

West Chicago Reinforcement

General Information

Proposing entity name	Sensitive commercial or competitive information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Sensitive commercial or competitive information
Company proposal ID	Sensitive commercial or competitive information
PJM Proposal ID	56
Project title	West Chicago Reinforcement
Project description	This project proposes a new double-circuit 345 kV transmission line along the far western side of the Chicago metropolitan area, creating an additional pathway for power from nuclear and natural-gas generation in the southern and southwestern parts of the region to the generation-constrained northern Chicago area. By strengthening north-to-south transfer capability, it enhances reliability, reduces loading on existing facilities and adds operating flexibility across the ComEd 345 kV network. The project builds a new 345 kV Orchard Substation with two six-position ring buses connected by a normally open bus-tie breaker, with Blue circuits on one ring and Red circuits on the other to preserve ComEd's Red/Blue separation. Orchard loops in the Plano-Electric Junction Red and Blue lines, connects to two new positions at Plano (one on each of the Red and Blue ring buses) by a new double-circuit 345 kV line, and extends a new line north to an expanded Pleasant Valley Substation, which loops in the existing Silver Lake-Cherry Valley/Prairie line. Silver Lake is expanded to loop in the Tollway-Grayslake/Libertyville Blue line. Orchard also creates a platform for future generation interconnections and a strategic location for a future connection to the Byron-Wayne 345 kV line. A new Houbolt Substation near Joliet loops in the two Dresden-Elwood 345 kV lines, the Nevada-Goodings Grove Red line and the Katydid-Goodings Grove Blue line, and a new double-circuit 345 kV line connects Houbolt to two new positions at the retired Joliet power plant site. This brings the existing Joliet-Lockport double-circuit 345 kV line into the network, providing alternate paths to the Dresden-Lockport and Goodings Grove-Lockport lines and improving resilience during outages. To fully realize these benefits, ComEd would rebuild approximately 12.5 miles of the double-circuit Lockport-Lisle 345 kV lines and approximately 22 miles of the double-circuit 138 kV path from Silver Lake through Wilson Road and Round Lake to Round Lake Beach, removing limiting elements so the network can reliably accommodate the added transfer capability and future generation and load growth.
Email	Sensitive commercial or competitive 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	Sensitive commercial or competitive information

Project Components

1. Plano R - Orchard R 345 kV #02 & Plano B - Orchard B 345 kV #02
2. Orchard Substation
3. Orchard R - Pleasant Valley R 345 kV & Orchard B - Pleasant Valley B 345 kV
4. Houbolt Substation
5. Houbolt - Joliet 345 kV #01 & Houbolt - Joliet 345 kV #02
6. Plano Substation Upgrade
7. Pleasant Valley Substation Upgrade
8. Silver Lake B - Grayslake B 345 kV
9. Silver Lake B - Tollway B 345 kV
10. Pleasant Valley B - Silver Lake B 345 kV
11. Pleasant Valley B - Cherry Valley B 345 kV
12. Plano R - Orchard R 345 kV #01
13. Orchard R - Electric Junction R 345 kV
14. Plano B - Orchard B 345 kV #01
15. Orchard B - Electric Junction B 345 kV
16. Silver Lake - Wilson Rd 138 kV Rebuild (Dbl Ckt)
17. Wilson Road - Round Lake - Round Lake Beach 138 kV Rebuild (Dbl Ckt)
18. Lockport - Lisle 345 kV Rebuild (Dbl Ckt)
19. Joliet Substation Upgrade
20. Houbolt R - Nevada R 345 kV

21. Houbolt R - Goodings Grove R 345 kV
22. Houbolt B - Katydid B 345 kV
23. Houbolt B - Goodings Grove B 345 kV
24. Dresden R - Houbolt R 345 kV
25. Houbolt R - Dresden R 345 kV
26. Dresden B - Houbolt B 345 kV
27. Houbolt B - Dresden B 345 kV
28. Silver Lake Substation Upgrades

Greenfield Transmission Line Component

Component title	Plano R - Orchard R 345 kV #02 & Plano B - Orchard B 345 kV #02	
Project description	Sensitive commercial or competitive information	
Point A	New Orchard Substation, located for this proposal near 41°48'3" N, 88°23'35"W	
Point B	Plano Substation located near 41°41'3.21"N, 88°28'38.30"W	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	2075.000000	2454.000000
Winter (MVA)	2273.000000	2604.000000
Conductor size and type	Both circuits: 2-conductor bundle of 954 kcmil 54/7 Cardinal ACSS/MA3/E3X, 18" phase bundle spacing. The E3X coating raises emissivity to 0.9 and lowers absorptivity to 0.2 while giving the conductor some hydrophobicity.	
Nominal voltage	AC	
Nominal voltage	345	
Line construction type	Overhead	

General route description	The route is comprised of 6 segments, all new 150-ft right-of-way (new easement), total 11.8 mi: i. Start 41.8002024° N, -88.3929894° W; End 41.7803119° N, -88.3921672° W; Length 1.7 mi; Angle points 6; General heading 181°; Type: New ROW ii. Start 41.7803119° N, -88.3921672° W; End 41.7804044° N, -88.4094289° W; Length 0.8 mi; Angle points 1; Heading 286°; New ROW iii. Start 41.7804044° N, -88.4094289° W; End 41.7668034° N, -88.4237522° W; Length 1.4 mi; Angle points 3; Heading 218°; New ROW iv. Start 41.7668034° N, -88.4237522° W; End 41.7175767° N, -88.4244566° W; Length 3.4 mi; Angle points 1; Heading 180°; New ROW v. Start 41.7175767° N, -88.4244566° W; End 41.7162156° N, -88.4730027° W; Length 2.5 mi; Angle points 1; Heading 268°; New ROW vi. Start 41.7162156° N, -88.4730027° W; End 41.6873625° N, -88.4769350° W; Length 2.0 mi; Angle points 4; Heading 185°; New ROW
Terrain description	Flat to gently rolling glacial till plain (Wheaton/Minooka morainic system) of western Kane and north-eastern Kendall Counties. Land use is predominantly row-crop agriculture with scattered farmsteads and rural residences, small woodlots along the creeks, and the I-88 / US-30 / IL-47 corridors.
Right-of-way width by segment	The route is comprised of 6 segments, all new 150-ft right-of-way (new easement), total 11.8 mi: i. Start 41.8002024° N, -88.3929894° W; End 41.7803119° N, -88.3921672° W; Length 1.7 mi; Angle points 6; General heading 181°; Type: New ROW ii. Start 41.7803119° N, -88.3921672° W; End 41.7804044° N, -88.4094289° W; Length 0.8 mi; Angle points 1; Heading 286°; New ROW iii. Start 41.7804044° N, -88.4094289° W; End 41.7668034° N, -88.4237522° W; Length 1.4 mi; Angle points 3; Heading 218°; New ROW iv. Start 41.7668034° N, -88.4237522° W; End 41.7175767° N, -88.4244566° W; Length 3.4 mi; Angle points 1; Heading 180°; New ROW v. Start 41.7175767° N, -88.4244566° W; End 41.7162156° N, -88.4730027° W; Length 2.5 mi; Angle points 1; Heading 268°; New ROW vi. Start 41.7162156° N, -88.4730027° W; End 41.6873625° N, -88.4769350° W; Length 2.0 mi; Angle points 4; Heading 185°; New ROW
Electrical transmission infrastructure crossings	ComEd 138 kV: UNKNOWN124332 - PLANO (138 KV)
Civil infrastructure/major waterway facility crossing plan	Route includes 5 major road crossings (state highway or interstate) and 8 minor road crossings. Route does not include any major waterway crossings.
Environmental impacts	See attached evaluation by HDR
Tower characteristics	The proposed line will be comprised of double circuit tubular steel monopole suspension structures on drilled pier foundations for angles up to 15° and two single circuit monopole structure suspension structures on drilled pier foundations for angles up to 30°. Double circuit suspension structures will utilize v-string conductor hardware assemblies whereas the single circuit suspension structures for running angles between 15° and 30° will employ i-string conductor hardware assemblies. All locations on the line requiring strain structures will have two single circuit strain structures on drilled pier foundations, independent of line angle. The conductor configuration for all structures will be vertical with a single optical ground wire shield wire above each circuit (two shield wires overall).

Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$69,283,001.00
Component cost (in-service year)	\$75,118,663.00
Greenfield Substation Component	
Component title	Orchard Substation
Project description	Sensitive commercial or competitive information
Substation name	Orchard Substation

Substation description	Two initial 345 kV five position ring buses with tie breaker position between ring buses. Ultimate arrangements for the two 345 kV ring buses are six position ring buses. The substation layout includes one 345 kV red line ring bus with line connections to ComEd Plano Substation (two lines), Electric Junction Substation, Pleasant Valley Substation, and one tie breaker position. Initial 345 kV blue line ring bus includes line connections to ComEd Plano Substation (two lines), Electric Junction Substation, Pleasant Valley Substation, and one tie breaker position. Tie breaker positions are designed to be operated normally open or normally closed depending on need. The new double circuit 345 kV transmission line between ComEd Plano and this greenfield substation will have one line connected to each of the Blue and the Red rings. The new double circuit 345 kV transmission line between ComEd Pleasant Valley substation and this greenfield substation will have one line connected to each of the Blue and Red rings. The following Outages and durations are assumed to be required to construct the proposed facilities: Two-Week Outage on Plano - Electric Junction Blue Line to tie into new ring bus creating Plano - West Chicago Sub Blue line and West Chicago - Electric Junction Blue Line. Two-Week Outage on Plano - Electric Junction Red Line to tie into new ring bus creating Plano - West Chicago Sub Red line and West Chicago - Electric Junction Red Line.	
Nominal voltage	AC	
Nominal voltage	345	
Transformer Information		
None		
Major equipment description	The 345 kV breakers installed will be dead tank design rated 4000A continuous with 63kA rated fault interrupting capability. Breakers will be SF6 type and independent pole operated. Breaker disconnect switches and line terminal disconnect switches installed will be motor operated double end break style switches rated 4000A continuous. All bus conductor and jumper materials will be designed to exceed the breaker and disconnect ratings of 4000A at the normal rating. Relaying and controls will be microprocessor-based relaying using dual SEL 411L relays with line differential for line relaying and SEL 451 breaker relaying. AC systems will be redundantly supplied via 345 kV SSVTs installed on each ring. DC systems will be 125 VDC with redundant battery and charger systems. The substation will be designed to meet security requirements as outlined in NERC CIP standards for physical and cyber security.	
	Normal ratings	Emergency ratings
Summer (MVA)	2390.000000	2677.000000
Winter (MVA)	2902.000000	3151.000000

Environmental assessment

For development of the substation, environmental impacts are anticipated to be minimal. The project will encroach upon a Zone AE 100-year floodplain where a Base Flood Elevation (BFE) has been established. The substation will be floodproofed in accordance with local jurisdictional and Ameren requirements to maintain operational capability and access during extreme flood events. Based on available topographic mapping, site drainage generally flows from east to west toward Lake Run, a nearby watercourse that flows north to south. Stormwater runoff from the site is expected to follow existing drainage patterns. Desktop environmental reviews identified no anticipated impacts to wetlands or other environmentally sensitive resources. However, a formal wetland delineation will be completed during project development to verify site conditions and support permitting requirements. Environmental studies and agency coordination will include wetland review, threatened and endangered species screening, cultural resource evaluations, geotechnical investigations, stormwater & land disturbance permitting, floodplain permitting, etc. Construction activities for the proposed substation will disturb soil and create the potential for erosion and sediment transport. A Stormwater Pollution Prevention Plan (SWPPP) will be developed, and appropriate best management practices (BMPs), including silt fence, wattles, erosion-control & riprap blankets, sediment controls, and temporary stabilization measures, will be implemented to minimize off-site impacts and maintain regulatory compliance throughout construction & beyond.

Outreach plan

In order to obtain approval from the Commission, Longview - Ameren is required to, among other things, hold public meetings in each affected county to explain the proposed transmission line and obtain public input, with notice of the public meetings being published in a newspaper of general circulation within the affected counties once a week for three consecutive weeks. Longview - Ameren must also notify respective County Clerks in advance of each phase of public meetings. In addition to these required activities, Longview - Ameren will give the public opportunities to learn about the Project in other ways. Longview - Ameren will establish a Project website with an interactive map of the study area, a dedicated Project email address, and a hotline answered live Monday-Friday. Longview - Ameren will hold in-person Community Representative Forums for stakeholders in the Project Counties, Open Houses; two self-paced, virtual engagement opportunities available through the project website (one during each phase of engagement); paid newspaper ads prior to both phases of engagement; a series of mailed invitation letters to stakeholders and landowners in the Study Area and much more.

Land acquisition plan	After the 14-day notice period expires, Longview - Ameren will conduct themselves in accordance with the Commission's Guidelines for Right-of-Way Acquisitions [83 Illinois Administrative Code Part 300]. Longview - Ameren will retain an appraisal firm for each county of the project, for the purpose of assisting Longview - Ameren in making good faith offers for the required easements. Ameren Service representatives will distribute landowner information packages before approaching property owners from whom the utilities must acquire property rights. The packages include an initial letter informing the landowner about the nature of, and need for, transmission line. Also enclosed in the easement packages, will be a parcel aerial, Right of Entry Form, Receipt, Closing Statement and Designation of Funds, Electric Transmission Easement, Pre-paid Damage Calculation Worksheet, W-9 Form, and a Special Condition Form that explains the safety and usage of the parcel to Longview - Ameren. The packages also advise landowners that a utility representative will be contacting them and identifies a utility person from whom they can obtain additional information in the meantime. Longview - Ameren Real Estate Department representatives will contact the landowners, in good faith, from whom easement rights are needed to construct the Program's transmission lines to negotiate purchase of the required easements using fair market values. Each landowner will be assigned to one land acquisition representative contact. These representatives initially will contact the landowners in person, if possible.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$63,381,000.00
Component cost (in-service year)	\$68,719,542.00

Greenfield Transmission Line Component

Component title	Orchard R - Pleasant Valley R 345 kV & Orchard B - Pleasant Valley B 345 kV	
Project description	Sensitive commercial or competitive information	
Point A	New Orchard Substation, located for this proposal near 41°48'3" N, 88°23'35"W	
Point B	Pleasant Valley Substation located near 42°15'24.97"N, 88°26'22.12"W	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	2075.000000	2454.000000
Winter (MVA)	2273.000000	2604.000000
Conductor size and type	Both circuits: 2-conductor bundle of 954 kcmil 54/7 Cardinal ACSS/MA3/E3X, 18" phase bundle spacing. The E3X coating raises emissivity to 0.9 and lowers absorptivity to 0.2 while giving the conductor some hydrophobicity.	
Nominal voltage	AC	
Nominal voltage	345	
Line construction type	Overhead	

General route description

The route is comprised of 10 segments: i. Start: 41.8017416917112° N, -88.3925769411124° W, End: 41.8372408634631° N, -88.5132032316375° W, Length: 7.2 mi, Angle Points: 12, General Heading: 291°, Type: New ROW ii. Start: 41.8372408634631° N, -88.5132032316375° W, End: 41.8950103182275° N, -88.5122152807235° W, Length: 4.0 mi, Angle Points: 1, General Heading: 360°, Type: New ROW iii. Start: 41.8950103182275° N, -88.5122152807235° W, End: 41.905088820947° N, -88.580848551589° W, Length: 3.6 mi, Angle Points: 2, General Heading: 281°, Type: New ROW iv. Start: 41.905088820947° N, -88.580848551589° W, End: 42.0112307907872° N, -88.6159710642169° W, Length: 9.5 mi, Angle Points: 7, General Heading: 346°, Type: New ROW v. Start: 42.0112307907872° N, -88.6159710642169° W, End: 42.1392744808719° N, -88.6167092862451° W, Length: 8.9 mi, Angle Points: 3, General Heading: 0°, Type: New ROW vi. Start: 42.1392744808719° N, -88.6167092862451° W, End: 42.2070121813525° N, -88.5886374081791° W, Length: 5.5 mi, Angle Points: 4, General Heading: 16°, Type: New ROW vii. Start: 42.2070121813525° N, -88.5886374081791° W, End: 42.2191518553739° N, -88.5062879229792° W, Length: 4.4 mi, Angle Points: 4, General Heading: 79°, Type: New ROW viii. Start: 42.2191518553739° N, -88.5062879229792° W, End: 42.2682735402996° N, -88.5055604627548° W, Length: 3.4 mi, Angle Points: 2, General Heading: 1°, Type: New ROW ix. Start: 42.2682735402996° N, -88.5055604627548° W, End: 42.2684167972141° N, -88.4433210048622° W, Length: 3.2 mi, Angle Points: 1, General Heading: 90°, Type: New ROW x. Start: 42.2684167972141° N, -88.4433210048622° W, End: 42.2581565007258° N, -88.4399506692502° W, Length: 0.8 mi, Angle Points: 2, General Heading: 164°, Type: New ROW

Terrain description

Gently rolling glacial till plain and moraine country of the Fox River-Kishwaukee River divide: the southern third (Kane County) is flat prairie farmland with Blackberry Creek and Union Ditch tributaries; the middle third crosses the Marengo Ridge moraine and the headwaters of the Kishwaukee River and Coon Creek with scattered woodlots, wetlands and gravel-pit operations; the northern third (Marengo-Woodstock) is rolling moraine farmland with kettle wetlands and small lakes approaching Pleasant Valley. Land use is predominantly row-crop agriculture with farmsteads, rural-residential parcels, equestrian/estate properties near Woodstock-Bull Valley. Soils are silt loam over till.

Right-of-way width by segment	The route is comprised of 10 segments with all new ROW expected to be 150 ft: i. Start: 41.8017416917112° N, -88.3925769411124° W, End: 41.8372408634631° N, -88.5132032316375° W, Length: 7.2 mi, Angle Points: 12, General Heading: 291°, Type: New ROW ii. Start: 41.8372408634631° N, -88.5132032316375° W, End: 41.8950103182275° N, -88.5122152807235° W, Length: 4.0 mi, Angle Points: 1, General Heading: 360°, Type: New ROW iii. Start: 41.8950103182275° N, -88.5122152807235° W, End: 41.905088820947° N, -88.580848551589° W, Length: 3.6 mi, Angle Points: 2, General Heading: 281°, Type: New ROW iv. Start: 41.905088820947° N, -88.580848551589° W, End: 42.0112307907872° N, -88.6159710642169° W, Length: 9.5 mi, Angle Points: 7, General Heading: 346°, Type: New ROW v. Start: 42.0112307907872° N, -88.6159710642169° W, End: 42.1392744808719° N, -88.6167092862451° W, Length: 8.9 mi, Angle Points: 3, General Heading: 0°, Type: New ROW vi. Start: 42.1392744808719° N, -88.6167092862451° W, End: 42.2070121813525° N, -88.5886374081791° W, Length: 5.5 mi, Angle Points: 4, General Heading: 16°, Type: New ROW vii. Start: 42.2070121813525° N, -88.5886374081791° W, End: 42.2191518553739° N, -88.5062879229792° W, Length: 4.4 mi, Angle Points: 4, General Heading: 79°, Type: New ROW viii. Start: 42.2191518553739° N, -88.5062879229792° W, End: 42.2682735402996° N, -88.5055604627548° W, Length: 3.4 mi, Angle Points: 2, General Heading: 1°, Type: New ROW ix. Start: 42.2682735402996° N, -88.5055604627548° W, End: 42.2684167972141° N, -88.4433210048622° W, Length: 3.2 mi, Angle Points: 1, General Heading: 90°, Type: New ROW x. Start: 42.2684167972141° N, -88.4433210048622° W, End: 42.2581565007258° N, -88.4399506692502° W, Length: 0.8 mi, Angle Points: 2, General Heading: 164°, Type: New ROW
Electrical transmission infrastructure crossings	Byron-Wayne 345 kV, 1 circuit, Junction-Waterman 138 kV, 1 circuit, Nelson-Junction 345 kV & Junction-Sugar Grove 138 kV, 2 circuits, Silver Lake-Cherry Valley 345 kV, 1 circuit
Civil infrastructure/major waterway facility crossing plan	Route includes 8 major road crossings (state highway or interstate) and 48 minor road crossings. Route does not include any major waterway crossings.
Environmental impacts	See attached evaluation by HDR
Tower characteristics	The proposed line will be comprised of double circuit tubular steel monopole suspension structures on drilled pier foundations for angles up to 15° and two single circuit monopole structure suspension structures on drilled pier foundations for angles up to 30°. Double circuit suspension structures will utilize v-string conductor hardware assemblies whereas the single circuit suspension structures for running angles between 15° and 30° will employ i-string conductor hardware assemblies. All locations on the line requiring strain structures will have two single circuit strain structures on drilled pier foundations, independent of line angle. The conductor configuration for all structures will be vertical with a single optical ground wire shield wire above each circuit (two shield wires overall).
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information

Component Cost Details - In Current Year \$

Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$262,107,999.00
Component cost (in-service year)	\$284,185,192.00

Greenfield Substation Component

Component title	Houbolt Substation
Project description	Sensitive commercial or competitive information
Substation name	Houbolt Substation

Substation description	Two 345 kV six position ring buses with tie breaker position. Initial layout includes one 345 kV red line ring bus with line connections to ComEd Dresden Substation, Elwood Substation, Nevada Substation, Goodings Grove Substation, new 345 kV line to Joliet, and one tie breaker position. Initial 345 kV blue line ring bus includes line connections to ComEd Dresden Substation, Elwood Substation, Katydid Substation, Goodings Grove Substation, new 345 kV line to Joliet, and one tie breaker position. Tie breaker positions are designed to be operated normally open or normally closed depending on need. The new double circuit 345 kV transmission line between ComEd Joliet Substation and this greenfield substation will have one line connected to each of the Blue and the Red rings. The new double circuit 345 kV transmission lines will connect to the existing 345 kV lines that run to the ComEd Lockport Substation at the Joliet Power Plant. The following Outages and durations are assumed to be required to construct the proposed facilities: Two-Week Outage on Dresden - Elwood Blue Line to tie into new ring bus creating Dresden - Joliet Area Sub Blue line and Joliet Area Sub - Elwood Blue Line. Two-Week Outage on Dresden - Elwood Red Line to tie into new ring bus creating Dresden - Joliet Area Sub Red line and Joliet Area Sub - Elwood Red Line. Two-Week Outage on Nevada - Goodings Grove Red Line to tie into new ring bus creating Nevada - Joliet Area Sub Red line and Joliet Area Sub - Goodings Grove Red Line. Two-Week Outage on Katydid - Goodings Grove Blue Line to tie into new ring bus creating Katydid - Joliet Area Sub Blue line and Joliet Area Sub - Goodings Grove Blue Line.	
Nominal voltage	AC	
Nominal voltage	345	
Transformer Information		
None		
Major equipment description	The 345 kV breakers installed will be dead tank design rated 4000A continuous with 63kA rated fault interrupting capability. Breakers will be SF6 type and independent pole operated. Breaker disconnect switches and line terminal disconnect switches installed will be motor operated double end break style switches rated 4000A continuous. All bus conductor and jumper materials will be designed to exceed the breaker and disconnect ratings of 4000A at the normal rating. Relaying and controls will be microprocessor-based relaying using dual SEL 411L relays with line differential for line relaying and SEL 451 breaker relaying. AC systems will be redundantly supplied via 345 kV SSVTs installed on each ring. DC systems will be 125 VDC with redundant battery and charger systems. The substation will be designed to meet security requirements as outlined in NERC CIP standards for physical and cyber security.	
	Normal ratings	Emergency ratings
Summer (MVA)	2390.000000	2677.000000

Winter (MVA)

2902.000000

3151.000000

Environmental assessment

For development of the proposed substation, environmental impacts are anticipated to be minimal. A wetland has been identified through available National Wetlands Inventory (NWI) mapping to the south of the proposed substation, but it will not be disturbed. A more formal wetland delineation will be completed during project development. Floodplain mapping has been reviewed and no conflicts have been identified. It appears that stormwater flows travel NE to SW across the proposed site, merging with a stream that ultimately discharges to the Des Plaines River to the west. Environmental studies and agency coordination will include wetland review, threatened and endangered species screening, cultural resource evaluations, geotechnical investigations, stormwater & land disturbance permitting, etc. Construction activities for the proposed substation will disturb soil and create the potential for erosion and sediment transport. A Stormwater Pollution Prevention Plan (SWPPP) will be developed, and appropriate best management practices (BMPs), including silt fence, wattles, erosion-control & riprap blankets, sediment controls, and temporary stabilization measures, will be implemented to minimize off-site impacts and maintain regulatory compliance throughout construction & beyond.

Outreach plan

In order to obtain approval from the Commission, Longview - Ameren is required to, among other things, hold public meetings in each affected county to explain the proposed transmission line and obtain public input, with notice of the public meetings being published in a newspaper of general circulation within the affected counties once a week for three consecutive weeks. Longview - Ameren must also notify respective County Clerks in advance of each phase of public meetings. In addition to these required activities, Longview - Ameren will give the public opportunities to learn about the Project in other ways. Longview - Ameren will establish a Project website with an interactive map of the study area, a dedicated Project email address, and a hotline answered live Monday-Friday. Longview - Ameren will hold in-person Community Representative Forums for stakeholders in the Project Counties, Open Houses; two self-paced, virtual engagement opportunities available through the project website (one during each phase of engagement); paid newspaper ads prior to both phases of engagement; a series of mailed invitation letters to stakeholders and landowners in the Study Area and much more.

Land acquisition plan	After the 14-day notice period expires, Longview - Ameren will conduct themselves in accordance with the Commission's Guidelines for Right-of-Way Acquisitions [83 Illinois Administrative Code Part 300]. Longview - Ameren will retain an appraisal firm for each county of the project, for the purpose of assisting Longview - Ameren in making good faith offers for the required easements. Ameren Service representatives will distribute landowner information packages before approaching property owners from whom the utilities must acquire property rights. The packages include an initial letter informing the landowner about the nature of, and need for, transmission line. Also enclosed in the easement packages, will be a parcel aerial, Right of Entry Form, Receipt, Closing Statement and Designation of Funds, Electric Transmission Easement, Pre-paid Damage Calculation Worksheet, W-9 Form, and a Special Condition Form that explains the safety and usage of the parcel to Longview - Ameren. The packages also advise landowners that a utility representative will be contacting them and identifies a utility person from whom they can obtain additional information in the meantime. Longview - Ameren Real Estate Department representatives will contact the landowners, in good faith, from whom easement rights are needed to construct the Program's transmission lines to negotiate purchase of the required easements using fair market values. Each landowner will be assigned to one land acquisition representative contact. These representatives initially will contact the landowners in person, if possible.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$66,102,001.00
Component cost (in-service year)	\$71,669,730.00

Greenfield Transmission Line Component

Component title	Houbolt - Joliet 345 kV #01 & Houbolt - Joliet 345 kV #02	
Project description	Sensitive commercial or competitive information	
Point A	Houbolt Substation	
Point B	Joliet 345 kV switchyard	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	2075.000000	2454.000000
Winter (MVA)	2273.000000	2604.000000
Conductor size and type	Both circuits: 2-conductor bundle of 954 kcmil 54/7 Cardinal ACSS/MA3/E3X, 18" phase bundle spacing. The E3X coating raises emissivity to 0.9 and lowers absorptivity to 0.2 while giving the conductor some hydrophobicity.	
Nominal voltage	AC	
Nominal voltage	345	
Line construction type	Overhead	
General route description	The route is comprised of 4 segments: i. Start: 41.4398365873888° N, -88.1484153996487° W, End: 41.4717523037008° N, -88.1487577423205° W, Length: 2.4 mi, Angle Points: 6, General Heading: 0°, Type: New ROW ii. Start: 41.4717523037008° N, -88.1487577423205° W, End: 41.4850800959903° N, -88.127283217518° W, Length: 1.5 mi, Angle Points: 2, General Heading: 50°, Type: New ROW iii. Start: 41.4850800959903° N, -88.127283217518° W, End: 41.4943825159513° N, -88.1305052305921° W, Length: 0.7 mi, Angle Points: 2, General Heading: 346°, Type: New ROW iv. Start: 41.4943825159513° N, -88.1305052305921° W, End: 41.49563266065° N, -88.1266044776121° W, Length: 0.2 mi, Angle Points: 2, General Heading: 67°, Type: New ROW	
Terrain description	Flat Des Plaines River valley outwash plain and bluffs in south-west Joliet, Will County, IL. The southern segment crosses level agricultural land converting to industrial warehousing; the middle segment crosses the Des Plaines River floodplain and the river itself; the northern segment crosses industrial and generating-station land on the east bank and the US-6 corridor. Soils are silty clay loam over outwash and shallow Silurian dolomite bedrock.	

Right-of-way width by segment	The route is comprised of 4 segments with new ROW being 150 ft: i. Start: 41.4398365873888° N, -88.1484153996487° W, End: 41.4717523037008° N, -88.1487577423205° W, Length: 2.4 mi, Angle Points: 6, General Heading: 0°, Type: New ROW ii. Start: 41.4717523037008° N, -88.1487577423205° W, End: 41.4850800959903° N, -88.127283217518° W, Length: 1.5 mi, Angle Points: 2, General Heading: 50°, Type: New ROW iii. Start: 41.4850800959903° N, -88.127283217518° W, End: 41.4943825159513° N, -88.1305052305921° W, Length: 0.7 mi, Angle Points: 2, General Heading: 346°, Type: New ROW iv. Start: 41.4943825159513° N, -88.1305052305921° W, End: 41.49563266065° N, -88.1266044776121° W, Length: 0.2 mi, Angle Points: 2, General Heading: 67°, Type: New ROW
Electrical transmission infrastructure crossings	Dresden-Joliet 138 kV, 2 circuits, Will County Generating Station-Joliet 138 kV, 2 circuits
Civil infrastructure/major waterway facility crossing plan	Route includes 1 major road crossing (state highway or interstate), 3 minor road crossings, and 1 major waterway crossing (Des Plaines River). Given the length of the river crossing, both the proposed crossing and the alternate location crossing are likely to be less than a 1700 foot span with the proposed under 1500 feet, it is assumed that the crossing towers will be able to be of the same design as the rest of the line (described above). However, given the uncertainty around a river crossing, the design may need to be modified from monopole suspension structures and dual monopole strain structures to a tubular steel structure with either two or four foundations. Additionally, instead of drilled pier foundations, driven pile foundations may be utilized once site specific geotechnical data is gathered.
Environmental impacts	See provided evaluation by HDR
Tower characteristics	The proposed line will be comprised of double circuit tubular steel monopole suspension structures on drilled pier foundations for angles up to 15° and two single circuit monopole structure suspension structures on drilled pier foundations for angles up to 30°. Double circuit suspension structures will utilize v-string conductor hardware assemblies whereas the single circuit suspension structures for running angles between 15° and 30° will employ i-string conductor hardware assemblies. All locations on the line requiring strain structures will have two single circuit strain structures on drilled pier foundations, independent of line angle. The conductor configuration for all structures will be vertical with a single optical ground wire shield wire above each circuit (two shield wires overall).
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information

Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$76,221,000.00
Component cost (in-service year)	\$82,641,047.00
Substation Upgrade Component	
Component title	Plano Substation Upgrade
Project description	Sensitive commercial or competitive information
Substation name	Plano 345 kV substation
Substation zone	ComEd
Substation upgrade scope	The ComEd Plano Substation will be upgraded with two new 4000A 345 kV Breakers and associated disconnect switches added to the existing ring buses. One breaker, two breaker disconnect switches, line disconnect switches, line potential transformers, bus support structures, and line arbors will be added into the Red and Blue ring buses for two new lines to the new L-A Orchard Substation.
Transformer Information	
None	
New equipment description	All new 345 kV breakers being added and installed will be dead tank design rated 4000A continuous with 63kA rated fault interrupting capability. All breaker disconnect switches and line terminal disconnect switches being installed will be rated 4000A continuous. All bus conductor and jumper materials will be designed to exceed the breaker and disconnect ratings of 4000A at normal rating.

Substation assumptions	L-A developed the scope based upon typical ComEd arrangement practices for its ring bus construction but used L-A's standard steel structures and equipment types for 345 kV. These standard structures and equipment are utilized by L-A throughout its 345 kV system in IL. Civil details for foundation costs were based on average soil type seen in IL by L-A. Existing blanket agreements for 345 kV substation equipment was used which provides current pricing for equipment and construction rates for contractors constructing the equipment. It was assumed that ComEd existing control enclosures have space for relay equipment required to operate the equipment. Relay schemes were assumed to be redundant SEL-411L relays to perform line differential, which is based upon other developments with ties to ComEd. Revenue Class interchange metering was assumed to be installed between L-A and ComEd facilities with redundant metering installed on both ends of interconnection points
Real-estate description	The upgrades at the ComEd Plano substation will not require any substation fence expansion or new real estate.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$7,183,320.00
Component cost (in-service year)	\$7,788,366.00
Substation Upgrade Component	

Component title	Pleasant Valley Substation Upgrade
Project description	Sensitive commercial or competitive information
Substation name	Pleasant Valley Substation 345 kV
Substation zone	ComEd
Substation upgrade scope	The upgrade will consist of eight new 4000A 345 kV breakers (four in the Blue ring, three in the Red ring and one bus tie) with associated breaker disconnect switches, five line disconnect switches, associated potential transformers, bus support structures and line termination structures to connect the two new L-A lines from the new L-A Orchard Substation (one Red circuit to the Red ring and one Blue circuit to the Blue ring); two new line positions on the Blue ring for tying the existing ComEd Cherry Valley to Silver Lake 345 kV line in and out of the Pleasant Valley Substation, creating Pleasant Valley to Cherry Valley and Pleasant Valley to Silver Lake Blue line positions; a new Red ring terminal position for the existing ComEd Pleasant Valley to Silver Lake 345 kV line; and a Red ring terminal position for the existing 345 kV Pleasant Valley transformer.
Transformer Information	
None	
New equipment description	All new 345 kV breakers being added and installed will be dead tank design rated 4000A continuous with 63kA rated fault interrupting capability. All breaker disconnect switches and line terminal disconnect switches being installed will be rated 4000A continuous. All bus conductor and jumper materials will be designed to exceed the breaker and disconnect ratings of 4000A at normal rating.
Substation assumptions	L-A developed the scope based upon typical ComEd arrangement practices for its ring bus construction but used L-A's standard steel structures and equipment types for 345 kV. These standard structures and equipment are utilized by L-A throughout its 345 kV system in IL. Civil details for foundation costs were based on average soil type seen in IL by L-A. Existing blanket agreements for 345 kV substation equipment was used which provides current pricing for equipment and construction rates for contractors constructing the equipment. It was assumed that ComEd existing control enclosures have space for relay equipment required to operate the equipment. Relay schemes were assumed to be redundant SEL-411L relays to perform line differential, which is based upon other developments with ties to ComEd. Revenue Class interchange metering was assumed to be installed between L-A and ComEd facilities with redundant metering installed on both ends of interconnection points
Real-estate description	The upgrades at the ComEd Pleasant Valley substation will not require any substation fence expansion or new real estate.
Construction responsibility	Sensitive commercial or competitive information

Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$28,733,279.00
Component cost (in-service year)	\$31,153,466.00
Transmission Line Upgrade Component	
Component title	Silver Lake B - Grayslake B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Grayslake–Tollway 345 kV Blue circuit
Point A	Grayslake 345 kV
Point B	Silver Lake 345 kV
Point C	
Terrain description	Rolling glacial moraine in the Crystal Lake-Cary-Prairie Grove area of McHenry County, IL; mixed suburban residential, open/agricultural. Soils are loam over sandy/gravelly glacial till suited to drilled-pier foundations.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2338 ACAR/2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The only structural work is at the cut point (structural check of the existing tower for the dead-end condition; new dead-end structure if required) and on the new loop-in leg, which is built with single-circuit tubular steel monopoles.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1202.000000	1387.000000
Winter (MVA)	1475.000000	1601.000000
Conductor size and type	2338 ACAR/2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	approx. 0.6 mi new single-circuit leg	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded Silver Lake substation. This requires approximately 0.6 miles of new line to be installed from the cut location to the Silver Lake Substation.	
Right of way	The new segment of line is anticipated to be routed parallel to the existing ComEd 345 kV corridor east of the Silver Lake station. This may accommodate the line with no additional ROW. The line would require 100-150' of ROW should new or expanded ROW be required.	

Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$2,154,255.00
Component cost (in-service year)	\$2,335,706.00
Transmission Line Upgrade Component	
Component title	Silver Lake B - Tollway B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Grayslake–Tollway 345 kV Blue
Point A	Silver Lake 345 kV
Point B	Tollway 345 kV
Point C	
Terrain description	Rolling glacial moraine in the Crystal Lake-Cary-Prairie Grove area of McHenry County, IL; mixed suburban residential, open/agricultural. Soils are loam over sandy/gravelly glacial till suited to drilled-pier foundations.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2338 ACAR/2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The only structural work is at the cut point (structural check of the existing tower for the dead-end condition; new dead-end structure if required) and on the new loop-in leg, which is built with single-circuit tubular steel monopoles.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1202.000000	1387.000000
Winter (MVA)	1475.000000	1601.000000
Conductor size and type	2338 ACAR/2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	approx. 0.6 mi new single-circuit leg; no existing line rebuilt	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded Silver Lake substation. This requires approximately 0.6 miles of new line to be installed from the cut location to the Silver Lake Substation.	
Right of way	The new segment of line is anticipated to be routed parallel to the existing ComEd 345 kV corridor east of the Silver Lake station. This may accommodate the line with no additional ROW. The line would require 100-150' of ROW should new or expanded ROW be required.	

Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$2,333,776.00
Component cost (in-service year)	\$2,530,348.00
Transmission Line Upgrade Component	
Component title	Pleasant Valley B - Silver Lake B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Silver Lake–Prairie/Cherry Valley 345 kV
Point A	Silver Lake 345 kV
Point B	Pleasant Valley 345 kV
Point C	
Terrain description	Rolling glacial moraine south of Woodstock, McHenry County, IL; agricultural and rural-residential land.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2338 ACAR/2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The Silver Lake-Prairie/Cherry Valley circuit is carried on ComEd double-circuit steel structures; no recent inspection or structural-analysis results are available to Longview-Ameren. The only structural work is at the cut point (structural check of the existing tower for the dead-end condition; new dead-end structure if required) and on the new leg, which is built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Pleasant Valley 345 kV yard.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1201.000000	1441.000000
Winter (MVA)	1486.000000	1651.000000
Conductor size and type	2338 ACAR/2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.25 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.25 miles of new line to be installed from the cut location to the substation.	
Right of way	No additional ROW expected to be needed	

Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$1,256,649.00
Component cost (in-service year)	\$1,362,495.00
Transmission Line Upgrade Component	
Component title	Pleasant Valley B - Cherry Valley B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Silver Lake
Point A	Pleasant Valley
Point B	Cherry Valley
Point C	
Terrain description	Rolling glacial moraine south of Woodstock, McHenry County, IL; agricultural and rural-residential land.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2338 ACAR/2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The Silver Lake-Prairie/Cherry Valley circuit is carried on ComEd double-circuit steel structures; no recent inspection or structural-analysis results are available to Longview-Ameren.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1201.000000	1441.000000
Winter (MVA)	1486.000000	1651.000000
Conductor size and type	2338 ACAR/2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	Less than 0.25 mi new single-circuit leg; no existing line rebuilt	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.25 miles of new line to be installed from the cut location to the substation.	
Right of way	No additional ROW required	
Construction responsibility	Sensitive commercial or competitive information	
Benefits/Comments	Sensitive commercial or competitive information	

Component Cost Details - In Current Year \$

Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$1,436,169.00
Component cost (in-service year)	\$1,557,137.00

Transmission Line Upgrade Component

Component title	Plano R - Orchard R 345 kV #01
Project description	Sensitive commercial or competitive information
Impacted transmission line	Plano—Electric Junction 345 kV Red circuit
Point A	Plano
Point B	Orchard
Point C	
Terrain description	Flat to gently rolling glacial till plain of the Fox River-Blackberry Creek divide in Sugar Grove Township, Kane County, IL. Predominantly row-crop agriculture with scattered rural residences.
Existing Line Physical Characteristics	
Operating voltage	345

Conductor size and type	2156 ACSR	
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).	
Tower line characteristics	The Plano-Electric Junction Red circuit is carried on ComEd double-circuit steel structures. The only structural work is at the cut point (structural check of the existing tower for the dead-end condition; new dead-end structure if required) and on the new loop-in leg, which is built with single-circuit tubular steel monopoles.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1334.000000	1528.000000
Winter (MVA)	1590.000000	1781.000000
Conductor size and type	2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Right of way	ROW will be acquired as needed as part of the land acquisition process for the new Orchard substation	
Construction responsibility	Sensitive commercial or competitive information	

Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$574,466.00
Component cost (in-service year)	\$622,855.00
Transmission Line Upgrade Component	
Component title	Orchard R - Electric Junction R 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Plano—Electric Junction 345 kV Red circuit
Point A	Orchard
Point B	Electric Junction 345 kV
Point C	
Terrain description	Flat to gently rolling glacial till plain of the Fox River-Blackberry Creek divide in Sugar Grove Township, Kane County, IL. Predominantly row-crop agriculture with scattered rural residences.
Existing Line Physical Characteristics	

Operating voltage	345	
Conductor size and type	2156 ACSR	
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).	
Tower line characteristics	The Plano-Electric Junction Red circuit is carried on ComEd double-circuit steel structures. The only structural work is at the cut point (structural check of the existing tower for the dead-end condition; new dead-end structure if required) and on the new loop-in leg, which is built with single-circuit tubular steel monopoles.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1334.000000	1528.000000
Winter (MVA)	1590.000000	1781.000000
Conductor size and type	2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Right of way	ROW will be acquired as needed as part of the land acquisition process for the new Orchard substation	

Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$520,612.00
Component cost (in-service year)	\$564,462.00
Transmission Line Upgrade Component	
Component title	Plano B - Orchard B 345 kV #01
Project description	Sensitive commercial or competitive information
Impacted transmission line	Plano—Electric Junction 345 kV Blue circuit
Point A	Plano 345 kV
Point B	Orchard
Point C	
Terrain description	Flat to gently rolling glacial till plain of the Fox River-Blackberry Creek divide in Sugar Grove Township, Kane County, IL. Predominantly row-crop agriculture with scattered rural residences.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The Plano-Electric Junction Blue circuit is carried on ComEd double-circuit steel structures. No recent inspection or structural-analysis results are available to Longview-Ameren.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1245.000000	1341.000000
Winter (MVA)	1476.000000	1560.000000
Conductor size and type	2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Right of way	ROW will be acquired as needed as part of the land acquisition process for the new Orchard substation	

Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$538,563.00
Component cost (in-service year)	\$583,926.00
Transmission Line Upgrade Component	
Component title	Orchard B - Electric Junction B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Plano—Electric Junction 345 kV Blue circuit
Point A	Orchard
Point B	Electric Junction 345 kV
Point C	
Terrain description	Flat to gently rolling glacial till plain of the Fox River-Blackberry Creek divide in Sugar Grove Township, Kane County, IL. Predominantly row-crop agriculture with scattered rural residences.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The Plano-Electric Junction Blue circuit is carried on ComEd double-circuit steel structures. No recent inspection or structural-analysis results are available to Longview-Ameren.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1245.000000	1341.000000
Winter (MVA)	1476.000000	1560.000000
Conductor size and type	2156 ACSR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 0.10 miles of new line to be installed from the cut location to the substation.	
Right of way	ROW will be acquired as part of the land acquisition process for the new Orchard substation	
Construction responsibility	Sensitive commercial or competitive information	

Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$484,706.00
Component cost (in-service year)	\$525,534.00
Transmission Line Upgrade Component	
Component title	Silver Lake - Wilson Rd 138 kV Rebuild (Dbl Ckt)
Project description	Sensitive commercial or competitive information
Impacted transmission line	Silver Lake - Wilson Rd 138 kV double circuit
Point A	Silver Lake 138 kV
Point B	Wilson Rd 138 kV
Point C	

Terrain description	Existing ComEd 138 kV corridor, approximately 11.7 miles from Silver Lake Substation east of Crystal Lake, north and east across the Fox River valley to the Wilson Road 138 kV station near Volo, rebuilt as a double-circuit line on the existing right-of-way. The terrain is rolling glacial moraine and outwash of the Fox River and Chain O'Lakes region: rural residential and agricultural land near Prairie Grove, the low Fox River bottomland and marshes between Burtons Bridge and Island Lake, and suburban development approaching US-12 at Volo and IL-60. Soils are silt loams over glacial till on the uplands, sand and gravel along the river terraces, and alluvium with peat in the river bottom and wetland depressions.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	2156 ACSS (Or current ComEd standard that will meet the required ratings)	
Hardware plan description	Rebuild: the existing conductor, insulators and hardware on the Silver Lake - Wilson Rd double circuit are replaced for the full rebuild length; existing structures are replaced. New hardware: insulators and hardware rated for the new 2,000 A conductor, new jumpers, and new shield wire over the full length. Age and condition of the existing hardware have not been assessed by Longview-Ameren (ComEd inspection records required).	
Tower line characteristics	Existing double-circuit 138 kV structures (ComEd lattice or steel-pole construction; type, age and condition not available to Longview-Ameren - no inspection or structural-analysis results on hand). Proposed: replace the existing structures with new double-circuit tubular steel monopoles (vertical phase configuration, two shield-wire positions, drilled-pier foundations) on the existing centerline/ROW, designed for the heavier 2,000 A conductor under NESC Heavy loading and ComEd 138 kV clearance standards; where ComEd's assessment shows the existing structures can carry the new conductor (reconductor/re-tension option), structure replacement is limited to dead-ends and overloaded tangents. Construction one circuit at a time with the adjacent circuit energized, or with temporary structures/outages per ComEd's outage plan.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000
	Normal ratings	Emergency ratings
Summer (MVA)	399.000000	478.000000
Winter (MVA)	399.000000	478.000000

Conductor size and type	2156 ACSS (or current ComEd standard that will meet the required ratings)
Shield wire size and type	3/8" EHS Steel (or current ComEd standard)
Rebuild line length	approx. 11.7 mi
Rebuild portion description	Full length (approx. 11.7 mi) of the double-circuit corridor between Silver Lake and Wilson Rd is assumed rebuilt or reconducted to 2,000 A.
Right of way	The rebuild stays on the existing ComEd double-circuit right-of-way for the full approx. 11.7 mi.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$33,165,998.00
Component cost (in-service year)	\$35,959,549.00
Transmission Line Upgrade Component	
Component title	Wilson Road - Round Lake - Round Lake Beach 138 kV Rebuild (Dbl Ckt)
Project description	Sensitive commercial or competitive information

Impacted transmission line	Wilson Road - Round Lake - Round Lake Beach 138 kV double circuit	
Point A	Wilson Rd 138 kV	
Point B	Round Lake 138 kV	
Point C	Round Lake Beach 138 kV	
Terrain description	Flat to gently rolling glacial lake plain in central Lake County, IL, along approximately 10 miles of existing ComEd 138 kV corridor from the Wilson Road 138 kV station near Volo north across IL-120 (Belvidere Road) and then east along the Rollins Road corridor through Round Lake and Round Lake Beach. The western half is a fully built suburban corridor of residential subdivisions, commercial frontage at Cedar Lake Road, IL-83 and Hainesville Road, and parks, with crossings of the Metra Milwaukee District North and Canadian National rail lines; the eastern half is more open, crossing Mill Creek and US-45 (Lake Street). Soils are loam over till with organic soils in the creek and marsh margins. Work is confined to the existing double-circuit right-of-way.	
Existing Line Physical Characteristics		
Operating voltage	138	
Conductor size and type	2156 ACSS (Or current ComEd standard that will meet the required ratings)	
Hardware plan description	Rebuild: the existing conductor, insulators and hardware on the Wilson Road - Round Lake - Round Lake Beach double circuit are replaced for the full rebuild length; existing structures are replaced. New hardware: insulators and hardware rated for the new 2,000 A conductor, new jumpers, and new shield wire over the full length. Age and condition of the existing hardware have not been assessed by Longview-Ameren (ComEd inspection records required).	
Tower line characteristics	Existing double-circuit 138 kV structures (ComEd lattice or steel-pole construction; type, age and condition not available to Longview-Ameren - no inspection or structural-analysis results on hand). Proposed: replace the existing structures with new double-circuit tubular steel monopoles (vertical phase configuration) on the existing centerline/ROW, designed for the heavier 2,000 A conductor under NESC Heavy loading and ComEd 138 kV clearance standards; where ComEd's assessment shows the existing structures can carry the new conductor (reconductor/re-tension option), structure replacement is limited to dead-ends and overloaded tangents.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	138.000000	138.000000

	Normal ratings	Emergency ratings
Summer (MVA)	399.000000	478.000000
Winter (MVA)	399.000000	478.000000
Conductor size and type	2156 ACSS (or current ComEd standard that will meet the required ratings)	
Shield wire size and type	3/8" EHS Steel (or current ComEd standard)	
Rebuild line length	approx. 10 mi	
Rebuild portion description	Full length (approx. 10 mi) of the double-circuit corridor Wilson Road - Round Lake - Round Lake Beach is rebuilt to 2,000 A.	
Right of way	The rebuild stays on the existing ComEd double-circuit right-of-way for the full approx. 10 mi; no ROW expansion is anticipated.	
Construction responsibility	Sensitive commercial or competitive information	
Benefits/Comments	Sensitive commercial or competitive information	
Component Cost Details - In Current Year \$		
Engineering & design	Sensitive commercial or competitive information	
Permitting / routing / siting	Sensitive commercial or competitive information	
ROW / land acquisition	Sensitive commercial or competitive information	
Materials & equipment	Sensitive commercial or competitive information	
Construction & commissioning	Sensitive commercial or competitive information	
Construction management	Sensitive commercial or competitive information	
Overheads & miscellaneous costs	Sensitive commercial or competitive information	
Contingency	Sensitive commercial or competitive information	
Total component cost	\$30,150,907.00	
Component cost (in-service year)	\$32,690,499.00	

Transmission Line Upgrade Component

Component title	Lockport - Lisle 345 kV Rebuild (Dbl Ckt)
Project description	Sensitive commercial or competitive information
Impacted transmission line	Lisle–Lockport 345 kV double circuit
Point A	Lisle 345 kV
Point B	Lockport 345 kV
Point C	
Terrain description	Developed south-west suburban corridor from Lisle through Woodridge, Bolingbrook and Romeoville to Lockport: flat to gently rolling glacial till plain with dense residential, commercial, industrial/logistics and forest-preserve land use along the existing ComEd 345 kV right-of-way. Soils are silty clay loam over till with shallow dolomite bedrock approaching the Des Plaines valley.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2 conductor bundle of 954 kcm 54/7 Cardinal ACSS/MA3/E3X. (Or current ComEd standard that will meet the required ratings)
Hardware plan description	Rebuild: the existing conductor, insulators and hardware on both circuits are replaced for the full approx. 12.6 mi; existing structures are replaced. New hardware: polymer or toughened-glass V-string suspension and dead-end assemblies rated for the new bundled 4,000 A conductor, spacer-dampers, new jumpers, and new shield wires over the full length. Age and condition of the existing hardware have not been assessed by Longview-Ameren (ComEd inspection records required).
Tower line characteristics	Existing double-circuit 345 kV structures (ComEd steel lattice or steel-pole construction; type, age and condition not available to Longview-Ameren - no inspection or structural-analysis results on hand). Proposed: replace the existing structures with new double-circuit tubular steel monopoles (vertical phase configuration, two shield-wire positions, drilled-pier foundations) on the existing centerline/ROW, designed for the heavier bundled 4,000 A conductor under NESC Heavy loading and ComEd 345 kV clearance standards - consistent with the Ameren double-circuit 345 kV monopole sample drawings included with the proposal. Taller structures/longer spans at the I-55, I-355, Des Plaines-Ship Canal and railroad crossings; if ComEd's assessment shows the existing structures can carry the new conductor (reconductor/re-tension option), replacement is limited to dead-ends and overloaded tangents.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	2075.000000	2454.000000
Winter (MVA)	2273.000000	2604.000000
Conductor size and type	2 conductor bundle of 954 kcm 54/7 Cardinal ACSS/MA3/E3X. (or current ComEd standard that will meet the required ratings)	
Shield wire size and type	Expected to retain; If required to be replaced: 48 Ct OPGW	
Rebuild line length	approx. 12.6 mi	
Rebuild portion description	Full length (approx. 12.6 mi) of the double-circuit Lisle-Lockport corridor is rebuilt to 4,000 A: new bundled conductor on both circuits, new OPGW/shield wires, replacement double-circuit monopoles on the existing centerline, new dead-ends and jumpers.	
Right of way	The rebuild stays on the existing ComEd double-circuit 345 kV right-of-way for the full approx. 12.6 mi; no ROW expansion is anticipated.	
Construction responsibility	Sensitive commercial or competitive information	
Benefits/Comments	Sensitive commercial or competitive information	
Component Cost Details - In Current Year \$		
Engineering & design	Sensitive commercial or competitive information	
Permitting / routing / siting	Sensitive commercial or competitive information	
ROW / land acquisition	Sensitive commercial or competitive information	
Materials & equipment	Sensitive commercial or competitive information	
Construction & commissioning	Sensitive commercial or competitive information	

Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$74,878,113.00
Component cost (in-service year)	\$81,185,050.00

Substation Upgrade Component

Component title	Joliet Substation Upgrade
Project description	Sensitive commercial or competitive information
Substation name	Joliet 345 kV switchyard
Substation zone	ComEd
Substation upgrade scope	Two new 345 kV terminal positions at the ComEd Joliet 345 kV switchyard for the new L-A Houbolt-Joliet double-circuit line: one position on the Red section and one on the Blue section, each with a new 4,000 A 345 kV breaker (and associated breaker disconnect switches), line disconnect switch, line potential transformers/CCVTs, surge arresters, bus support structures and line arbor/dead-end, 4,000 A bus and jumpers, dual SEL-411L line-differential relaying to Houbolt, breaker-failure and bus-differential extension, revenue-class interchange metering, SCADA/RTU and OPGW fiber termination. Relay setting changes on the existing Joliet-Lockport 345 kV terminals and at Lockport for the changed flows.

Transformer Information

None	
New equipment description	All new 345 kV breakers being added and installed will be dead tank design rated 4000A continuous with 63kA rated fault interrupting capability. All breaker disconnect switches and line terminal disconnect switches being installed will be rated 4000A continuous. All bus conductor and jumper materials will be designed to exceed the breaker and disconnect ratings of 4000A at normal rating.

Substation assumptions	L-A developed the scope based upon typical ComEd arrangement practices for its ring bus construction but used L-A's standard steel structures and equipment types for 345 kV. These standard structures and equipment are utilized by L-A throughout its 345 kV system in IL. Civil details for foundation costs were based on average soil type seen in IL by L-A. Existing blanket agreements for 345 kV substation equipment was used which provides current pricing for equipment and construction rates for contractors constructing the equipment. It was assumed that ComEd existing control enclosures have space for relay equipment required to operate the equipment. Relay schemes were assumed to be redundant SEL-411L relays to perform line differential, which is based upon other developments with ties to ComEd. Revenue Class interchange metering was assumed to be installed between L-A and ComEd facilities with redundant metering installed on both ends of interconnection points
Real-estate description	No fence expansion or new real estate is assumed: the two new terminal positions are laid out within the existing ComEd Joliet 345 kV switchyard at the Joliet Generating Station.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$9,086,900.00
Component cost (in-service year)	\$9,852,283.00
Transmission Line Upgrade Component	

Component title	Houbolt R - Nevada R 345 kV	
Project description	Sensitive commercial or competitive information	
Impacted transmission line	Goodings Grove–Nevada 345 kV Red circuit	
Point A	Nevada 345 kV	
Point B	Houbolt 345 kV	
Point C		
Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	2338 ACAR / 2156 ACSR	
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).	
Tower line characteristics	The Goodings Grove-Nevada 345 kV Red circuit is carried on ComEd double-circuit steel structures shared with the Goodings Grove-Katydid Road Blue circuit; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings

Summer (MVA)	1201.000000	1290.000000
Winter (MVA)	1497.000000	1564.000000
Conductor size and type	2338 ACAR / 2156 ACSR	
Shield wire size and type	Existing shield wire is retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.	
Construction responsibility	Sensitive commercial or competitive information	
Benefits/Comments	Sensitive commercial or competitive information	
Component Cost Details - In Current Year \$		
Engineering & design	Sensitive commercial or competitive information	
Permitting / routing / siting	Sensitive commercial or competitive information	
ROW / land acquisition	Sensitive commercial or competitive information	
Materials & equipment	Sensitive commercial or competitive information	
Construction & commissioning	Sensitive commercial or competitive information	
Construction management	Sensitive commercial or competitive information	
Overheads & miscellaneous costs	Sensitive commercial or competitive information	
Contingency	Sensitive commercial or competitive information	
Total component cost	\$9,963,426.00	

Component cost (in-service year)	\$10,802,639.00
Transmission Line Upgrade Component	
Component title	Houbolt R - Goodings Grove R 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Goodings Grove–Nevada 345 kV Red circuit
Point A	Houbolt 345 kV
Point B	Goodings Grove 345 kV
Point C	
Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2338 ACAR / 2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The Goodings Grove-Nevada 345 kV Red circuit is carried on ComEd double-circuit steel structures shared with the Goodings Grove-Katydid Road Blue circuit; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.
Proposed Line Characteristics	
	Designed
	Operating

Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1201.000000	1290.000000
Winter (MVA)	1497.000000	1564.000000
Conductor size and type	2338 ACAR / 2156 ACSR	
Shield wire size and type	Existing shield wire is retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.	
Construction responsibility	Sensitive commercial or competitive information	
Benefits/Comments	Sensitive commercial or competitive information	
Component Cost Details - In Current Year \$		
Engineering & design	Sensitive commercial or competitive information	
Permitting / routing / siting	Sensitive commercial or competitive information	
ROW / land acquisition	Sensitive commercial or competitive information	
Materials & equipment	Sensitive commercial or competitive information	
Construction & commissioning	Sensitive commercial or competitive information	
Construction management	Sensitive commercial or competitive information	
Overheads & miscellaneous costs	Sensitive commercial or competitive information	

Contingency	Sensitive commercial or competitive information
Total component cost	\$8,347,735.00
Component cost (in-service year)	\$9,050,860.00
Transmission Line Upgrade Component	
Component title	Houbolt B - Katydid B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Goodings Grove–Katydid Road 345 kV Blue circuit
Point A	Katydid Road 345 kV
Point B	Houbolt 345 kV
Point C	
Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2338 ACAR / 2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The Goodings Grove-Katydid Road 345 kV Blue circuit is carried on ComEd double-circuit steel structures shared with the Goodings Grove-Nevada Red circuit; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1334.000000	1726.000000
Winter (MVA)	1602.000000	1921.000000
Conductor size and type	2338 ACAR / 2156 ACSR	
Shield wire size and type	Existing shield wire is retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.	
Construction responsibility	Sensitive commercial or competitive information	
Benefits/Comments	Sensitive commercial or competitive information	
Component Cost Details - In Current Year \$		
Engineering & design	Sensitive commercial or competitive information	
Permitting / routing / siting	Sensitive commercial or competitive information	
ROW / land acquisition	Sensitive commercial or competitive information	
Materials & equipment	Sensitive commercial or competitive information	

Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$10,501,991.00
Component cost (in-service year)	\$11,386,566.00
Transmission Line Upgrade Component	
Component title	Houbolt B - Goodings Grove B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Goodings Grove–Katydid Road 345 kV Blue circuit
Point A	Houbolt 345 kV
Point B	Goodings Grove 345 kV
Point C	
Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2338 ACAR / 2156 ACSR
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).

Tower line characteristics	The Goodings Grove-Katydid Road 345 kV Blue circuit is carried on ComEd double-circuit steel structures shared with the Goodings Grove-Nevada Red circuit; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1334.000000	1726.000000
Winter (MVA)	1602.000000	1921.000000
Conductor size and type	2338 ACAR / 2156 ACSR	
Shield wire size and type	Existing shield wire is retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.	
Construction responsibility	Sensitive commercial or competitive information	
Benefits/Comments	Sensitive commercial or competitive information	
Component Cost Details - In Current Year \$		
Engineering & design	Sensitive commercial or competitive information	

Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$9,155,581.00
Component cost (in-service year)	\$9,926,750.00
Transmission Line Upgrade Component	
Component title	Dresden R - Houbolt R 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Dresden–Elwood Energy Center 345 kV Red circuit
Point A	Dresden 345 kV
Point B	Houbolt 345 kV
Point C	
Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.
Existing Line Physical Characteristics	
Operating voltage	345
Conductor size and type	2338 ACAR

Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).	
Tower line characteristics	The Dresden-Elwood Energy Center 345 kV Red circuit is carried on ComEd double-circuit steel structures; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1201.000000	1479.000000
Winter (MVA)	1497.000000	1710.000000
Conductor size and type	2338 ACAR	
Shield wire size and type	Existing line shield wire retained and extended along loop-in leg	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.	
Construction responsibility	Sensitive commercial or competitive information	

Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$9,424,862.00
Component cost (in-service year)	\$10,218,713.00
Transmission Line Upgrade Component	
Component title	Houbolt R - Dresden R 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Dresden–Elwood Energy Center 345 kV Red circuit
Point A	Houbolt 345 kV
Point B	Elwood 345 kV
Point C	
Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	2338 ACAR
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).
Tower line characteristics	The Dresden-Elwood Energy Center 345 kV Red circuit is carried on ComEd double-circuit steel structures; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1201.000000	1479.000000
Winter (MVA)	1497.000000	1710.000000
Conductor size and type	2338 ACAR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	

Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$8,617,017.00
Component cost (in-service year)	\$9,342,823.00
Transmission Line Upgrade Component	
Component title	Dresden B - Houbolt B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Dresden–Elwood Energy Center 345 kV Blue circuit
Point A	Dresden 345 kV
Point B	Houbolt 345 kV
Point C	

Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	2338 ACAR	
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).	
Tower line characteristics	The Dresden-Elwood Energy Center 345 kV Blue circuit is carried on ComEd double-circuit steel structures; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1201.000000	1479.000000
Winter (MVA)	1497.000000	1710.000000
Conductor size and type	2338 ACAR	
Shield wire size and type	Existing line shield wire retained	
Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.	

Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.
Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$10,232,707.00
Component cost (in-service year)	\$11,094,603.00
Transmission Line Upgrade Component	
Component title	Houbolt B - Dresden B 345 kV
Project description	Sensitive commercial or competitive information
Impacted transmission line	Dresden–Elwood Energy Center 345 kV Blue circuit
Point A	Houbolt 345 kV

Point B	Elwood 345 kV	
Point C		
Terrain description	Flat outwash/till plain of the Des Plaines-Kankakee valley south of I-80 in Joliet/Elwood, Will County, IL. Land use is agricultural transitioning to industrial warehousing, with the Des Plaines River approx. 2 mi to the west/north-west and Midewin National Tallgrass Prairie / the former Joliet Arsenal further south.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	2338 ACAR	
Hardware plan description	Existing conductor, insulators and hardware on the cut circuit are retained and reused on all spans not affected by the cut-in; age and condition have not been assessed by Longview-Ameren (ComEd inspection records required). New hardware is limited to the cut point and the new leg: a new dead-end assembly on the cut-point structure (or a new dead-end structure if the existing tower cannot accept the unbalanced longitudinal load).	
Tower line characteristics	The Dresden-Elwood Energy Center 345 kV Blue circuit is carried on ComEd double-circuit steel structures; no recent inspection or structural-analysis results are available to Longview-Ameren. The new approx. 4 mi leg is assumed to be built with single-circuit tubular steel monopoles terminating on the line-entrance dead-end structure at the Houbolt 345 kV yard. Structure family per the Ameren 345 kV monopole sample drawings.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1201.000000	1479.000000
Winter (MVA)	1497.000000	1710.000000
Conductor size and type	2338 ACAR	
Shield wire size and type	Existing shield wire is retained	

Rebuild line length	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.
Rebuild portion description	No portion of the existing line is rebuilt. The existing line is cut and looped-in to the expanded substation. This requires less than 4 miles of new line to be installed from the cut location to the substation.
Right of way	No change to the existing line right-of-way. The new loop-in leg requires a new single-circuit 345 kV easement of approximately 150 ft width from the cut point to the Houbolt 345 kV yard; the leg is routed to parallel the existing corridor and property lines wherever practical.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information
Component Cost Details - In Current Year \$	
Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$8,886,298.00
Component cost (in-service year)	\$9,634,786.00
Substation Upgrade Component	
Component title	Silver Lake Substation Upgrades
Project description	Sensitive commercial or competitive information

Substation name	Silver Lake
Substation zone	ComEd
Substation upgrade scope	The ComEd Silver Lake substation upgrade will include a new initial four position 4000A rated ring bus built in the ComEd Blue line system. The ring bus will consist of five new 4000A 345 kV breakers with associated breaker disconnect switches, two line disconnect switches, potential transformers, bus support structures and line arbors to connect the existing 345 kV ComEd Grayslake to Tollway line in and out of the Silver Lake ring bus. A new bus tie terminal will be created connecting the existing Silver Lake red ring to the new blue ring. A new terminal will be created moving one of the ComEd 345 kV transformers at Silver Lake from the red to the new blue ring.
Transformer Information	
None	
New equipment description	All new 345 kV breakers being added and installed will be dead tank design rated 4000A continuous with 63kA rated fault interrupting capability. All breaker disconnect switches and line terminal disconnect switches being installed will be rated 4000A continuous. All bus conductor and jumper materials will be designed to exceed the breaker and disconnect ratings of 4000A at normal rating.
Substation assumptions	L-A developed the scope based upon typical ComEd arrangement practices for its ring bus construction but used L-A's standard steel structures and equipment types for 345 kV. These standard structures and equipment are utilized by L-A throughout its 345 kV system in IL. Civil details for foundation costs were based on average soil type seen in IL by L-A. Existing blanket agreements for 345 kV substation equipment was used which provides current pricing for equipment and construction rates for contractors constructing the equipment. It was assumed that ComEd existing control enclosures have space for relay equipment required to operate the equipment. Relay schemes were assumed to be redundant SEL-411L relays to perform line differential, which is based upon other developments with ties to ComEd. Revenue Class interchange metering was assumed to be installed between L-A and ComEd facilities with redundant metering installed on both ends of interconnection points
Real-estate description	The upgrades at the ComEd Silver Lake substation will require the substation fence to be expanded, but the expansion will be within the ComEd owned property. The expansion area for these upgrades is under 2 acres.
Construction responsibility	Sensitive commercial or competitive information
Benefits/Comments	Sensitive commercial or competitive information

Component Cost Details - In Current Year \$

Engineering & design	Sensitive commercial or competitive information
Permitting / routing / siting	Sensitive commercial or competitive information
ROW / land acquisition	Sensitive commercial or competitive information
Materials & equipment	Sensitive commercial or competitive information
Construction & commissioning	Sensitive commercial or competitive information
Construction management	Sensitive commercial or competitive information
Overheads & miscellaneous costs	Sensitive commercial or competitive information
Contingency	Sensitive commercial or competitive information
Total component cost	\$14,761,723.00
Component cost (in-service year)	\$16,005,093.00

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-GD-LL66	272803	W PLAEXCLUDED_FROM_COMPETITION	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222	Light Load Gen Deliv	Included
2026W1-GD-LL67	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222 ; R	Light Load Gen Deliv	Included
2026W1-GD-LL1	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION	1	345	222 ; R	Light Load Gen Deliv	Included
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	345	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	345	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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-GD-LL143	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL72	272803	W PLAEXCLUDED_FROM_COMPETITION; R	272054	W PLAEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL71	272803	W PLAEXCLUDED_FROM_COMPETITION; R	272054	W PLAEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL156	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL157	272803	W PLAEXCLUDED_FROM_COMPETITION; R	272054	W PLAEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL158	272054	MILLER RD; R	272803	W PLAEXCLUDED_FROM_COMPETITION; R	1	138	222	Light Load Gen Deliv	Included
2026W1-GD-LL159	272803	W PLAEXCLUDED_FROM_COMPETITION; R	272054	W PLAEXCLUDED_FROM_COMPETITION; R	1	138	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
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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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
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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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
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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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
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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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-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-ST155	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	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-ST158	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST162	271131	BUTTERFIE; R	272855	YORK ;RT	1	138	222	Summer N-1-1	Included
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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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-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-ST186	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	222	Summer N-1-1	Included
2026W1-N11-ST188	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	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-ST200	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	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
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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
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-ST215	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	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	1	138	222, R	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-GD-LL65	272054	MILLER RD; R	272803	W PLAXEXCLUDED_FROM_COMPETITION	1	138	222 ; R	Light Load Gen Deliv	Included
2026W1-GD-LL144	272803	W PLAXEXCLUDED_FROM_COMPETITION	272261	EXCLUDED_FROM_COMPETITION	1	138	222, R	Light Load Gen Deliv	Included
2026W1-GD-LL9	270694	CHERRY VA; B	270908	PRAIRIE ; B	1	345	222	Light Load Gen Deliv	Included
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

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-GD-S534	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	222	Summer Gen Deliv	Included
2026W1-GD-S233	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	222	Summer Gen Deliv	Included
2026W1-GD-S537	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	222	Summer Gen Deliv	Included
2026W1-GD-S232	270814	LOMBARD ;4B	275199	LOMBARD ;4M	1	345/138	222	Summer Gen Deliv	Included
2026W1-N11-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	222	Winter N-1-1	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

Sensitive commercial or competitive information

Financial Information

Capital spend start date 04/2027

Construction start date 08/2029

Project Duration (In Months) 50

Cost Containment Commitment

Cost cap (in current year) Sensitive commercial or competitive information

Cost cap (in-service year) Sensitive commercial or competitive information

Components covered by cost containment

1. Plano R - Orchard R 345 kV #02 & Plano B - Orchard B 345 kV #02 - PROPOSER
2. Orchard Substation - PROPOSER
3. Orchard R - Pleasant Valley R 345 kV & Orchard B - Pleasant Valley B 345 kV - PROPOSER
4. Houbolt Substation - PROPOSER
5. Houbolt - Joliet 345 kV #01 & Houbolt - Joliet 345 kV #02 - PROPOSER

Cost elements covered by cost containment

Engineering & design	No
Permitting / routing / siting	No
ROW / land acquisition	No
Materials & equipment	No
Construction & commissioning	No
Construction management	Yes
Overheads & miscellaneous costs	No
Taxes	No
AFUDC	No
Escalation	No
Additional Information	Sensitive commercial or competitive information
Is the proposer offering a binding cap on ROE?	No
Is the proposer offering a Debt to Equity Ratio cap?	Sensitive commercial or competitive information
Additional cost containment measures not covered above	Sensitive commercial or competitive information

Additional Comments

None