towers. Modification percentages are based on weight-span analysis and point load differences attributed to the larger conductor diameter and ice loading impacts. Typical span lengths were used to determine sag-related risks like blowout and vertical clearances.	
Right of way	Existing right of way has 345kv double circuit structures.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	
Materials & equipment	Company confidential and proprietary information.	
Construction & commissioning	Company confidential and proprietary information.	
Construction management	Company confidential and proprietary information.	
Overheads & miscellaneous costs	Company confidential and proprietary information.	
Contingency	Company confidential and proprietary information.	

Total component cost	\$14,339,096.00
Component cost (in-service year)	\$15,902,523.00
Transmission Line Upgrade Component	
Component title	345KV L15616 Cherry Valley to Prairie, rebuild and Increase Capacity
Project description	Company confidential and proprietary information.
Impacted transmission line	345KV L15616 Cherry Valley to Prairie
Point A	Cherry Valley
Point B	Prairie
Point C	
Terrain description	The line is in existing ComEd right-of-way over flat terrain. The project is bordering agricultural, wooded, and residential lands.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2156 KCMIL ACSR and 2338 KCMIL ACAR
Hardware plan description	Existing hardware to be replaced.
Tower line characteristics	ComEd proposes rebuilding the line and reconductoring, as opposed to utilizing existing structures and reconductoring the line due to the following conditions. Assumptions: . This line was constructed in 1970, making the structures approximately 56 years old, and nearing end of useful life. Ground Clearance and Galloping . A preliminary survey point clearance analysis identified ground clearance violations in 56 spans with the proposed 1277.2 ACAR (54/7) bundled conductor checked at max operating temperature 230 F as well as 140 F. These results indicate that at least one structure within each affected span may require a height increase or other corrective measures to achieve the required clearances. . In addition, a preliminary galloping analysis identified potential wire-to-wire galloping clearance issues throughout the line following installation of the proposed conductor. A detailed analysis would be required to evaluate the severity of these conditions and identify any necessary mitigation measures.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1680.000000	2059.000000
Winter (MVA)	2091.000000	2382.000000
Conductor size and type	2-1277.2 KCMIL 54/7 ACAR BUNDLED	
Shield wire size and type	OPGW	
Rebuild line length	15.6	
Rebuild portion description	Remove existing lattice towers and replace with steel monopole.	
Right of way	utilize existing L15616 right of way from Cherry Valley to Prairie	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	
Materials & equipment	Company confidential and proprietary information.	
Construction & commissioning	Company confidential and proprietary information.	
Construction management	Company confidential and proprietary information.	
Overheads & miscellaneous costs	Company confidential and proprietary information.	
Contingency	Company confidential and proprietary information.	

Total component cost	\$49,144,268.00
Component cost (in-service year)	\$54,617,815.00
Substation Upgrade Component	
Component title	345KV L15616 Cherry Valley to Prairie, Cherry Valley Substation Component.
Project description	Company confidential and proprietary information.
Substation name	Cherry Valley
Substation zone	ComEd
Substation upgrade scope	Replace 345kV BT 4-7 oil circuit breaker with a new 4000A SF6 circuit breaker, and associated equipment at Cherry Valley. Replace conductor on bus 7 with 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor.
Transformer Information	
None	
New equipment description	345kV BT circuit breaker 4000A , 63KA 2-345kV 4000A ACCC D06 motor operated disconnects (MODs)
Substation assumptions	No other ongoing yard design or construction at Cherry Valley that alters current layout. AC and DC studies will be needed at the detailed design stage to confirm sizes of auxiliary AC and DC systems.
Real-estate description	No other ongoing yard design or construction at Cherry Valley that alters current layout or real-estate.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.

Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$3,220,903.00
Component cost (in-service year)	\$3,545,852.00
Transmission Line Upgrade Component	
Component title	345kV L97104 Prairie to Silver Lake, Increase Capacity
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L97104 Prairie to Silver Lake
Point A	Prairie
Point B	Silver Lake
Point C	
Terrain description	The line is in existing ComEd right-of-way L15616 (Cherry Valley to Silver Lake, Future 97104 Prairie to Silver Lake) over flat terrain. The project is bordering farmland and residential parcels. There are 3 major road crossings and 3 railroad crossings
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2338 ACAR
Hardware plan description	Existing hardware will be replaced

Tower line characteristics

ComEd is proposing lattice structure replacement and reconductoring as opposed to utilizing existing structures and reconductoring only. For the proposed reconductoring section, 2-1277.2 kcmil bundled ACAR (54/7) conductor satisfies the minimum thermal capability requirement. Proposed conductor on existing structures identified significant ground-clearance violations in both reconductoring segments when modeled under the applicable maximum operating condition. Within L97104, the clearance report identified 80 spans with clearance violations to ground. These results indicate that the proposed 2-1277.2 kcmil bundled ACAR conductor cannot be implemented on the existing structures within these limits without substantial mitigation.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1386.000000	1585.000000
Winter (MVA)	1701.000000	1872.000000
Conductor size and type	2-1277.2_KCMIL_54/7_ACAR_BUNDLED	
Shield wire size and type	OPGW	
Rebuild line length	21.5	
Rebuild portion description	Rebuild 345kv lattice structures with new 345kv steel monopole structures.	
Right of way	Rebuild 345kv lattice structures with new 345kv steel monopole structures.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	

Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$66,572,659.00
Component cost (in-service year)	\$73,518,381.00
Substation Upgrade Component	
Component title	345kV L97104 Prairie to Silver Lake, Silver Lake Substation Component.
Project description	Company confidential and proprietary information.
Substation name	Silver Lake
Substation zone	ComEd
Substation upgrade scope	At Silver Lake, replace 345kV BT 3-4, 2156 KCMIL CB Leads, with new, 2-2156_KCMIL_84/19_ACSR_BLUEBIRD bundled CB Leads.
Transformer Information	
None	
New equipment description	New 2-2156_KCMIL_84/19_ACSR_BLUEBIRD substation conductor.
Substation assumptions	None-No yard design or construction at Silver Lake that alters current layout.
Real-estate description	None-No yard design or construction at Silver Lake that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$407,257.00
Component cost (in-service year)	\$452,983.00
Transmission Line Upgrade Component	
Component title	345kV L93505 Kendall County Energy Center to Dresden Blue, Capacity Increase
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L93505 Kendall County Energy Center to Dresden Blue
Point A	Kendall County Energy Center
Point B	Dresden
Point C	
Terrain description	L93505 Kendall County Energy Center to Dresden is in existing ComEd right-of-way over flat terrain. L93505 is bordering farmland and industrial parcels. There are 2 major road crossings, 1 river crossing, and 2 railroad crossings.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2338 ACAR and 2156 ACSR sag limited.

Hardware plan description	utilize existing hardware	
Tower line characteristics	Removal of sag-limit on 2338 ACAR would require: Engineered solution to rectify approximately 7 spans which would have clearance violations. Solutions could include structure modification or distribution conductor reconfigurations. Initial studies show that this would require lattice tower structure height modifications of approximately 8 suspension structures. This structure count accounts for additional required clearance where structures are modified	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1202.000000	1479.000000
Winter (MVA)	1498.000000	1821.000000
Conductor size and type	1-2338_KCMIL_42/19_ACAR	
Shield wire size and type	no change	
Rebuild line length	n/a	
Rebuild portion description	Engineered solution to rectify approximately 7 spans which would have clearance violations. Solutions could include structure modification or distribution conductor reconfigurations. Initial studies show that this would require lattice tower structure height modifications of approximately 8 suspension structures. This structure count accounts for additional required clearance where structures are modified	
Right of way	existing L93535 Kendall County Energy Center to Dresden Blue row.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	

Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$7,546,053.00
Component cost (in-service year)	\$8,313,283.00
Transmission Line Upgrade Component	
Component title	345kV L11617 Goodings Grove to Lockport Blue, Increase Capacity with ACSS
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L11617 Goodings Grove to Lockport Blue
Point A	Goodings Grove
Point B	Lockport
Point C	
Terrain description	The line is in existing ComEd right-of-way over flat terrain. The terrain is bordering industrial, residential, and wooded lands. There are 2 railroad crossings and 3 major road crossings.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	1 x ACSR "Bluebird"
Hardware plan description	Existing hardware will be replaced

Tower line characteristics	Double circuit 345kV lattice lowers with 2 shield wire positions. Towers are designed for Bluebird ACSR and 1000ft and 1200ft weight spans	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1560.000000	1802.000000
Winter (MVA)	1857.000000	2064.000000
Conductor size and type	2 x 795 kcmil 26/7 ACSS "Drake"	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	9.02	
Rebuild portion description	It is estimated at 5 towers will require replacement and 3 towers will require modifications to accommodate the larger conductor.	
Right of way	Existing ComEd ROW will be used.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	
Materials & equipment	Company confidential and proprietary information.	
Construction & commissioning	Company confidential and proprietary information.	

Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$10,441,554.00
Component cost (in-service year)	\$11,564,488.00
Substation Upgrade Component	
Component title	345kV L11617 Goodings Grove to Lockport Blue, Capacity Increase- Substation Component
Project description	Company confidential and proprietary information.
Substation name	Lockport
Substation zone	ComEd
Substation upgrade scope	Install 345kV - 4000A BT 10-11 circuit breaker. Replace foundation. Install (2) 345kV 4000A ACCC D06 motor operated disconnects (MODs) on either side of the BT 10-11 circuit breaker. Replace both structures and foundations. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the BT 10-11 circuit breaker and MODs on all three phases. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the BT 11-12 circuit breaker and MODs on all three phases. Replace 3-phase section of 3" AL pipe on Bus 10 with 6" AL SCH. 40 NPS pipe. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor from L.11617 dead-end structure to line side MODs on all three phases.
Transformer Information	
None	
New equipment description	345kV BT circuit breaker, 4000A, 63kA 345kV MODs, 4000A, ACCC D06, 63kA
Substation assumptions	No other ongoing yard design or construction at TSS 108 Lockport that alters the current layout. AC and DC studies will be needed at the detailed design stage to confirm sizes of auxiliary AC and DC systems. Equipment installed is 3-Phase. Assumes the completion of 0P2600001. Bus support structures will be evaluated at detailed design stage.
Real-estate description	no yard expansion or additional acreage required.
Construction responsibility	Company confidential and proprietary information.

Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$3,374,558.00
Component cost (in-service year)	\$3,715,022.00
Substation Upgrade Component	
Component title	345kV L11601 East Frankfort to Gooding Grove Blue, Capacity Increase- East Frankfort Substation Component
Project description	Company confidential and proprietary information.
Substation name	East Frankfort
Substation zone	ComEd
Substation upgrade scope	Replace 1-2156KCMIL ACSR conductor with new 2-2156 ACSR bundled conductors at the L11601 East Frankfort to Gooding Grove, East Frankfort Line terminal.
Transformer Information	
None	
New equipment description	new 2-2156 ACSR bundled conductors

Substation assumptions	Dead end structure can support the new conductors.
Real-estate description	NO impact on real-estate
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$156,105.00
Component cost (in-service year)	\$170,389.00
Substation Upgrade Component	
Component title	345kV L11602 East Frankfort to Gooding Grove Red, Capacity Increase- East Frankfort Substation Component
Project description	Company confidential and proprietary information.
Substation name	East Frankfort
Substation zone	ComEd
Substation upgrade scope	Replace 1-2156KCMIL ACSR conductor with new 2-2156 ACSR bundled conductors at the L11602 East Frankfort to Gooding Grove, East Frankfort Line terminal.

Transformer Information

None

New equipment description	new 2-2156 ACSR bundled conductors
Substation assumptions	Dead end structure can support the new conductors.
Real-estate description	NO impact on real-estate
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$156,105.00
Component cost (in-service year)	\$170,389.00

Transmission Line Upgrade Component

Component title	138kV L1603 Round Lake to Antioch Tap Red and L1603 Antioch to Round Lake Beach Tap Red, Increase Capacity
Project description	Company confidential and proprietary information.

Impacted transmission line	138kV L1603 Round Lake to Antioch Tap Red and L1603 Antioch to Round Lake Beach Tap Red	
Point A	Round Lake	
Point B	Antioch Tap	
Point C	Round Lake Beach Tap	
Terrain description	The line is in existing ComEd L1603 Round Lake to Antioch Tap Red and L1603 Antioch to Round Lake Beach Tap Red right-of-way over flat terrain. The project is bordering residential and industrial parcels. There is one major road crossing.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	300 CU 19 strand	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Double circuit 138kV lattice towers with 2 shield wire positions. Existing lattice structures are over 100 years old. Line is double circuit with 1603/1607 Round Lake to Antioch Tap Red and Blue and L1603/L1607 Antioch to Round Lake Beach Tap Red and Blue. The existing conductor is primarily 19 strand 300 CU with an average span length of 900'. Existing structures are primarily type "A" towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	351.000000	449.000000
Winter (MVA)	421.000000	500.000000
Conductor size and type	1113 kCMIL ACSR (45/7) Bluejay	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	

Rebuild line length	3
Rebuild portion description	Remove double circuit lattice structures, rebuild with new double circuit monopole structures.
Right of way	Existing L1603/L1607 Round Lake to Antioch Tap Red and Blue and L1603/L1607 Antioch to Round Lake Beach Tap Red and Blue right of way.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$11,273,218.00
Component cost (in-service year)	\$12,484,616.00
Transmission Line Upgrade Component	
Component title	138kV L1607 Round Lake to Antioch Tap Blue and L1607 Antioch to Round Lake Beach Tap Blue, rebuild and reconductor
Project description	Company confidential and proprietary information.
Impacted transmission line	138kV L1607 Round Lake to Antioch Tap Blue and L1607 Antioch to Round Lake Beach Tap Blue
Point A	Round Lake

Point B	Antioch Tap	
Point C	Round Lake Beach Tap	
Terrain description	The line is in existing ComEd L1607 Round Lake to Antioch Tap Blue and L1607 Antioch to Round Lake Beach Tap Blue right-of-way over flat terrain. The project is bordering residential and industrial parcels. There is one major road crossing.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	300 CU 19 strand	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Double circuit 138kV lattice towers with 2 shield wire positions. Existing lattice structures are approximately 100 years old. Line is double circuit with 1603/1607 Round Lake to Antioch Tap Red and Blue and L1603/L1607 Antioch to Round Lake Beach Tap Red and Blue. The existing conductor is primarily 19 strand 300 CU with an average span length of 900'. Existing structures are primarily type "A" towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	351.000000	449.000000
Winter (MVA)	421.000000	500.000000
Conductor size and type	1113 kCMIL ACSR (45/7) Bluejay	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	3	
Rebuild portion description	Remove double circuit lattice structures, rebuild with new double circuit monopole structures.	

Right of way	Existing L1603/L1607 Round Lake to Antioch Tap Red and Blue and L1603/L1607 Antioch to Round Lake Beach Tap Red and Blue right of way.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$11,452,341.00
Component cost (in-service year)	\$12,687,168.85
Transmission Line Upgrade Component	
Component title	138kV L5103 Bedford Park to Clearing Tap Blue, Increase Capacity
Project description	Company confidential and proprietary information.
Impacted transmission line	138kV L5103 Bedford Park to Clearing Tap Blue
Point A	Bedford Park
Point B	Clearing Tap Blue
Point C	

Terrain description	The line is in existing ComEd L5103 Bedford Park to Clearing Tap Blue right-of-way over flat terrain. The terrain is bordering industrial properties. The rebuild portion parallels a BRC railroad.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	477 ACSR Hawk, 1113 ACSR Bluejay	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Primarily double circuit 138kV lattice towers with 2 shield wire positions. 138kV circuit is in a 6-wire configuration. Existing towers are designed for 900 ACSR and have 450' average span length.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	416.000000	497.000000
Winter (MVA)	498.000000	561.000000
Conductor size and type	1025.6 ACCC Drake	
Shield wire size and type	7#8 Alumoweld Shield Wire	
Rebuild line length	0.7	
Rebuild portion description	Both shield wires are to be replaced. It is assumed that the entire 6-wire configuration for 0.57 miles will be reconducted, giving a total reconductor length of 1.25 circuit miles. Existing towers are designed for 900 ACSR and have 450' average span length. Due to short span lengths, ACCC has best sag performance. It is assumed that the tap structure (tangent) will be replaced with a deadend to splice from ACCC to ACSR.	
Right of way	Existing ComEd ROW will be used.	
Construction responsibility	Company confidential and proprietary information.	

Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$1,248,707.00
Component cost (in-service year)	\$1,380,348.00
Substation Upgrade Component	
Component title	138kV L5103 Bedford Park to Clearing Tap Blue, Bedford Park Substation Component
Project description	Company confidential and proprietary information.
Substation name	Bedford Park
Substation zone	ComEd
Substation upgrade scope	Install 2-1113 kCMIL ACSR (45/7) Bluejay Bundled conductor from L.5103 Bedford Park to Clearing Tap Blue dead-end structure to circuit breaker 113's line side MODs on all three phases. Install 2-1113 kCMIL ACSR (45/7) Bluejay Bundled conductor from L.5103 Bedford Park to Clearing Tap Blue dead-end structure to T-Bus MODs on all three phases. Install 2-1113 kCMIL ACSR (45/7) Bluejay Bundled conductor from circuit breaker 113's line side MODs on all three phases.
Transformer Information	

None	
New equipment description	2-1113 kCMIL ACSR (45/7) Bluejay Bundled conductor
Substation assumptions	No other ongoing yard design or construction at Bedford Park that alters current layout.
Real-estate description	No other ongoing yard design or construction at Bedford Park that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$401,742.00
Component cost (in-service year)	\$439,429.00
Transmission Line Upgrade Component	
Component title	138kV L7910 Spaulding to Bartlett Tap Blue, Increase Capacity
Project description	Company confidential and proprietary information.
Impacted transmission line	138kV L7910 Spaulding to Bartlett Tap Blue
Point A	Spaulding

Point B	Bartlett Tap	
Point C		
Terrain description	The line is in existing ComEd right-of-way over flat terrain. The terrain is bordering industrial and residential land. There are no major road crossings	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	1113 ACSR Bluejay	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Double circuit 138kV lattice towers with 2 shield wire positions. Line is on double circuit structures with 7915 (Spaulding to Elgin Tap Red) (which has no reconductor scope). The existing conductor is primarily 1113 Bluejay ACSR with 750' average span lengths. Existing structures are primarily type "AB" (LS 549) designed for 1113 Bluejay ACSR and 1000' weight spans	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	486.000000	550.000000
Winter (MVA)	527.000000	586.000000
Conductor size and type	2x1113 kCMIL ACSR bundled	
Shield wire size and type	7#8 Alumoweld Shield Wire	
Rebuild line length	1.4	

Rebuild portion description	Rebuild from Spaulding to Bartlett Tap . Approximately 1.4 miles of existing 1113 Bluejay ACSR conductor. . 14 structures consisting of steel poles and lattice towers installed between 1969 and 1991. . Proposed upgrade with 2 x 1113 Bluejay ACSR conductor would approximately double existing wire loads and existing structures are not designed for new loads. . Eight of thirteen spans exhibit existing galloping concerns. . Structures range from 35 to 57 years old, with four approaching end of service life. . Two wood structures require replacement
Right of way	Existing ComEd L7910 Spaulding to Bartlett Tap Blue ROW will be used.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$11,083,591.00
Component cost (in-service year)	\$12,326,188.00
Substation Upgrade Component	
Component title	138kV L7910 Spaulding to Bartlett Tap Blue, Increase Capacity, Spaulding Substation Component
Project description	Company confidential and proprietary information.
Substation name	Spaulding

Substation zone	ComEd
Substation upgrade scope	At Spaulding replace incoming conductors, along with 138 kV L7910 Circuit breaker leads with 2-1113 KCMIL ACSR bundled conductors.
Transformer Information	
None	
New equipment description	2-1113 KCMIL ACSR bundled conductors.
Substation assumptions	n/a
Real-estate description	n/a
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$272,606.00
Component cost (in-service year)	\$303,522.00
Transmission Line Upgrade Component	

Component title	138kV L10302 York Center Tap to Butterfield Tap Red, Increase Capacity	
Project description	Company confidential and proprietary information.	
Impacted transmission line	L10302 York Center Tap to Butterfield Tap Red	
Point A	York Center Tap	
Point B	Butterfield Tap Red	
Point C		
Terrain description	n/a	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	1113 KCMIL ACSR Bluejay	
Hardware plan description	no change to existing hardware	
Tower line characteristics	no change to existing towers. Replace L10302 York Center Tap to Butterfield Tap Red circuit switcher.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	351.000000	449.000000
Winter (MVA)	421.000000	500.000000
Conductor size and type	1113 KCMIL ACSR Bluejay	
Shield wire size and type	no change	
Rebuild line length	0	

Rebuild portion description	Replace L10302 York Center Tap to Butterfield Tap Red circuit switcher.
Right of way	no change
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$329,210.00
Component cost (in-service year)	\$362,751.00
Transmission Line Upgrade Component	
Component title	138kV L12016 Lombard to Glendale Heights Tap Blue, Increase Capacity, reconductor with ACSS
Project description	Company confidential and proprietary information.
Impacted transmission line	138kV L12016 Lombard to Glendale Heights Tap Blue
Point A	Lombard
Point B	Glendale Heights Tap
Point C	

Terrain description	The line is in existing ComEd right-of-way from Itasca to Lombard over flat terrain. The project is bordering residential and industrial parcels. There is 1 major road crossing and 1 railroad crossing	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	1113 ACSR Bluejay	
Hardware plan description	Existing hardware will be replaced.	
Tower line characteristics	Quad circuit 345kV/138kV lattice towers with 2 shield wire positions. Line is mutual with 12005/12006 Lombard to Des Plaines Red and Blue (12006 345kV line has no reconductor scope), and 12015 Lombard to Itasca Red. The existing conductor is primarily 1113 Bluejay ACSR with 700' average span lengths. Existing structures are primarily type "QA" (LS 825) designed for 1113 Bluejay ACSR and 1000' weight span	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	438.000000	497.000000
Winter (MVA)	510.000000	561.000000
Conductor size and type	1033 kcmil 45/7 ACSS TW Curlew	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	2.4	
Rebuild portion description	Structure replacement and modification percentages are governed by the 12005 345kV reconductor project. Increased conductor diameter compared to existing is approximately accounted for in original design transverse OLF buffer	
Right of way	Existing ComEd ROW will be used.	
Construction responsibility	Company confidential and proprietary information.	

Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$4,775,491.00
Component cost (in-service year)	\$5,297,668.00
Substation Upgrade Component	
Component title	138kV L12016 Lombard to Glendale Heights Tap Blue, Increase Capacity, Lombard Substation Component
Project description	Company confidential and proprietary information.
Substation name	Lombard
Substation zone	Lombard
Substation upgrade scope	Install 2-1590 kCMIL ACSR (54/19) Falcon Bundled conductor from L.12016 dead-end structure to line side MODs on all three phases. Install 2-1590 kCMIL ACSR (54/19) Falcon Bundled conductor between the L.12016 circuit breaker and MODs, and from MODs to Bus 4 on all three phases.
Transformer Information	
None	

New equipment description	2-1590 kCMIL ACSR (54/19) Falcon Bundled conductor
Substation assumptions	No other ongoing yard design or construction at Lombard that alters current layout.
Real-estate description	No other ongoing yard design or construction at Lombard that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$227,494.00
Component cost (in-service year)	\$252,696.00
Transmission Line Upgrade Component	
Component title	138kV L12015 Lombard to Glendale Heights Tap Red, and Glendale Heights Tap to Nordic Tap, Increase Capacity, reconductor with ACSS
Project description	Company confidential and proprietary information.
Impacted transmission line	138kV L12015 Lombard to Glendale Heights Tap Red, and Glendale Heights Tap to Nordic Tap
Point A	Lombard Red

Point B	Glendale Heights Tap	
Point C	Nordic Tap	
Terrain description	The line is in existing ComEd right-of-way over flat terrain. The project is bordering residential, industrial, and wooded parcels. There is 1 major road crossing and 1 railroad crossing.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	1113 ACSR Bluejay	
Hardware plan description	Existing hardware will be replaced.	
Tower line characteristics	Quad circuit 345kV/138kV lattice towers with 2 shield wire positions. Line is mutual with 12005/12006 Lombard to Des Plaines Red and Blue (12006 345kV line has no reconductor scope), and 12016 Lombard to Itasca Blue. The existing conductor is primarily 1113 Bluejay ACSR with 700' average span lengths. Existing structures are primarily type "QA" (LS 825) designed for 1113 Bluejay ACSR and 1000' weight spans	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	438.000000	497.000000
Winter (MVA)	510.000000	561.000000
Conductor size and type	1033 kcmil 45/7 ACSS TW Curlew	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	4.0	
Rebuild portion description	Structure replacement and modification percentages are governed by the 12005 345kV reconductor project. Increased conductor diameter compared to existing is approximately accounted for in original design transverse OLF buffer	

Right of way	Existing ComEd ROW will be used.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$58,771,084.00
Component cost (in-service year)	\$64,908,446.00
Substation Upgrade Component	
Component title	138kV L12015 Lombard to Glendale Heights Tap Red, Increase Capacity, Lombard Substation Component
Project description	Company confidential and proprietary information.
Substation name	Lombard
Substation zone	ComEd
Substation upgrade scope	Install 2-1590 kCMIL ACSR (54/19) Falcon Bundled conductor from L.12015 dead-end structure to line side MODs on all three phases. Install 2-1590 kCMIL ACSR (54/19) Falcon Bundled conductor between the L.12015 circuit breaker and MODs, and from MODs to Bus 3, on all three phases.

Transformer Information

None	
New equipment description	2-1590 kCMIL ACSR (54/19) Falcon Bundled conductor
Substation assumptions	No other ongoing yard design or construction at Lombard that alters current layout.
Real-estate description	No other ongoing yard design or construction at Lombard that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$227,494.00
Component cost (in-service year)	\$252,696.00

Transmission Line Upgrade Component

Component title	345kV L12005 Lombard to Des Plaines Blue, Increase Capacity, reconductor with ACSS
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L12005 Lombard to Des Plaines Blue

Point A	Lombard	
Point B	Des Plaines	
Point C		
Terrain description	The line is in existing ComEd right-of-way over flat terrain. The terrain is bordering industrial, residential, and open lands. There are 2 railroad crossings and 10 major road crossings.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	1 x ACSR "Bluebird"	
Hardware plan description	Existing hardware will be replaced	
Tower line characteristics	Quad circuit 345kV/138kV lattice towers with 2 shield wire positions. Line is mutual with 12006 Lombard to Des Plaines Red (12006 345kV line has no reconductor scope), and 12015/12016 Lombard to Itasca Red and Blue. The existing conductor is 2156 Bluebird ACSR with 750' average span lengths. Existing structures are primarily type "QA" (LS 825) designed for Bluebird ACSR and 1000' weight spans	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1576.000000	1912.000000
Winter (MVA)	1934.000000	2197.000000
Conductor size and type	2 x 795 kcmil 26/7 ACSS "Drake"	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	25.42	

Rebuild portion description	One shield wire will be replaced as part of the reconductor. About 10% of structures will be replaced, and 6% will be modified to maintain the line's integrity. Tower replacement and modification quantities were estimated based on comparing the proposed conductor to the loading schedules of the existing towers. Modification percentages are based on weight-span analysis and point load differences attributed to the larger conductor diameter and ice loading impacts. Increased conductor diameter compared to existing is approximately accounted for in original design transverse OLF buffer. Typical span lengths were used to determine sag-related risks like blowout and vertical clearances.
Right of way	Existing ComEd ROW will be used.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$25,112,429.00
Component cost (in-service year)	\$27,850,567.15
Substation Upgrade Component	
Component title	345kV L12005 Lombard to Des Plaines Blue, Increase Capacity, Lombard Substation Component
Project description	Company confidential and proprietary information.

Substation name	Lombard
Substation zone	ComEd
Substation upgrade scope	Install 345kV L.12005 - 4000A circuit breaker. Replace foundation. Install (2) 345kV 4000A ACCC D06 motor operated disconnects (MODs) on either side of the L.12005 breaker. Replace both structures and foundations. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor from L.12005 dead-end structure to line side MODs on all three phases. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the L.12005 circuit breaker and MODs on all three phases.
Transformer Information	
None	
New equipment description	345kV gas circuit breaker, 4000A, 63kA 345kV motor operated disconnects, 4000A, ACCC D06, 63kA
Substation assumptions	No other ongoing yard design or construction at Lombard that alters current layout.
Real-estate description	No other ongoing yard design or construction at Lombard that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.

Total component cost	\$3,266,277.00
Component cost (in-service year)	\$3,593,041.00

Transmission Line Upgrade Component

Component title	138kV L4203 Silver Lake to Wilson Rd Tap Red, and Wilson Road Tap to Round Lake Tap Red, Rebuild and Increase Capacity	
Project description	Company confidential and proprietary information.	
Impacted transmission line	L4203 Silver Lake to Wilson Rd Tap Red, and Wilson Road Tap to Round Lake Tap Red	
Point A	Silver Lake	
Point B	Wilson Rd Tap Red	
Point C	Round Lake Tap Red	
Terrain description	The line is in existing ComEd right-of-way over flat terrain. The terrain is bordering industrial, residential, agricultural, and wooded lands. There are 5 major road crossings and 1 river crossing.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	1113 ACSR Bluejay, 477 ACSS Flicker	
Hardware plan description	Existing hardware will be replaced.	
Tower line characteristics	Double circuit 138kV lattice towers. L4203 (Round Lake to Silver Lake Red) has approximately 110 structures with a mix of single and double circuit structures (circuits include: L4203 & L4202, Round Lake to Silver Lake Red and Blue).	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings

Summer (MVA)	351.000000	449.000000
Winter (MVA)	420.000000	500.000000
Conductor size and type	1113kCMIL ACSR Bluejay and Twisted Parakeet 556.5 KCMIL ACSR	
Shield wire size and type	7#8 Alumoweld	
Rebuild line length	14.3	
Rebuild portion description	Sag Removal is estimated to require 22 structure modifications when reviewing vertical and blowout clearances with respect to survey points. Galloping mitigation may be considered during detailed engineering for approximately 55 structure ahead spans. Note that 15 structures included in this count already require structure modifications due to sag removal. The Flicker 477kCMIL should not be reconducted and should be rebuilt utilizing 138kV steel poles with Parakeet TP 556.5?kCMIL?ACSR (approx. 33 new structures).	
Right of way	Existing ComEd ROW will be used	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	
Materials & equipment	Company confidential and proprietary information.	
Construction & commissioning	Company confidential and proprietary information.	
Construction management	Company confidential and proprietary information.	
Overheads & miscellaneous costs	Company confidential and proprietary information.	
Contingency	Company confidential and proprietary information.	
Total component cost	\$22,452,139.00	

Component cost (in-service year)	\$24,873,084.00
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Transmission Line Upgrade Component

Component title	345kV L12002 Lombard to Itasca Red, Increase Capacity with ACSS
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Project description	Company confidential and proprietary information.
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Impacted transmission line	345kV L12002 Lombard to Itasca Red,
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Point A	Lombard
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Point B	Itasca
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Point C	
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Terrain description	The line is in existing ComEd right-of-way over flat terrain. The terrain is bordering industrial, residential, and wooded land. There are 5 major road crossings and 1 railroad crossing
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Existing Line Physical Characteristics

Operating voltage	345
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Conductor size and type	1 x ACSR "Bluebird"
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Hardware plan description	Existing hardware will be replaced.
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Tower line characteristics	Double circuit 345kV lattice towers with 2 shield wire positions. Line is double circuit with 12001 (no reconductor scope). The existing conductor is 1-Bluebird ACSR with average span lengths of 750'. Existing structures are primarily type "A" (TL 258) designed for Bluebird ACSR and 1000' weight spans
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Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1560.000000	1802.000000

Winter (MVA)	1857.000000	2064.000000
Conductor size and type	2 x 795 kcmil 26/7 ACSS "Drake"	
Shield wire size and type	7#8 Alumoweld with two shield wire positions	
Rebuild line length	8	
Rebuild portion description	Modification percentages are based on weight-span analysis and point load differences attributed to the larger conductor diameter and ice loading impacts. Typical span lengths were used to determine sag-related risks like blowout and vertical clearance. Increased conductor diameter compared to existing is approximately accounted for in original design transverse OLF buffer.	
Right of way	Existing ComEd ROW will be used.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	
ROW / land acquisition	Company confidential and proprietary information.	
Materials & equipment	Company confidential and proprietary information.	
Construction & commissioning	Company confidential and proprietary information.	
Construction management	Company confidential and proprietary information.	
Overheads & miscellaneous costs	Company confidential and proprietary information.	
Contingency	Company confidential and proprietary information.	
Total component cost	\$17,263,833.00	
Component cost (in-service year)	\$19,162,094.00	
Substation Upgrade Component		

Component title	345kV L12002 Lombard to Itasca Red, Increase Capacity- Lombard Substation Component
Project description	Company confidential and proprietary information.
Substation name	Lombard
Substation zone	ComEd
Substation upgrade scope	Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor from L.12002 dead-end structure to line side MODs on all three phases. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the L.12002 circuit breaker and MODs on all three phases.
Transformer Information	
None	
New equipment description	2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor
Substation assumptions	No other ongoing yard design or construction at Lombard that alters current layout.
Real-estate description	No other ongoing yard design or construction at Lombard that alters current layout.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.

Total component cost	\$216,014.00
Component cost (in-service year)	\$239,758.00

Substation Upgrade Component

Component title	Install 345/138kV TR84 at Elk Grove
Project description	Company confidential and proprietary information.
Substation name	Elk Grove
Substation zone	ComEd
Substation upgrade scope	Install 345/138kV TR84 and associated equipment at Elk Grove. Install 3-138kV BT GIS circuit breakers and 1-345kV BT GIS circuit breaker and associated equipment at Elk Grove.

Transformer Information

	Name	Capacity (MVA)
Transformer	Elk Grove TR84	420
	High Side	Low Side Tertiary
Voltage (kV)	345	138 n/a
New equipment description	Elk Grove TR84 Summer Normal/Emergency 420/480 Winter Normal/Emergency 449/491 345kV BT GIS Circuit Breaker, 4000A 63kA 138kV BT GIS Circuit Breaker, 3000A, 63kA	
Substation assumptions	The ultimate layout already provided for the autotransformer installation on existing footprint of the Elk Grove (East) expansion project. Additional acreage is not required for this project to be executed successfully.	
Real-estate description	The ultimate layout already provided for the autotransformer installation on existing footprint of the Elk Grove (East) expansion project. Additional acreage is not required for this project to be executed successfully.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	

Component Cost Details - In Current Year \$

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$30,966,611.00
Component cost (in-service year)	\$34,058,647.00

Transmission Line Upgrade Component

Component title	Cut 345kV L10111 and L10112 Itasca to Des Plaines Red and Blue into 345kV Elk Grove, create new L10111 and L10112 Itasca to Elk Grove, Red and Blue, create new L18418 and L18419 Elk Grove to Des Plaines, Red and Blue
Project description	Company confidential and proprietary information.
Impacted transmission line	Remove 345kV L10111 and L10112 Itasca to Des Plaines, Red and Blue, Create L10111 a L10112 Itasca to Elk Grove, Red and Blue and L18418 and L18419 Elk Grove to Des Plaines, Red and Blue
Point A	Itasca
Point B	Elk Grove
Point C	Des Plaines
Terrain description	Elk Grove substation is along the existing L10111 and L10112 (Previously Itasca to Desplaines, Red and Blue) right of way.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2156.0 kCMIL Bluebird ACSR (84/19)
Hardware plan description	utilize existing hardware from existing L10111 and L10112 (Previously Itasca to Des Plaines, Red and Blue)
Tower line characteristics	utilize existing 345kv double circuit lattice structures from existing L10111 and L10112 (Previously Itasca to Des Plaines, Red and Blue)

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1334.000000	1557.000000
Winter (MVA)	1600.000000	1760.000000
Conductor size and type	2 – 1033.5 kCMIL Curlew ACSS (22/7)	
Shield wire size and type	Utilize existing shield wire from existing L10111 and L10112 (Previously Itasca to Des Plaines Red and Blue)	
Rebuild line length	0	
Rebuild portion description	Cut-in 345kV L10111 and L10112 (Previously Itasca to Des Plaines Red and Blue) into Elk Grove, to create L101112 and L10112 Elk Grove to Itasca, Red and Blue, and L18418 and L18419 Elk Grove to Des Plaines, Red and Blue For New 345kV L18418 and L18419 Elk Grove to Des Plaines, Red and Blue Add approximately 0.25 miles of new 2156.0 Bluebird ACSR (84/19) conductor to connect L18418 and L18419 from Elk Grove to existing L10111 and L10112 infrastructure (previously Itasca to Des Plaines Red and Blue). Utilize the existing infrastructure for old L10111 and old L10112 (previously Itasca to Des Plaines Red and Blue) remainder of the right of way from Elk Grove to Des Plaines. For New 345kV L10111 and L10112 Add approximately 0.25 miles of new conductor to connect L10111 and L10112 from Elk Grove to existing L10111 and L10112 (previously Itasca to Des Plaines Red and Blue) infrastructure. Utilize the existing infrastructure for old L10111 and old L10112 (previously Itasca to Des Plaines Red and Blue) remainder of the right of way from Elk Grove to Itasca.	

Right of way	For new 345kV L10111 and L10112, utilize the existing right of way for L10111 and L10112 (previously Itasca to Des Plaines Red and Blue) from Elk Grove to Itasca. For new 345kV L18418 and L18419, utilize the existing right of way for L10111 and L10112 (previously Itasca to Des Plaines Red and Blue) from Elk Grove to Des Plaines.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$16,541,086.00
Component cost (in-service year)	\$18,497,817.77
Substation Upgrade Component	
Component title	Cut 345kV L10111 and L10112 Itasca to Des Plaines Red and Blue into 345kV Elk Grove, create new L10111 and L10112 Itasca to Elk Grove, Red and Blue, create new L18418 and L18419 Elk Grove to Des Plaines, Red and Blue- Elk Grove Substation Component
Project description	Company confidential and proprietary information.
Substation name	Elk Grove
Substation zone	ComEd

Substation upgrade scope	Cut In L10111 and L10112 into 345kV Elk Grove. Rename L10111 from Elk Grove Blue to Des Plaines Blue to L18418. Rename L10112 from Elk Grove Red to Des Plaines Red L10819 i. Install three (3) 345kV gas-insulated circuit breakers with associated MOD and ground switches on the 345kV Blue bus in the 345kV GIS building. ii. Install three (3) 345kV gas-insulated circuit breakers with associated MOD and ground switches on the 345kV Red bus in the 345kV GIS building. iii. Install two (2) 345kV gas-insulated motor-operated disconnects, associated ground switches and fast-acting ground switches for the L.10111 and L.18418 345kV GIS blue bus. iv. Install two (2) 345kV gas-insulated motor-operated disconnects, associated ground switches and fast-acting ground switches for the L.10112 and L.18419 345kV GIS red bus, v. Install GIS Cable Modules for the cable line connection, instrument transformers, LCCs, and associated equipment. vi. Install 345kV cable TUG lines (L.10111, L.10112, L.18418, L.18419) from the GIS to the transmission right of way, to transition to associated OH line. Consider 2 cables per phase, for each 345kV line that will require six (6) cable terminations per line. vii. Each line UG/OH transition, shall be equipped with three (3) 345kV Fiber optic CT, for the UG protection scheme.
Transformer Information	
None	
New equipment description	345kV GIS Circuit Breakers, 4000A 63kA
Substation assumptions	The ultimate layout already provided for the line cut-ins within Elk Grove GIS.
Real-estate description	Additional acreage is not required at the Substation for this project to be executed successfully.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.

Contingency	Company confidential and proprietary information.		
Total component cost	\$25,815,406.00		
Component cost (in-service year)	\$28,077,781.00		
Substation Upgrade Component			
Component title	Install 2-138kV Phase Shifters at Itasca		
Project description	Company confidential and proprietary information.		
Substation name	Itasca		
Substation zone	ComEd		
Substation upgrade scope	Install 1-138kV, 466MVA phase shifter, and 3 motor operated disconnect switches on line L10108 from Itasca to Pine Red, at Itasca. Install 1-138kV, 466MVA phase shifter, and 3 motor operated disconnect switches on line L10109 from Itasca to Pine Blue at Itasca.		
Transformer Information			
	Name		Capacity (MVA)
Transformer	L10108 138kV PS Transformer		420
	High Side	Low Side	Tertiary
Voltage (kV)	115	138	n/a
	Name		Capacity (MVA)
Transformer	L10109 138kV PS Transformer		420
	High Side	Low Side	Tertiary
Voltage (kV)	138	138	n/a
New equipment description	138kV PS Transformers, Summer Normal/Emergency 420/480 Winter Normal/Emergency 420/480		

Substation assumptions	L.10108 and L10109 to Itasca to Pine Red and Blue will be intercepted within the yard and re-installed from the bus side of the shifters to the 138kV buses. The microwave towers within the COMED yard will have to be relocated to create a location for the phase shifters. Cost of relocation to be included in this project. Grading and grounding within the 120' x 160' area for the new phase shifters needs to be installed.
Real-estate description	Additional acreage is not required for this project to be executed successfully.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$28,437,273.00
Component cost (in-service year)	\$30,977,629.00
Greenfield Transmission Line Component	
Component title	Install New 138kV L14613 from Sandwich to Plano
Project description	Company confidential and proprietary information.
Point A	Sandwich
Point B	Plano

Point C

	Normal ratings	Emergency ratings
Summer (MVA)	351.000000	449.000000
Winter (MVA)	420.000000	500.000000
Conductor size and type	1113 KCMIL Bluejay & 556.5 kCMIL ACSR (24/7) Parakeet/TP conductor	
Nominal voltage	AC	
Nominal voltage	138	
Line construction type	Overhead	
General route description	ComEd is replacing wood structures on L14609 from Sandwich to Plano with new 138kV double circuit steel structures. The new 138kV L14613 transmission line will utilize existing double circuit structures of 138kV L14609 from Sandwich to Miller, and utilize existing double circuit structures of 138kV L97805 from Miller to Plano.	
Terrain description	Open farmland; flat.	
Right-of-way width by segment	ComEd is replacing wood structures on L14609 from Sandwich to Plano with new 138kV double circuit steel structures. There are approximately 60 double circuit wood poles to replace with double circuit steel monopoles. The new 138kV L14613 transmission line will utilize existing double circuit structures of 138kV L14609 from Sandwich to Miller, and utilize existing double circuit structures of 138kV L97805 from Miller to Plano.	
Electrical transmission infrastructure crossings		
Civil infrastructure/major waterway facility crossing plan	Five road crossings (Little Rock Road, Creek Road, Cook Road, E Sandwich Road, W Sandwich Road, Three potential creek crossings One potential easement crossing (based on GIS) Existing distribution along southern side of property line	
Environmental impacts	ESD would need to work with ECOC to confirm any other environmental concerns (floodplains, wetlands, wetland buffers, areas of critical species etc.)	
Tower characteristics	ComEd is replacing wood structures on L14609 from Sandwich to Plano with new 138kV double circuit steel structures. There are approximately 60 double circuit wood poles to replace with double circuit steel monopoles. The new 138kV L14613 transmission line will utilize existing double circuit structures of 138kV L14609 from Sandwich to Miller, and utilize existing double circuit structures of 138kV L97805 from Miller to Plano.	

Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$22,756,937.00
Component cost (in-service year)	\$25,190,230.00
Substation Upgrade Component	
Component title	Install New 138kV L14613 from Sandwich to Plano- Sandwich Substation Component
Project description	Company confidential and proprietary information.
Substation name	Sandwich
Substation zone	Comd
Substation upgrade scope	At Sandwich Install new L14613 Line disconnect and structure. Install New SF6 Circuit Breaker for new 138kV BT 1-6. This will include Motor-operated Disconnects. New Circuit breaker will include new relay scheme that will include new relay panels and possibly new battery Install new Circuit breaker, MOD, and Line disconnect foundation.
Transformer Information	

None	
New equipment description	138kV BT circuit breaker, 3000A and 63kA 138kv motor operated line disconnect switch, 3000A 63kA
Substation assumptions	Sandwich substation ultimate was designed and built to accommodate the new line.
Real-estate description	no change, Sandwich substation ultimate was designed and built to accommodate the new line.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$3,017,090.00
Component cost (in-service year)	\$3,312,981.00
Substation Upgrade Component	
Component title	Install New 138kV L14613 from Sandwich to Plano- Plano Substation Component
Project description	Company confidential and proprietary information.
Substation name	Plano
Substation zone	ComEd

Substation upgrade scope	Install 1 new 138kV BT circuit breaker onto the existing 138kv ring bus at Sandwich, install one new motor operated line disconnect switch to interconnect L14613 into Sandwich substation.
Transformer Information	
None	
New equipment description	138kV BT circuit breaker, 3000A and 63kA 138kV motor operated line disconnect switch, 3000A
Substation assumptions	Plano substation ultimate was designed and built to accommodate the new line.
Real-estate description	no change, Plano substation ultimate was designed and built to accommodate the new line.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$3,564,025.00
Component cost (in-service year)	\$3,917,132.00
Substation Upgrade Component	
Component title	345kV L12002 Lombard to Itasca Red, Increase Capacity- Itasca Substation Component

Project description	Company confidential and proprietary information.
Substation name	Itasca
Substation zone	ComEd
Substation upgrade scope	GIS Vendor confirmed via email station is built for 4000 amps and provided lower rated nameplates. Itasca, Replace nameplates on ALL GIS equipment, including what is not shown in the PD. GIS will be rated at the maximum rating that is allowable per the vendor. Itasca, Update all station prints to reflect the new GIS nameplate rating.
Transformer Information	
None	
New equipment description	GIS Vendor confirmed via email station is built for 4000 amps and provided lower rated nameplates. GIS will be rated at the maximum rating that is allowable per the vendor.
Substation assumptions	GIS Vendor confirmed via email station is built for 4000 amps and provided lower rated nameplates. GIS will be rated at the maximum rating that is allowable per the vendor.
Real-estate description	n/a no change.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.

Total component cost	\$364,528.00
Component cost (in-service year)	\$403,680.00
Substation Upgrade Component	
Component title	345kV L10802 Lockport Red to Lisle Red, Lisle Substation Component.
Project description	Company confidential and proprietary information.
Substation name	Lisle
Substation zone	ComEd
Substation upgrade scope	At Lisle, Replace Line conductors. Replacing the line connection will be no issue as the BUS at Lisle is tubular BUS. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor
Transformer Information	
None	
New equipment description	2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor
Substation assumptions	n/a
Real-estate description	n/a
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year \$	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.

Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$240,531.00
Component cost (in-service year)	\$264,646.00
Substation Upgrade Component	
Component title	345kV L10322 Lisle Red to Lombard Red, Lombard Substation Component.
Project description	Company confidential and proprietary information.
Substation name	Lombard
Substation zone	ComEd
Substation upgrade scope	i. Install 345kV L.10322 - 4000A circuit breaker. Replace foundation. ii. Install (2) 345kV 4000A ACCC D06 motor operated disconnects (MODs) on either side of the L.10322 breaker. Replace both structures and foundations. iii. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor from L.10322 dead-end structure to line side MODs on all three phases. iv. Install 2-2156 kCMIL ACSR (84/19) Bluebird Bundled conductor between the L.10322 circuit breaker and MODs on all three phases. v. Install insulators as needed.
Transformer Information	
None	
New equipment description	345kV gas circuit breaker, 4000A, 63kA 345kV MOD, 4000A, ACCC D06, 63kA
Substation assumptions	i. No other ongoing yard design or construction at TSS 120 Lombard that alters current layout. ii. AC and DC studies will be needed at the detailed design stage to confirm sizes of auxiliary AC and DC systems. iii. Equipment installed is 3-Phase.
Real-estate description	no yard expansion or additional acreage required.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.

Component Cost Details - In Current Year \$

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$3,332,431.00
Component cost (in-service year)	\$3,664,497.00

Transmission Line Upgrade Component

Component title	345kV L10111 and L10112 from Itasca to Elk Grove Red and Blue, Increase Capacity
Project description	Company confidential and proprietary information.
Impacted transmission line	345kV L10111 and L10112 Itasca to Elk Grove Red and Blue
Point A	Itasca
Point B	Elk Grove
Point C	
Terrain description	Existing L10111/L10112 Itasca to Elk Grove Red and Blue right of way.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2156.0 kCMIL Bluebird ACSR (84/19)

Hardware plan description	utilize new hardware due to line rebuild.	
Tower line characteristics	For L10111 and L10112 from Itasca to Elk Grove Red and Blue. The lattice towers were installed in 1965 and have exceeded their expected service life, making replacement the preferred long-term solution. The replacement of all structures offers a cost-effective opportunity to mitigate loading, clearance, reliability, and asset condition issues under a single capital investment initiative.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1882.000000	1981.000000
Winter (MVA)	1882.000000	2335.000000
Conductor size and type	2 – 1033.5 kCMIL Curlew ACSS (22/7)	
Shield wire size and type	to be determined during detailed engineering	
Rebuild line length	4.27	
Rebuild portion description	For L10111 & L10112 Itasca to Elk Grove Red and Blue rebuild A total of 34 structures is included in the project and will require rebuild. These structures consist of: -10 Dead-end structures -A 30' steel pole -23 Suspension Towers	
Right of way	he proposed new sections for the existing lines L10111 & L10112 Itasca to Elk Grove Red and Blue will be approximately 4.27 miles from ELK GROVE (the cut in will begin from station) to existing L10111 and L10112 ROW structures and then to ITASCA.	
Construction responsibility	Company confidential and proprietary information.	
Benefits/Comments	Company confidential and proprietary information.	
Component Cost Details - In Current Year \$		
Engineering & design	Company confidential and proprietary information.	
Permitting / routing / siting	Company confidential and proprietary information.	

ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	\$36,471,787.00
Component cost (in-service year)	\$40,255,561.00

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
2026W1-N1-ST6	270812	LOMBARD ;3B	270724	ELK GROVE; B	1	345/345	222/222	Summer Baseline	Included
2026W1-N1-ST22	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222/222	Summer Baseline	Included
2026W1-N1-ST21	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222/222	Summer Baseline	Included
2026W1-N1-ST9	272855	YORK ;RT	271131	BUTTERFIE; R	1	138/138	222/222	Summer Baseline	Included
2026W1-N1-ST5	270812	LOMBARD ;3B	270724	ELK GROVE; B	1	345/345	222/222	Summer Baseline	Included
2026W1-N1-ST4	270812	LOMBARD ;3B	270724	ELK GROVE; B	1	345/345	222/222	Summer Baseline	Included
2026W1-N1-ST2	272855	YORK ;RT	271131	BUTTERFIE; R	1	138/138	222/222	Summer Baseline	Included
2026W1-N1-ST8	272855	YORK ;RT	271131	BUTTERFIE; R	1	138/138	222/222	Summer Baseline	Included
2026W1-N1-ST10	272855	YORK ;RT	271131	BUTTERFIE; R	1	138/138	222/222	Summer Baseline	Included
2026W1-GD-LL66	272803	W PLAEXCLUDED_FROM_COMPETITION	272054	W PLAEXCLUDED_FROM_COMPETITION	1	138/138	222/222	Light Load Gen Deliv	Included
2026W1-GD-LL67	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	138/138	222/222	Light Load Gen Deliv	Included
2026W1-GD-LL1	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	138/138	222/222	Light Load Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-GD-LL2	272803	W PLAEXCLUDED_FROM_COMPETITION	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL69	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	138	222 ; R	Light Load Gen Deliv	Included
2026W1-GD-LL70	272803	W PLAEXCLUDED_FROM_COMPETITION	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL68	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	138	222 ; R	Light Load Gen Deliv	Included
2026W1-GD-LL73	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL143	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	138	222 ; R	Light Load Gen Deliv	Included
2026W1-GD-LL72	272803	W PLAEXCLUDED_FROM_COMPETITION	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL71	272803	W PLAEXCLUDED_FROM_COMPETITION	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL156	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	138	222 ; R	Light Load Gen Deliv	Included
2026W1-GD-LL157	272803	W PLAEXCLUDED_FROM_COMPETITION	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL158	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	138	222 ; R	Light Load Gen Deliv	Included
2026W1-GD-LL159	272803	W PLAEXCLUDED_FROM_COMPETITION	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL74	270908	PRAIRIE ; B	270883	SILVER LK; R	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL75	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL76	270908	PRAIRIE ; B	270883	SILVER LK; R	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL77	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL78	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL79	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL80	270908	PRAIRIE ; B	270883	SILVER LK; R	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL81	270908	PRAIRIE ; B	270883	SILVER LK; R	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL82	270908	PRAIRIE ; B	270883	SILVER LK; R	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL8	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL15	272444	SANDWICH ; B	272054	MILLER RD; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL89	272444	SANDWICH ; B	272054	MILLER RD; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL90	272444	SANDWICH ; B	272054	MILLER RD; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-S53	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer Gen Deliv	Included
2026W1-IPD-S4	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222	Summer IPD	Included
2026W1-IPD-S5	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222	Summer IPD	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-IPD-S8	270999	ANTIOCH ;RT	272393	ROUND LK ;5R	1	138	222	Summer IPD	Included
2026W1-IPD-S60	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer IPD	Included
2026W1-IPD-S64	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer IPD	Included
2026W1-IPD-S71	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer IPD	Included
2026W1-IPD-S72	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer IPD	Included
2026W1-IPD-S75	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer IPD	Included
2026W1-N11-ST1	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST3	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST4	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST8	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST9	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST10	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST11	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST12	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST13	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST14	270809	LISLE ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST15	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST18	270809	LISLE ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST19	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST20	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST21	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST22	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST23	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST25	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST26	270716	DRESDEN ; B	274702	KENDALL ;BU	1	345	222	Summer N-1-1	Included
2026W1-N11-ST28	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST29	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST30	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST34	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST35	270809	LISLE ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST36	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST37	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST38	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST39	270809	LISLE ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST40	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST41	270809	LISLE ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST42	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST43	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST44	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST45	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST47	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST48	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST55	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST56	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST57	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST58	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST60	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST61	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST62	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST63	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST64	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST65	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST68	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST69	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST70	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST71	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST72	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST73	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST76	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST77	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST78	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST80	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST85	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST87	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST88	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST89	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST90	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST91	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST92	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST93	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST95	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST96	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST97	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST98	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST99	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST100	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST101	270781	ITASCA ; R	270813	LOMBARD ;2R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST103	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST108	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST109	270724	ELK GROVE; B	270812	LOMBARD ;3B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST110	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST113	270732	ELECT JCT;1B	270814	LOMBARD ;4B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST114	270769	GOODINGS ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST119	272457	ELK GROVE; R	998470	ELK GROVE 81	1	138	222	Summer N-1-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST120	272457	ELK GROVE; R	998470	ELK GROVE 81	1	138	222	Summer N-1-1	Excluded
2026W1-N11-ST121	270725	ELK GROVE; R	998470	ELK GROVE 81	1	345/138	222	Summer N-1-1	Excluded
2026W1-N11-ST122	270725	ELK GROVE; R	998470	ELK GROVE 81	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST123	270999	ANTIOCH ;RT	272393	ROUND LK ;5R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST124	270998	ANTIOCH ;BT	272386	ROUND LK ; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST125	272465	SILVER LK; R	272791	WILSON RD; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST126	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST127	272456	ELK GROVE; B	998471	ELK GROVE 82	1	138	222	Summer N-1-1	Included
2026W1-N11-ST128	270724	ELK GROVE; B	998471	ELK GROVE 82	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST130	272465	SILVER LK; R	272791	WILSON RD; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST131	272456	ELK GROVE; B	998471	ELK GROVE 82	1	138	222	Summer N-1-1	Included
2026W1-N11-ST132	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST134	270724	ELK GROVE; B	998471	ELK GROVE 82	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST135	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST137	270999	ANTIOCH ;RT	272393	ROUND LK ;5R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST138	271064	BARTLETT ;BT	272546	SPAULDING;1B	1	138	222	Summer N-1-1	Excluded
2026W1-N11-ST139	271555	GLENDALE ;RT	271923	LOMBARD ; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST140	270998	ANTIOCH ;BT	272386	ROUND LK ; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST141	271555	GLENDALE ;RT	271923	LOMBARD ; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST144	271064	BARTLETT ;BT	272546	SPAULDING;1B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST146	270999	ANTIOCH ;RT	272393	ROUND LK ;5R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST148	271554	GLENDALE ;BT	271924	LOMBARD ;6B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST151	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST153	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST154	271554	GLENDALE ;BT	271924	LOMBARD ;6B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST156	272465	SILVER LK; R	272791	WILSON RD; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST157	271554	GLENDALE ;BT	271924	LOMBARD ;6B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST162	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST163	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST164	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST165	270999	ANTIOCH ;RT	272393	ROUND LK ;5R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST166	271554	GLENDALE ;BT	271924	LOMBARD ;6B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST167	272387	ROUND LK ; R	272791	WILSON RD; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST168	275213	SILVER LK;2M	272464	SILVER LK; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST169	272457	ELK GROVE; R	998470	ELK GROVE 81	1	138	222	Summer N-1-1	Included
2026W1-N11-ST170	270999	ANTIOCH ;RT	272393	ROUND LK ;5R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST171	271052	BEDFORD P;4B	271216	CLEARING ;BT	1	138	222	Summer N-1-1	Excluded
2026W1-N11-ST172	271554	GLENDALE ;BT	271924	LOMBARD ;6B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST173	270725	ELK GROVE; R	998470	ELK GROVE 81	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST174	270781	ITASCA ; R	271735	ITASCA ;3R	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST175	270781	ITASCA ; R	271735	ITASCA ;3R	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST176	271554	GLENDALE ;BT	271924	LOMBARD ;6B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST177	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST178	270883	SILVER LK; R	275213	SILVER LK;2M	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST179	272465	SILVER LK; R	272791	WILSON RD; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST180	271554	GLENDALE ;BT	271924	LOMBARD ;6B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST185	270999	ANTIOCH ;RT	272389	RL BEACH ; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST189	270998	ANTIOCH ;BT	272388	RL BEACH ; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST190	270998	ANTIOCH ;BT	272386	ROUND LK ; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST191	272457	ELK GROVE; R	998470	ELK GROVE 81	1	138	222	Summer N-1-1	Included
2026W1-N11-ST194	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST195	270725	ELK GROVE; R	998470	ELK GROVE 81	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST196	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST199	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included
2026W1-N11-ST202	271555	GLENDALE ;RT	272109	EXCLUDED_FROM_COMPETITION	1	138	222	Summer N-1-1	Included
2026W1-N11-ST207	270808	LISLE ; B	270810	LOCKPORT ; B	1	345	222	Summer N-1-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST208	271052	BEDFORD P;4B	271216	CLEARING ;BT	1	138	222	Summer N-1-1	Included
2026W1-N11-ST209	270781	ITASCA ; R	998462	ITASCA 84	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST210	272457	ELK GROVE; R	998470	ELK GROVE 81	1	138	222	Summer N-1-1	Included
2026W1-N11-ST211	270781	ITASCA ; R	998462	ITASCA 84	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST212	270999	ANTIOCH ;RT	272389	RL BEACH ; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST214	271739	ITASCA ;4R	998462	ITASCA 84	1	138	222	Summer N-1-1	Included
2026W1-N11-ST216	271739	ITASCA ;4R	998462	ITASCA 84	1	138	222	Summer N-1-1	Included
2026W1-N11-ST218	271555	GLENDALE ;RT	272109	EXCLUDED_FROM_COMPETITION; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST220	271343	DIERKING ; R	272147	GREENLEAF; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST221	271343	DIERKING ; R	272147	GREENLEAF; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST222	271342	DIERKING ; B	272146	GREENLEAF; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST224	270883	SILVER LK; R	270917	WAYNE ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST225	270883	SILVER LK; R	270917	WAYNE ; R	1	345	222	Summer N-1-1	Included
2026W1-N11-ST227	271342	DIERKING ; B	272146	GREENLEAF; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST228	271343	DIERKING ; R	272147	GREENLEAF; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST229	271343	DIERKING ; R	272147	GREENLEAF; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST230	271343	DIERKING ; R	272147	GREENLEAF; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST231	271343	DIERKING ; R	272147	GREENLEAF; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST232	271343	DIERKING ; R	272147	GREENLEAF; R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST233	271437	PINE ; R	271737	ITASCA ;6R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST234	271437	PINE ; R	271737	ITASCA ;6R	1	138	222	Summer N-1-1	Included
2026W1-N11-ST235	271342	DIERKING ; B	272146	GREENLEAF; B	1	138	222	Summer N-1-1	Included
2026W1-N11-ST238	271436	PINE ; B	271736	ITASCA ;12	1	138	222	Summer N-1-1	Included
2026W1-N11-ST239	271437	PINE ; R	271737	ITASCA ;6R	1	138	222	Summer N-1-1	Included
2026W1-ComEd-T1	270809	LISLE ; R	270811	LOCKPORT ; R	1	345	222	FERC 715	Excluded
2026W1-GD-LL65	272054	MILLER RD; R	272803	W PLAXEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL144	272803	W PLAXEXCLUDED_FROM_COMPETITION; R	272803	W PLAXEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL9	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-GD-LL11	270908	PRAIRIE ; B	270883	SILVER LK; R	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL10	270908	PRAIRIE ; B	270883	SILVER LK; R	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL146	272444	SANDWICH ; B	272054	MILLER RD; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL88	272444	SANDWICH ; B	272054	MILLER RD; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-S174	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222	Summer Gen Deliv	Included
2026W1-GD-S175	270724	ELK GROVE; B	271442	ELK GRV E; B	1	345/138	222	Summer Gen Deliv	Included

New Flowgates

Company confidential and proprietary information.

Financial Information

Capital spend start date 01/2027

Construction start date 03/2029

Project Duration (In Months) 53

Cost Containment Commitment

Cost cap (in current year) Company confidential and proprietary information.

Cost cap (in-service year) Company confidential and proprietary information.

Components covered by cost containment

1. 345kV L11124 Electric Junction Blue to Lombard Blue, Increase Capacity - PROPOSER
2. 345kV L11124 Electric Junction Blue to Lombard Blue- Electric Junction Substation Component - PROPOSER
3. 345kV L11124 Electric Junction Blue to Lombard Blue- Lombard Substation Component - PROPOSER
4. 345kV L11604 Goodings Grove Red to Lockport Red, Increase Capacity with ACSS - PROPOSER
5. L11604 Goodings Grove Red to Lockport Red, Lockport Substation Component - PROPOSER
6. 345kV L10801 Lockport to Lisle Blue, Increase Capacity with ACSS - PROPOSER

7. 345kV L10801 Lockport Blue to Lisle Blue, Lockport Substation Component. - PROPOSER
8. 345kV L10801 Lockport Blue to Lisle Blue, & 345kV L10322 Lisle Red to Lombard Red, Lisle Substation Component. - PROPOSER
9. 345kV L10802 Lockport to Lisle Red, Increase Capacity with ACSS - PROPOSER
10. 345kV L10802 Lockport Red to Lisle Red, Lockport Substation Component. - PROPOSER
11. 345kV L10322 Lisle to Lombard Red, Increase Capacity with ACSS - PROPOSER
12. 345KV L15616 Cherry Valley to Prairie, rebuild and Increase Capacity - PROPOSER
13. 345KV L15616 Cherry Valley to Prairie, Cherry Valley Substation Component. - PROPOSER
14. 345kV L97104 Prairie to Silver Lake, Increase Capacity - PROPOSER
15. 345kV L97104 Prairie to Silver Lake, Silver Lake Substation Component. - PROPOSER
16. 345kV L93505 Kendall County Energy Center to Dresden Blue, Capacity Increase - PROPOSER
17. 345kV L11617 Goodings Grove to Lockport Blue, Increase Capacity with ACSS - PROPOSER
18. 345kV L11617 Goodings Grove to Lockport Blue, Capacity Increase- Substation Component - PROPOSER
19. 345kV L11601 East Frankfort to Gooding Grove Blue, Capacity Increase- East Frankfort Substation Component - PROPOSER
20. 345kV L11602 East Frankfort to Gooding Grove Red, Capacity Increase- East Frankfort Substation Component - PROPOSER
21. 138kV L1603 Round Lake to Antioch Tap Red and L1603 Antioch to Round Lake Beach Tap Red, Increase Capacity - PROPOSER
22. 138kV L1607 Round Lake to Antioch Tap Blue and L1607 Antioch to Round Lake Beach Tap Blue, rebuild and reconductor - PROPOSER
23. 138kV L5103 Bedford Park to Clearing Tap Blue, Increase Capacity - PROPOSER
24. 138kV L5103 Bedford Park to Clearing Tap Blue, Bedford Park Substation Component - PROPOSER
25. 138kV L7910 Spaulding to Bartlett Tap Blue, Increase Capacity - PROPOSER
26. 138kV L7910 Spaulding to Bartlett Tap Blue, Increase Capacity, Spaulding Substation Component - PROPOSER
27. 138kV L10302 York Center Tap to Butterfield Tap Red, Increase Capacity - PROPOSER
28. 138kV L12016 Lombard to Glendale Heights Tap Blue, Increase Capacity, reconductor with ACSS - PROPOSER
29. 138kV L12016 Lombard to Glendale Heights Tap Blue, Increase Capacity, Lombard Substation Component - PROPOSER
30. 138kV L12015 Lombard to Glendale Heights Tap Red, and Glendale Heights Tap to Nordic Tap, Increase Capacity, reconductor with ACSS - PROPOSER
31. 138kV L12015 Lombard to Glendale Heights Tap Red, Increase Capacity, Lombard Substation Component - PROPOSER
32. 345kV L12005 Lombard to Des Plaines Blue, Increase Capacity, reconductor with ACSS - PROPOSER
33. 345kV L12005 Lombard to Des Plaines Blue, Increase Capacity, Lombard Substation Component - PROPOSER
34. 138kV L4203 Silver Lake to Wilson Rd Tap Red, and Wilson Road Tap to Round Lake Tap Red, Rebuild and Increase Capacity - PROPOSER
35. 345kV L12002 Lombard to Itasca Red, Increase Capacity with ACSS - PROPOSER

36. 345kV L12002 Lombard to Itasca Red, Increase Capacity- Lombard Substation Component - PROPOSER
37. Install 345/138kV TR84 at Elk Grove - PROPOSER
38. Cut 345kV L10111 and L10112 Itasca to Des Plaines Red and Blue into 345kV Elk Grove, create new L10111 and L10112 Itasca to Elk Grove, Red and Blue, create new L18418 and L18419 Elk Grove to Des Plaines, Red and Blue - PROPOSER
39. Cut 345kV L10111 and L10112 Itasca to Des Plaines Red and Blue into 345kV Elk Grove, create new L10111 and L10112 Itasca to Elk Grove, Red and Blue, create new L18418 and L18419 Elk Grove to Des Plaines, Red and Blue- Elk Grove Substation Component - PROPOSER
40. Install 2-138kV Phase Shifters at Itasca - PROPOSER
41. Install New 138kV L14613 from Sandwich to Plano - PROPOSER
42. Install New 138kV L14613 from Sandwich to Plano- Sandwich Substation Component - PROPOSER
43. Install New 138kV L14613 from Sandwich to Plano- Plano Substation Component - PROPOSER
44. 345kV L12002 Lombard to Itasca Red, Increase Capacity- Itasca Substation Component - PROPOSER
45. 345kV L10802 Lockport Red to Lisle Red, Lisle Substation Component. - PROPOSER
46. 345kV L10322 Lisle Red to Lombard Red, Lombard Substation Component. - PROPOSER
47. 345kV L10111 and L10112 from Itasca to Elk Grove Red and Blue, Increase Capacity - PROPOSER

Cost elements covered by cost containment

Engineering & design	Yes
Permitting / routing / siting	Yes
ROW / land acquisition	Yes
Materials & equipment	Yes
Construction & commissioning	Yes
Construction management	Yes
Overheads & miscellaneous costs	Yes
Taxes	No
AFUDC	No
Escalation	No

Additional Information

Is the proposer offering a binding cap on ROE?

Is the proposer offering a Debt to Equity Ratio cap?

Additional cost containment measures not covered above

Additional Comments

None

Company confidential and proprietary information.

No

Company confidential and proprietary information.

Company confidential and proprietary information.