

Polk - Waukegan HVDC + Polk - Sheldon East 765 kV

General Information

Proposing entity name	Proprietary & Confidential Information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Proprietary & Confidential Information
Joint proposal ID	Proprietary & Confidential Information
Company proposal ID	Proprietary & Confidential Information
PJM Proposal ID	313
Project title	Polk - Waukegan HVDC + Polk - Sheldon East 765 kV
Project description	Construct a new 2,800 MW, 525 kV HVDC transmission link between Polk and Waukegan using overhead, underground, and submarine segments, together with a new 765 kV transmission line between Sheldon East and Polk. The project includes new converter stations at Polk and Waukegan, a new Sheldon East 765 kV substation on the Woodford-Reynolds line, and a new Polk 765 kV substation on the Wilton-Dumont line.
Email	Proprietary & Confidential Information
Project in-service date	06/2034
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Proprietary & Confidential Information

Project Components

1. 56) State Line – Waukegan 525 kV
2. 118) Waukegan 345kV – Waukegan 525 kV Converter Station Tie-in

3. 119) Polk – State Line 525 kV
4. 124) Sheldon East- Polk 765 kV
5. 156) Polk - State Line 525 kV
6. 48) Polk 525 kV Converter Station
7. 54) Waukegan 525 kV Converter Station
8. 179) Polk Substation 345 kV
9. 182) Sheldon East 765 kV Substation
10. 185) Polk 765 kV Substation
11. 110) St John - Crete 345 kV loop-in
12. 111) University Park – Olive 345 kV loop-in
13. 113) Wilton - Dumont 765 kV loop-in
14. 114) Davis Creek - Burman 345 kV loop-in
15. 115) Davis Creek - Bloom 345 kV loop-in
16. 117) Waukegan 345 kV Substation Upgrade
17. 192) East Frankfort 345 kV Substation Upgrade

Greenfield Transmission Line Component

Component title	56) State Line – Waukegan 525 kV	
Project description	Proprietary & Confidential Information	
Point A	UG/UW Geographic Transition Point	
Point B	Waukegan	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	2800.000000	2800.000000
Winter (MVA)	2800.000000	2800.000000

Conductor size and type	One (1) cable per pole with one (1) DMR cable. Single Bundle of two (2) 6000kcmil copper XLPE cable [1-6000kcmil cable/pole] with one (1) 6000kcmil copper XLPE DMR cable.
Nominal voltage	DC
Nominal voltage	525
Line construction type	Submarine
General route description	The proposed State Line - Waukegan 525 kV transmission line component originates at the State Line substation and terminates at the Waukegan substation, traversing through 2 counties, including Lake County, Indiana; Lake County, Illinois. The line is proposed as an underwater single circuit 525 kV transmission facility.
Terrain description	The proposed State Line - Waukegan 525 kV component will consist of a submarine HVDC cable installed along the bed of Lake Michigan.
Right-of-way width by segment	The proposed route would require lakebed authorization and/or an easement from the Illinois Department of Natural Resources (IDNR). A 350-foot-wide right-of-way (ROW) is proposed for the submarine cable to provide sufficient space for installation, maintenance, and, if necessary, retrieval of the cable to a barge for splicing or repair. The final ROW width will be subject to review and approval by IDNR.
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.
Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file) for crossing plans and locations.

Environmental impacts	Environmental constraints associated with the proposed State Line - Waukegan 525 kV project centerline and are considered manageable through avoidance, minimization, and mitigation during routing, siting, design, and permitting. The proposed component was developed to maximize the use of existing utility and transportation corridors, previously disturbed areas, and compatible land uses, where practicable. Route alternatives were evaluated through environmental screening, aerial imagery review, GIS analysis, and constructability assessments. The project evaluated opportunities for co-location with existing infrastructure, land use considerations, permitting considerations, and other project-specific factors to avoid and minimize impacts to sensitive environmental resources, to the extent practicable. Additional details on preliminary routing and feasibility are included in Attachment 14 (Routing Supplemental Attachment). Industry-standard environmental construction Best Management Practices and Time-of-Year restrictions will be implemented to minimize impacts to natural and cultural resources encountered by the proposed project. Based on environmental reviews completed to date, no fatal environmental flaws or significant constraints have been identified that would preclude permitting, construction, or operation of the Project. Identified impacts are anticipated to be manageable through standard permitting, agency coordination, route refinement, and mitigation. Additional details on the anticipated environmental permitting approach and a description of the federal, state, and local regulatory environment is included in Attachment 8 (Environmental and Permitting Plan).
Tower characteristics	Direct Bury.
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information

Total component cost	\$621,695,187.00
Component cost (in-service year)	\$703,878,554.00

Greenfield Transmission Line Component

Component title	118) Waukegan 345kV – Waukegan 525 kV Converter Station Tie-in	
Project description	Proprietary & Confidential Information	
Point A	Waukegan	
Point B	Waukegan	
Point C	NA	
	Normal ratings	Emergency ratings
Summer (MVA)	2228.000000	2292.000000
Winter (MVA)	2396.000000	2452.000000
Conductor size and type	2xCurlew ACSS	
Nominal voltage	AC	
Nominal voltage	345	
Line construction type	Overhead	
General route description	The route is located primarily within and immediately adjacent to the substation properties and is intended to provide a direct interconnection between the existing Waukegan 345 kV Substation and the proposed Waukegan 525 kV converter station	
Terrain description	Terrain along the short alignment is generally consistent with the surrounding substation sites and is not expected to present significant constraints to construction.	
Right-of-way width by segment	The proposed component will require a 150-ft right-of-way	
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.	

Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file) for crossing plans and locations.
Environmental impacts	Due to the short length of the proposed tie line and its location within and immediately adjacent to the proposed substation properties, environmental impacts are anticipated to be limited. Potential impacts will be evaluated during detailed design and addressed through applicable permitting, consultation, and mitigation requirements.
Tower characteristics	Delta SWAK. See structure drawing set included in Attachment 10.
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$5,172,574.00
Component cost (in-service year)	\$5,898,834.00
Greenfield Transmission Line Component	
Component title	119) Polk – State Line 525 kV
Project description	Proprietary & Confidential Information
Point A	OH/UG Geographic Transition Point

Point B	UG/UW Geographic Transition Point	
Point C	NA	
	Normal ratings	Emergency ratings
Summer (MVA)	2800.000000	2800.000000
Winter (MVA)	2800.000000	2800.000000
Conductor size and type	Two (2) cables per pole with one (1) DMR cable. Two (2) 3000kcmil copper XLPE cables/pole with two (2) 3000kcmil copper XLPE cables installed in a 2 Row by 3 Column concrete encased duct bank. Each cable to be placed in its own duct.	
Nominal voltage	AC	
Nominal voltage	525	
Line construction type	Underground	
General route description	The proposed Polk - State Line 525 kV (Underground Segment) transmission line component originates at the State Line substation and terminates at the UG/OH geographic handoff point substation, traversing through 2 counties, including Cook County, Illinois; Lake County, Indiana. The line is proposed as an underground single circuit 525 kV transmission facility. The route is primarily located within developed, wetlands, and herbaceous terrain and follows existing right-of-way for approximately 95% of the route and will require new right-of-way for approximately 5% of the route. The component generally follows existing infrastructure corridors where practicable, such as major roadways, existing transmission corridors, rail corridors, and utility rights-of-way, in order to minimize environmental and land use impacts.	
Terrain description	The proposed Polk - State Line 525 kV (Underground Segment) component traverses terrain that is generally characterized by relatively flat terrain, consisting primarily of developed, wetlands, and herbaceous land uses. The topography along the route includes low-relief plains within the Central Corn Belt Plains ecoregion. Subsurface conditions generally consist of limestone and dolostone overlain by Orthents, Urban land, and Watseka loamy fine sand. Population and development characteristics along the proposed route consist of a mixed rural-residential and suburban setting, with intermittent residential subdivisions and localized development present along select portions of the alignment; however, these areas appear limited and manageable through standard routing, siting, and stakeholder coordination practices. Please see Attachment 14 for detailed route analysis.	

Right-of-way width by segment	The proposed 525 kV transmission line will utilize a 30-foot-wide right-of-way (ROW) along the route. Approximately 95% of the proposed route is anticipated to parallel, co-locate within, or expand upon existing transmission or utility corridors, while the remaining approximately 5% of the route will consist of new greenfield ROW.
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.
Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file) for crossing plans and locations.
Environmental impacts	Environmental constraints associated with the proposed Polk - Des Plaines 525 kV (Overhead) project centerline and are considered manageable through avoidance, minimization, and mitigation during routing, siting, design, and permitting. The proposed component was developed to maximize the use of existing utility and transportation corridors, previously disturbed areas, and compatible land uses, where practicable. Route alternatives were evaluated through environmental screening, aerial imagery review, GIS analysis, and constructability assessments. The project evaluated opportunities for co-location with existing infrastructure, land use considerations, permitting considerations, and other project-specific factors to avoid and minimize impacts to sensitive environmental resources, to the extent practicable. Additional details on preliminary routing and feasibility are included in Attachment 14 (Routing Supplemental Attachment). Industry-standard environmental construction Best Management Practices and Time-of-Year restrictions will be implemented to minimize impacts to natural and cultural resources encountered by the proposed project. Based on environmental reviews completed to date, no fatal environmental flaws or significant constraints have been identified that would preclude permitting, construction, or operation of the Project. Identified impacts are anticipated to be manageable through standard permitting, agency coordination, route refinement, and mitigation. Additional details on the anticipated environmental permitting approach and a description of the federal, state, and local regulatory environment is included in Attachment 8 (Environmental and Permitting Plan).
Tower characteristics	Underground Duct Bank.
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information

Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$304,900,660.00
Component cost (in-service year)	\$349,721,436.00

Greenfield Transmission Line Component

Component title	124) Sheldon East- Polk 765 kV	
Project description	Proprietary & Confidential Information	
Point A	Sheldon East	
Point B	Polk	
Point C	NA	
	Normal ratings	Emergency ratings
Summer (MVA)	6877.000000	6942.000000
Winter (MVA)	8011.000000	8245.000000
Conductor size and type	6xRedwing ACSR(GA2)	
Nominal voltage	AC	
Nominal voltage	765	
Line construction type	Overhead	

General route description	The proposed Sheldon East- Polk 765 kV transmission line component originates at the Sheldon East substation and terminates at the Polk substation, traversing through 3 counties, including Iroquois County, Kankakee County, and Will County, Illinois. The line is proposed as an overhead single circuit 765 kV transmission facility. The component generally follows existing infrastructure corridors where practicable, such as major roadways, existing transmission corridors, rail corridors, and utility rights-of-way, in order to minimize environmental and land use impacts.
Terrain description	The proposed Sheldon East- Polk 765 kV component traverses terrain that is generally characterized by relatively flat terrain, consisting primarily of agricultural, developed, and forested land uses. The topography along the route includes low-relief plains within the Central Corn Belt Plains ecoregion. Subsurface conditions generally consist of dolostone, shale, and limestone overlain by Selma loam, Gilford fine sandy loam, and Milford silty clay loam. Population and development characteristics along the proposed route consist of predominantly rural and undeveloped areas, with limited residential presence and minimal population exposure along the proposed route . Please see Attachment 14 for detailed route analysis.
Right-of-way width by segment	The route will require a 200- to 250-foot-wide right-of-way (ROW).
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.
Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file) for crossing plans and locations.
Environmental impacts	Environmental constraints associated with the proposed Sheldon East- Polk 765 kV project centerline and are considered manageable through avoidance, minimization, and mitigation during routing, siting, design, and permitting. The proposed component was developed to maximize the use of existing utility and transportation corridors, previously disturbed areas, and compatible land uses, where practicable. Route alternatives were evaluated through environmental screening, aerial imagery review, GIS analysis, and constructability assessments. The project evaluated opportunities for co-location with existing infrastructure, land use considerations, permitting considerations, and other project-specific factors to avoid and minimize impacts to sensitive environmental resources, to the extent practicable. Additional details on preliminary routing and feasibility are included in Attachment 14 (Routing Supplemental Attachment). Industry-standard environmental construction Best Management Practices and Time-of-Year restrictions will be implemented to minimize impacts to natural and cultural resources encountered by the proposed project. Based on environmental reviews completed to date, no fatal environmental flaws or significant constraints have been identified that would preclude permitting, construction, or operation of the Project. Identified impacts are anticipated to be manageable through standard permitting, agency coordination, route refinement, and mitigation. Additional details on the anticipated environmental permitting approach and a description of the federal, state, and local regulatory environment is included in Attachment 8 (Environmental and Permitting Plan).
Tower characteristics	See structure drawing set included in Attachment 10.

Construction responsibility	Proprietary & Confidential Information	
Benefits/Comments	Proprietary & Confidential Information	
Component Cost Details - In Current Year \$		
Engineering & design	Proprietary & Confidential Information	
Permitting / routing / siting	Proprietary & Confidential Information	
ROW / land acquisition	Proprietary & Confidential Information	
Materials & equipment	Proprietary & Confidential Information	
Construction & commissioning	Proprietary & Confidential Information	
Construction management	Proprietary & Confidential Information	
Overheads & miscellaneous costs	Proprietary & Confidential Information	
Contingency	Proprietary & Confidential Information	
Total component cost	\$220,717,736.00	
Component cost (in-service year)	\$250,923,800.00	
Greenfield Transmission Line Component		
Component title	156) Polk - State Line 525 kV	
Project description	Proprietary & Confidential Information	
Point A	Polk	
Point B	OH/UG Geographic Transition Point	
Point C	NA	
	Normal ratings	Emergency ratings
Summer (MVA)	2800.000000	2800.000000

Winter (MVA)	2800.000000	2800.000000
Conductor size and type	3xChukar ACSR	
Nominal voltage	AC	
Nominal voltage	525	
Line construction type	Overhead	
General route description	The proposed Polk - State Line (Overhead) transmission line component originates at the Polk substation and terminates at the OH/UG Geographic handoff substation, traversing through 2 counties, including Will County and Cook County, Illinois. The line is proposed as an overhead single circuit 525 kV transmission facility. The route is primarily located within agricultural, developed, and forested terrain and follows existing right-of-way for approximately 12% of the route and will require new right-of-way for approximately 88% of the route. The component generally follows existing infrastructure corridors where practicable, such as major roadways, existing transmission corridors, rail corridors, and utility rights-of-way, in order to minimize environmental and land use impacts.	
Terrain description	The proposed Polk - State Line (Overhead) component traverses terrain that is generally characterized by relatively flat to gently rolling terrain, consisting primarily of agricultural, developed, and forested land uses. The topography along the route includes low-relief plains within the Central Corn Belt Plains ecoregion, with slope conditions characterized by gentle slopes ranging from approximately 0 to 5 percent. Subsurface conditions generally consist of dolostone overlain by Beecher silt loam, Milford silty clay loam, and Ashkum silty clay loam. Population and development characteristics along the proposed route consist of primarily rural areas with scattered residential development, isolated homes, and agricultural parcels, with limited proximity to developed residential areas. Please see Attachment 14 for detailed route analysis.	
Right-of-way width by segment	The proposed 525 kV transmission line will utilize a 200-foot-wide right-of-way (ROW) along the route. Approximately 12% of the proposed route is anticipated to parallel, co-locate within, or expand upon existing transmission or utility corridors, while the remaining approximately 88% of the route will consist of new greenfield ROW.	
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.	
Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file) for crossing plans and locations.	

Environmental impacts	Environmental constraints associated with the proposed Polk - Des Plaines 525 kV (Overhead) project centerline and are considered manageable through avoidance, minimization, and mitigation during routing, siting, design, and permitting. The proposed component was developed to maximize the use of existing utility and transportation corridors, previously disturbed areas, and compatible land uses, where practicable. Route alternatives were evaluated through environmental screening, aerial imagery review, GIS analysis, and constructability assessments. The project evaluated opportunities for co-location with existing infrastructure, land use considerations, permitting considerations, and other project-specific factors to avoid and minimize impacts to sensitive environmental resources, to the extent practicable. Additional details on preliminary routing and feasibility are included in Attachment 14 (Routing Supplemental Attachment). Industry-standard environmental construction Best Management Practices and Time-of-Year restrictions will be implemented to minimize impacts to natural and cultural resources encountered by the proposed project. Based on environmental reviews completed to date, no fatal environmental flaws or significant constraints have been identified that would preclude permitting, construction, or operation of the Project. Identified impacts are anticipated to be manageable through standard permitting, agency coordination, route refinement, and mitigation. Additional details on the anticipated environmental permitting approach and a description of the federal, state, and local regulatory environment is included in Attachment 8 (Environmental and Permitting Plan).
Tower characteristics	Guyed Lattice and Self-Supported Lattice. See structure drawing set included in Attachment 10.
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information

Total component cost	\$112,242,705.00	
Component cost (in-service year)	\$127,183,288.00	
Greenfield Substation Component		
Component title	48) Polk 525 kV Converter Station	
Project description	Proprietary & Confidential Information	
Substation name	Polk Converter Station	
Substation description	Construct a new 525 kV Polk converter station adjacent to the Polk 765kV substation footprint.	
Nominal voltage	DC	
Nominal voltage	525	
Transformer Information		
None		
Major equipment description	525kV HVDC Bipole Converter Station, 2800 MW	
	Normal ratings	Emergency ratings
Summer (MVA)	2800.000000	2800.000000
Winter (MVA)	2800.000000	2800.000000

Environmental assessment

Environmental constraints were evaluated within the proposed substation site and are considered manageable through avoidance, minimization, and mitigation measures. The parcel contains four NWI-mapped wetlands. According to FEMA data, a small portion of the proposed substation layout may contain a 100-year floodplain. However, no regulated floodways were identified. No major watercourses are located within the parcel, although overland flow is assumed to drain to unnamed tributaries Pike Creek. No fatal flaws have been identified. Based on publicly available information, no previously recorded archaeological sites, cemeteries, or historic districts are located within the immediate vicinity of the site. However, one undetermined historic property was identified by the SHPO, in the vicinity of the site. Two federally listed species (one endangered and one proposed threatened) have known ranges in the area, but no critical habitat has been identified within the vicinity of the site. If suitable habitat is identified or regulations change, agency coordination and species-specific surveys will be conducted. The project intends to follow recommended tree-clearing windows and seasonal restrictions to minimize impacts to federally listed bats, migratory birds, and other protected species. Standard construction BMPs, along with avoidance and minimization measures, will be implemented to prevent impacts to natural resources to the maximum extent practicable. There are no environmental concerns that cannot be addressed through standard agency coordination and mitigation. No major federal action triggering NEPA is anticipated. See Attachment 08 - Permitting Plan.

Outreach plan

The proposer is committed to informing the public about the project to the greatest extent practicable while working with all interested stakeholders including landowners through a robust public outreach program to address and respond to community concerns. A well-designed public outreach program can have numerous benefits, including fostering cooperative relationships with landowners and other stakeholders, expediting the regulatory permitting process, and assisting with project development. In general, the purpose of the community outreach plan is to gain community support for the project. In the affected communities, the proposer's public outreach plan will educate the public and relevant stakeholders on specific project details to enable timely regulatory approvals and construction activities. Elements of the public outreach plan will include the following: 1) Identify potential issues at an early stage by engagement with key community stakeholders at the outset; 2) Broaden the community engagement process to identify potential and relevant community benefits that can facilitate community support for the proposed project; 3) Develop a broad base of community support for the proposed project before the regulatory agencies; and 4) Develop a comprehensive administrative record documenting the community outreach process that can be presented to the regulatory agency or, in the event of a legal challenge, to the appropriate court. The outreach plan proposes to dedicate considerable time and resources in engaging the community, and specifically the affected community during the planning process to identify highly sensitive areas in order to develop a project that has the least amount of cultural, environmental, and social impacts. The plans will reflect avoidance of impacts rather than mitigation. However, in some cases, if avoidance is not possible, then the proposer will involve landowners and other stakeholders in providing appropriate and practical mitigation measures. Public outreach activities by the proposer will begin following project award.

Land acquisition plan

See attachment 9.

Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$817,820,356.00
Component cost (in-service year)	\$924,820,314.00
Greenfield Substation Component	
Component title	54) Waukegan 525 kV Converter Station
Project description	Proprietary & Confidential Information
Substation name	Waukegan Converter Station
Substation description	Construct a new 525 kV Waukegan converter station interconnecting to the existing Waukegan 345/138kV substation
Nominal voltage	DC
Nominal voltage	525
Transformer Information	

None

Major equipment description

525kV HVDC Bipole Converter Station, 2800 MW

Normal ratings

Emergency ratings

Summer (MVA)

2800.000000

2800.000000

Winter (MVA)

2800.000000

2800.000000

Environmental assessment

Environmental constraints were evaluated within the proposed substation site and are considered manageable through avoidance, minimization, and mitigation measures. The parcel contains seven NWI-mapped wetlands. According to FEMA data, no portion of the proposed substation layout contains a 100-year floodplain or regulated floodway. No major watercourses are located within the parcel, although overland flow is assumed to drain to Lake Michigan. No fatal flaws have been identified. Based on publicly available information, no previously recorded archaeological sites, cemeteries, or historic districts are located within the immediate vicinity of the site. However, one undetermined historic property was identified by the SHPO, in the vicinity of the site. Seven federally listed species (three endangered, three threatened, and one proposed threatened) have known ranges in the area. A small portion of the site contains critical habitat for the Piping Plover. If suitable habitat is identified or regulations change, agency coordination and species-specific surveys will be conducted. The proposed site has historic industrial uses and contamination, as it is listed under the IL EPA Site Remediation Program. Therefore an Environmental Site Assessment will be needed to understand the level of contamination and remediation will be necessary to develop the site. The project intends to follow recommended tree-clearing windows and seasonal restrictions to minimize impacts to federally listed bats, migratory birds, and other protected species. Standard construction BMPs, along with avoidance and minimization measures, will be implemented to prevent impacts to natural resources to the maximum extent practicable. There are no environmental concerns that cannot be addressed through standard agency coordination and mitigation. No major federal action triggering NEPA is anticipated. See Attachment 08 - Permitting Plan.

Outreach plan	The proposer is committed to informing the public about the project to the greatest extent practicable while working with all interested stakeholders including landowners through a robust public outreach program to address and respond to community concerns. A well-designed public outreach program can have numerous benefits, including fostering cooperative relationships with landowners and other stakeholders, expediting the regulatory permitting process, and assisting with project development. In general, the purpose of the community outreach plan is to gain community support for the project. In the affected communities, the proposer's public outreach plan will educate the public and relevant stakeholders on specific project details to enable timely regulatory approvals and construction activities. Elements of the public outreach plan will include the following: 1) Identify potential issues at an early stage by engagement with key community stakeholders at the outset; 2) Broaden the community engagement process to identify potential and relevant community benefits that can facilitate community support for the proposed project; 3) Develop a broad base of community support for the proposed project before the regulatory agencies; and 4) Develop a comprehensive administrative record documenting the community outreach process that can be presented to the regulatory agency or, in the event of a legal challenge, to the appropriate court. The outreach plan proposes to dedicate considerable time and resources in engaging the community, and specifically the affected community during the planning process to identify highly sensitive areas in order to develop a project that has the least amount of cultural, environmental, and social impacts. The plans will reflect avoidance of impacts rather than mitigation. However, in some cases, if avoidance is not possible, then the proposer will involve landowners and other stakeholders in providing appropriate and practical mitigation measures. Public outreach activities by the proposer will begin following project award.
Land acquisition plan	See attachment 9.
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information

Overheads & miscellaneous costs	Proprietary & Confidential Information	
Contingency	Proprietary & Confidential Information	
Total component cost	\$819,492,866.00	
Component cost (in-service year)	\$926,928,594.00	
Greenfield Substation Component		
Component title	179) Polk Substation 345 kV	
Project description	Proprietary & Confidential Information	
Substation name	Polk 345	
Substation description	Construct the new Polk Substation with 345 kV facilities and loop in the existing St. John-Crete 345 kV, University Park-Olive 345 kV, Davis Creek-Burman 345 kV, and Davis Creek-Bloom 345 kV transmission lines.	
Nominal voltage	AC	
Nominal voltage	345	
Transformer Information		
None		
Major equipment description	AC Air Insulated Substation (AIS): New proposed 345kV substation. New 345kV Breaker and a half (BAAH) substation including twelve (12) 345kV-5000A-63kAIC breakers. Line bays include connections to University Park, Crete, ST John, Olive, Davis Creek 1, Davis Creek 2, Burnham, and Bloom 345kV substations. This configuration allows for four (4) total BAAH bays at the substation when fully built out.	
	Normal ratings	Emergency ratings
Summer (MVA)	2228.000000	2292.000000
Winter (MVA)	2396.000000	2452.000000

Environmental assessment

Environmental constraints were evaluated within the proposed substation site and are considered manageable through avoidance, minimization, and mitigation measures. The parcel contains four NWI-mapped wetlands. According to FEMA data, a small portion of the proposed substation layout may contain a 100-year floodplain. However, no regulated floodways were identified. No major watercourses are located within the parcel, although overland flow is assumed to drain to unnamed tributaries Pike Creek. No fatal flaws have been identified. Based on publicly available information, no previously recorded archaeological sites, cemeteries, or historic districts are located within the immediate vicinity of the site. However, one undetermined historic property was identified by the SHPO, in the vicinity of the site. Two federally listed species (one endangered and one proposed threatened) have known ranges in the area, but no critical habitat has been identified within the vicinity of the site. If suitable habitat is identified or regulations change, agency coordination and species-specific surveys will be conducted. The project intends to follow recommended tree-clearing windows and seasonal restrictions to minimize impacts to federally listed bats, migratory birds, and other protected species. Standard construction BMPs, along with avoidance and minimization measures, will be implemented to prevent impacts to natural resources to the maximum extent practicable. There are no environmental concerns that cannot be addressed through standard agency coordination and mitigation. No major federal action triggering NEPA is anticipated. See Attachment 08 - Permitting Plan.

Outreach plan

The proposer is committed to informing the public about the project to the greatest extent practicable while working with all interested stakeholders including landowners through a robust public outreach program to address and respond to community concerns. A well-designed public outreach program can have numerous benefits, including fostering cooperative relationships with landowners and other stakeholders, expediting the regulatory permitting process, and assisting with project development. In general, the purpose of the community outreach plan is to gain community support for the project. In the affected communities, the proposer's public outreach plan will educate the public and relevant stakeholders on specific project details to enable timely regulatory approvals and construction activities. Elements of the public outreach plan will include the following: 1) Identify potential issues at an early stage by engagement with key community stakeholders at the outset; 2) Broaden the community engagement process to identify potential and relevant community benefits that can facilitate community support for the proposed project; 3) Develop a broad base of community support for the proposed project before the regulatory agencies; and 4) Develop a comprehensive administrative record documenting the community outreach process that can be presented to the regulatory agency or, in the event of a legal challenge, to the appropriate court. The outreach plan proposes to dedicate considerable time and resources in engaging the community, and specifically the affected community during the planning process to identify highly sensitive areas in order to develop a project that has the least amount of cultural, environmental, and social impacts. The plans will reflect avoidance of impacts rather than mitigation. However, in some cases, if avoidance is not possible, then the proposer will involve landowners and other stakeholders in providing appropriate and practical mitigation measures. Public outreach activities by the proposer will begin following project award.

Land acquisition plan

See attachment 9.

Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$66,829,304.00
Component cost (in-service year)	\$76,040,373.00
Greenfield Substation Component	
Component title	182) Sheldon East 765 kV Substation
Project description	Proprietary & Confidential Information
Substation name	Sheldon East
Substation description	Construct the new Sheldon East substation on the Woodford -Reynolds 765kV line.
Nominal voltage	AC
Nominal voltage	765
Transformer Information	

	Name	Capacity (MVA)	
Transformer	NA	NA	
	High Side	Low Side	Tertiary
Voltage (kV)	765	NA	NA
Major equipment description	AC Air Insulated Substation (AIS): New proposed 765kV substation. New 765kV Double Breaker Double Bus (DBDB) substation including eight (8) 765kV-5000A-63kAIC breakers (number includes breakers for the shunt reactor banks). Two (2) 150MVAR Line Reactor banks outgoing to Woodford and Polk 765kV substations. An Additional line without a line reactor bank going to Reynolds 765kV Substation. This configuration allows for three (3) total DBDB bays at the substation.		
	Normal ratings	Emergency ratings	
Summer (MVA)	6877.000000	6942.000000	
Winter (MVA)	8011.000000	8245.000000	
Environmental assessment	Environmental constraints were evaluated within the proposed substation site and are considered manageable through avoidance, minimization, and mitigation measures. The parcel contains one NWI-mapped wetland. According to FEMA data, a small portion of the southern half of the proposed site contains a 100-year floodplain. However, no regulated floodways exist on site. No major watercourses are located within the parcel, although overland flow is assumed to drain to unnamed tributaries Coon Creek. No fatal flaws have been identified. Based on publicly available information, no previously recorded archaeological sites, cemeteries, architectural resources, or historic districts are located within the immediate vicinity of the site. Five federally listed species (two endangered, one threatened, one experimental, and one proposed threatened) have known ranges in the area, but no critical habitat has been identified within the vicinity of the site. If suitable habitat is identified or regulations change, agency coordination and species-specific surveys will be conducted. The project intends to follow recommended tree-clearing windows and seasonal restrictions to minimize impacts to federally listed bats, migratory birds, and other protected species. Standard construction BMPs, along with avoidance and minimization measures, will be implemented to prevent impacts to natural resources to the maximum extent practicable. There are no environmental concerns that cannot be addressed through standard agency coordination and mitigation. No major federal action triggering NEPA is anticipated. See Attachment 08 - Permitting Plan.		

Outreach plan	The proposer is committed to informing the public about the project to the greatest extent practicable while working with all interested stakeholders including landowners through a robust public outreach program to address and respond to community concerns. A well-designed public outreach program can have numerous benefits, including fostering cooperative relationships with landowners and other stakeholders, expediting the regulatory permitting process, and assisting with project development. In general, the purpose of the community outreach plan is to gain community support for the project. In the affected communities, the proposer's public outreach plan will educate the public and relevant stakeholders on specific project details to enable timely regulatory approvals and construction activities. Elements of the public outreach plan will include the following: 1) Identify potential issues at an early stage by engagement with key community stakeholders at the outset; 2) Broaden the community engagement process to identify potential and relevant community benefits that can facilitate community support for the proposed project; 3) Develop a broad base of community support for the proposed project before the regulatory agencies; and 4) Develop a comprehensive administrative record documenting the community outreach process that can be presented to the regulatory agency or, in the event of a legal challenge, to the appropriate court. The outreach plan proposes to dedicate considerable time and resources in engaging the community, and specifically the affected community during the planning process to identify highly sensitive areas in order to develop a project that has the least amount of cultural, environmental, and social impacts. The plans will reflect avoidance of impacts rather than mitigation. However, in some cases, if avoidance is not possible, then the proposer will involve landowners and other stakeholders in providing appropriate and practical mitigation measures. Public outreach activities by the proposer will begin following project award.
Land acquisition plan	See attachment 9.
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information

Overheads & miscellaneous costs	Proprietary & Confidential Information		
Contingency	Proprietary & Confidential Information		
Total component cost	\$209,950,801.00		
Component cost (in-service year)	\$238,540,805.00		
Greenfield Substation Component			
Component title	185) Polk 765 kV Substation		
Project description	Proprietary & Confidential Information		
Substation name	Polk 765		
Substation description	Construct the new Polk 765 kV Substation on the Wilton Center to Dumont 765kV line.		
Nominal voltage	AC		
Nominal voltage	765		
Transformer Information			
	Name		Capacity (MVA)
Transformer	NA		NA
	High Side	Low Side	Tertiary
Voltage (kV)	765	NA	NA
Major equipment description	AC Air Insulated Substation (AIS): New proposed 765kV substation. New 765kV Breaker and a half (BAAH) substation including ten (10) 765kV-5000A-63kAIC breakers (number includes breakers for the shunt reactor banks) with a future 11th breaker to be added later for final buildout. Two (2) 150MVAR Line Reactor banks outgoing to Sheldon East and Dumont 765kV substations. An Additional line without a line reactor bank going to Wilton 765kV substation. This configuration allows for three (3) total BAAH bays at the substation when fully built out.		
	Normal ratings		Emergency ratings

Summer (MVA)	6877.000000	6942.000000
Winter (MVA)	8011.000000	8245.000000
Environmental assessment	Environmental constraints were evaluated within the proposed substation site and are considered manageable through avoidance, minimization, and mitigation measures. The parcel contains four NWI-mapped wetlands. According to FEMA data, a small portion of the proposed substation layout may contain a 100-year floodplain. However, no regulated floodways were identified. No major watercourses are located within the parcel, although overland flow is assumed to drain to unnamed tributaries Pike Creek. No fatal flaws have been identified. Based on publicly available information, no previously recorded archaeological sites, cemeteries, or historic districts are located within the immediate vicinity of the site. However, one undetermined historic property was identified by the SHPO, in the vicinity of the site. Two federally listed species (one endangered and one proposed threatened) have known ranges in the area, but no critical habitat has been identified within the vicinity of the site. If suitable habitat is identified or regulations change, agency coordination and species-specific surveys will be conducted. The project intends to follow recommended tree-clearing windows and seasonal restrictions to minimize impacts to federally listed bats, migratory birds, and other protected species. Standard construction BMPs, along with avoidance and minimization measures, will be implemented to prevent impacts to natural resources to the maximum extent practicable. There are no environmental concerns that cannot be addressed through standard agency coordination and mitigation. No major federal action triggering NEPA is anticipated. See Attachment 08 - Permitting Plan.	

Outreach plan	The proposer is committed to informing the public about the project to the greatest extent practicable while working with all interested stakeholders including landowners through a robust public outreach program to address and respond to community concerns. A well-designed public outreach program can have numerous benefits, including fostering cooperative relationships with landowners and other stakeholders, expediting the regulatory permitting process, and assisting with project development. In general, the purpose of the community outreach plan is to gain community support for the project. In the affected communities, the proposer's public outreach plan will educate the public and relevant stakeholders on specific project details to enable timely regulatory approvals and construction activities. Elements of the public outreach plan will include the following: 1) Identify potential issues at an early stage by engagement with key community stakeholders at the outset; 2) Broaden the community engagement process to identify potential and relevant community benefits that can facilitate community support for the proposed project; 3) Develop a broad base of community support for the proposed project before the regulatory agencies; and 4) Develop a comprehensive administrative record documenting the community outreach process that can be presented to the regulatory agency or, in the event of a legal challenge, to the appropriate court. The outreach plan proposes to dedicate considerable time and resources in engaging the community, and specifically the affected community during the planning process to identify highly sensitive areas in order to develop a project that has the least amount of cultural, environmental, and social impacts. The plans will reflect avoidance of impacts rather than mitigation. However, in some cases, if avoidance is not possible, then the proposer will involve landowners and other stakeholders in providing appropriate and practical mitigation measures. Public outreach activities by the proposer will begin following project award.
Land acquisition plan	See attachment 9.
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information

Overheads & miscellaneous costs	Proprietary & Confidential Information	
Contingency	Proprietary & Confidential Information	
Total component cost	\$241,277,361.00	
Component cost (in-service year)	\$274,880,623.00	
Transmission Line Upgrade Component		
Component title	110) St John - Crete 345 kV loop-in	
Project description	Proprietary & Confidential Information	
Impacted transmission line	St John to Crete Energy Park 345 kV	
Point A	St John	
Point B	Crete	
Point C	NA	
Terrain description	The proposed transmission line connections are located primarily within the existing St. John-Crete 345 kV transmission corridor and immediately adjacent to the proposed Polk 345 kV Substation. Terrain is generally consistent with the existing transmission corridor and substation area	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Hardware plan description	Matches existing facilities	
Tower line characteristics	Matches existing facilities	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000

	Normal ratings	Emergency ratings
Summer (MVA)	1872.000000	2162.000000
Winter (MVA)	2193.000000	2390.000000
Conductor size and type	Matches existing facilities	
Shield wire size and type	Matches existing facilities	
Rebuild line length	0.12	
Rebuild portion description	Cuts into existing St John to Crete 345 kV Transmission line and routes directly into and out of the new Polk 345 kV Substation; Creates a new St. John to Polk 345 kV circuit connection and a new Crete to Polk 345 kV circuit connection.	
Right of way	150-foot ROW will be required for the new line length	
Construction responsibility	Proprietary & Confidential Information	
Benefits/Comments	Proprietary & Confidential Information	
Component Cost Details - In Current Year \$		
Engineering & design	Proprietary & Confidential Information	
Permitting / routing / siting	Proprietary & Confidential Information	
ROW / land acquisition	Proprietary & Confidential Information	
Materials & equipment	Proprietary & Confidential Information	
Construction & commissioning	Proprietary & Confidential Information	
Construction management	Proprietary & Confidential Information	
Overheads & miscellaneous costs	Proprietary & Confidential Information	
Contingency	Proprietary & Confidential Information	
Total component cost	\$3,325,000.00	
Component cost (in-service year)	\$3,766,571.00	

Transmission Line Upgrade Component

Component title	111) University Park – Olive 345 kV loop-in	
Project description	Proprietary & Confidential Information	
Impacted transmission line	University Park to Olive 345 kV	
Point A	University Park	
Point B	Olive	
Point C	NA	
Terrain description	The proposed transmission line connections are located primarily within the existing University-Olive 345 kV transmission corridor and immediately adjacent to the proposed Polk 345 kV Substation. Terrain is generally consistent with the existing transmission corridor and substation area.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Hardware plan description	Matches existing facilities	
Tower line characteristics	Matches existing facilities	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1825.000000	2004.000000
Winter (MVA)	1976.000000	2142.000000
Conductor size and type	Matches existing facilities	

Shield wire size and type	Matches existing facilities
Rebuild line length	0.06
Rebuild portion description	Cuts into existing University Park to Olive 345 kV Transmission line and routes directly into and out of the new Polk 345 kV Substation; Creates a new University Park to Polk 345 kV circuit connection and a new Olive to Polk 345 kV circuit connection.
Right of way	150-foot ROW will be required for the new line length
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$3,325,000.00
Component cost (in-service year)	\$3,766,571.00
Transmission Line Upgrade Component	
Component title	113) Wilton - Dumont 765 kV loop-in
Project description	Proprietary & Confidential Information
Impacted transmission line	Dumont to Wilton CTR 765 kV

Point A	Wilton	
Point B	Dumont	
Point C	NA	
Terrain description	The proposed transmission line connections are located primarily within the existing Wilton-Dumont 765 kV transmission corridor and immediately adjacent to the proposed Polk 765 kV Substation. Terrain is generally consistent with the existing transmission corridor and substation area.	
Existing Line Physical Characteristics		
Operating voltage	765	
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Hardware plan description	Matches existing facilities	
Tower line characteristics	Matches existing facilities	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	765.000000	765.000000
	Normal ratings	Emergency ratings
Summer (MVA)	4142.000000	4460.000000
Winter (MVA)	4909.000000	5187.000000
Conductor size and type	Matches existing facilities	
Shield wire size and type	Matches existing facilities	
Rebuild line length	0.81	
Rebuild portion description	Cuts into existing Wilton to Dumont 765 kV Transmission line and routes directly into and out of the new Polk 765 kV Substation; Creates a new Wilton to Polk 765 kV circuit connection and a new Dumont to Polk 765 kV circuit connection.	

Right of way	150-foot ROW will be required for the new line length
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$4,500,000.00
Component cost (in-service year)	\$5,097,614.00
Transmission Line Upgrade Component	
Component title	114) Davis Creek - Burman 345 kV loop-in
Project description	Proprietary & Confidential Information
Impacted transmission line	Davis Creek to Burman 345 kV
Point A	Davis Creek
Point B	Burman
Point C	NA

Terrain description	The proposed transmission line connections are located primarily within the existing Davis Creek-Burman 345 kV transmission corridor and immediately adjacent to the proposed Polk 345 kV Substation. Terrain is generally consistent with the existing transmission corridor and substation area.	
Existing Line Physical Characteristics		
Operating voltage	345	
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Hardware plan description	Matches existing facilities	
Tower line characteristics	Matches existing facilities	
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	1701.000000
Conductor size and type	Matches existing facilities	
Shield wire size and type	Matches existing facilities	
Rebuild line length	0.13	
Rebuild portion description	Cuts into existing Davis Creek to Burman 345 kV Transmission line and routes directly into and out of the new Polk 345 kV Substation; Creates a new Davis Creek to Polk 345 kV circuit connection and a new Burman to Polk 345 kV circuit connection.	
Right of way	150-foot ROW will be required for the new line length	
Construction responsibility	Proprietary & Confidential Information	
Benefits/Comments	Proprietary & Confidential Information	

Component Cost Details - In Current Year \$

Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$3,325,000.00
Component cost (in-service year)	\$3,766,571.00

Transmission Line Upgrade Component

Component title	115) Davis Creek - Bloom 345 kV loop-in
Project description	Proprietary & Confidential Information
Impacted transmission line	Davis Creek to Bloom 345 kV
Point A	Davis Creek
Point B	Bloom
Point C	NA
Terrain description	The proposed transmission line connections are located primarily within the existing Davis Creek-Bloom 345 kV transmission corridor and immediately adjacent to the proposed Polk 345 kV Substation. Terrain is generally consistent with the existing transmission corridor and substation area.

Existing Line Physical Characteristics

Operating voltage	345	
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Hardware plan description	Matches existing facilities	
Tower line characteristics	Matches existing facilities	
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	Matches existing facilities	
Shield wire size and type	Matches existing facilities	
Rebuild line length	0.13	
Rebuild portion description	Cuts into existing Davis Creek to Bloom 345 kV Transmission line and routes directly into and out of the new Polk 345 kV Substation; Creates a new Davis Creek to Polk 345 kV circuit connection and a new Bloom to Polk 345 kV circuit connection.	
Right of way	150-foot ROW will be required for the new line length	
Construction responsibility	Proprietary & Confidential Information	
Benefits/Comments	Proprietary & Confidential Information	
Component Cost Details - In Current Year \$		
Engineering & design	Proprietary & Confidential Information	
Permitting / routing / siting	Proprietary & Confidential Information	

ROW / land acquisition	Proprietary & Confidential Information		
Materials & equipment	Proprietary & Confidential Information		
Construction & commissioning	Proprietary & Confidential Information		
Construction management	Proprietary & Confidential Information		
Overheads & miscellaneous costs	Proprietary & Confidential Information		
Contingency	Proprietary & Confidential Information		
Total component cost	\$3,325,000.00		
Component cost (in-service year)	\$3,766,571.00		
Substation Upgrade Component			
Component title	117) Waukegan 345 kV Substation Upgrade		
Project description	Proprietary & Confidential Information		
Substation name	Waukegan		
Substation zone	COMED		
Substation upgrade scope	Add four (4) 345kV breakers into existing switchyard to create two (2) additional line terminals.		
Transformer Information			
	Name		Capacity (MVA)
Transformer	NA		NA
	High Side	Low Side	Tertiary
Voltage (kV)	NA	NA	NA
New equipment description	Add (4) 345kV, 5000A, 63kAIC breakers and (2) 345kV lines.		
Substation assumptions	Assumes required equipment upgrades occur in existing footprint.		

Real-estate description	Proposed upgrade does not require additional real estate acquisition
Construction responsibility	Proprietary & Confidential Information
Benefits/Comments	Proprietary & Confidential Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary & Confidential Information
Permitting / routing / siting	Proprietary & Confidential Information
ROW / land acquisition	Proprietary & Confidential Information
Materials & equipment	Proprietary & Confidential Information
Construction & commissioning	Proprietary & Confidential Information
Construction management	Proprietary & Confidential Information
Overheads & miscellaneous costs	Proprietary & Confidential Information
Contingency	Proprietary & Confidential Information
Total component cost	\$30,439,940.00
Component cost (in-service year)	\$30,439,940.00
Substation Upgrade Component	
Component title	192) East Frankfort 345 kV Substation Upgrade
Project description	Proprietary & Confidential Information
Substation name	East Frankfort
Substation zone	COMED
Substation upgrade scope	Upgrade the equipment terminating Goodings - East Frankfort 345 kV line.
Transformer Information	

	Name	Capacity (MVA)	
Transformer	NA	NA	
	High Side	Low Side	Tertiary
Voltage (kV)	345	NA	NA
New equipment description	Replace terminal equipment		
Substation assumptions	Assumes required equipment upgrades occur in existing footprint. Spare position available in existing switchyard.		
Real-estate description	Proposed upgrade does not require additional real estate acquisition		
Construction responsibility	Proprietary & Confidential Information		
Benefits/Comments	Proprietary & Confidential Information		
Component Cost Details - In Current Year \$			
Engineering & design	Proprietary & Confidential Information		
Permitting / routing / siting	Proprietary & Confidential Information		
ROW / land acquisition	Proprietary & Confidential Information		
Materials & equipment	Proprietary & Confidential Information		
Construction & commissioning	Proprietary & Confidential Information		
Construction management	Proprietary & Confidential Information		
Overheads & miscellaneous costs	Proprietary & Confidential Information		
Contingency	Proprietary & Confidential Information		
Total component cost	\$320,000.00		
Component cost (in-service year)	\$320,000.00		

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

Proprietary & Confidential Information

Financial Information

Capital spend start date 02/2027

Construction start date 04/2032

Project Duration (In Months) 88

Cost Containment Commitment

Cost cap (in current year) Proprietary & Confidential Information

Cost cap (in-service year) Proprietary & Confidential Information

Components covered by cost containment

1. 56) State Line – Waukegan 525 kV - PROPOSER
2. 118) Waukegan 345kV – Waukegan 525 kV Converter Station Tie-in - PROPOSER
3. 119) Polk – State Line 525 kV - PROPOSER
4. 124) Sheldon East- Polk 765 kV - PROPOSER
5. 156) Polk - State Line 525 kV - PROPOSER
6. 48) Polk 525 kV Converter Station - PROPOSER
7. 54) Waukegan 525 kV Converter Station - PROPOSER

8. 182) Sheldon East 765 kV Substation - PROPOSER

Cost elements covered by cost containment

Engineering & design	Yes
Permitting / routing / siting	Yes
ROW / land acquisition	Yes
Materials & equipment	Yes
Construction & commissioning	Yes
Construction management	Yes
Overheads & miscellaneous costs	Yes
Taxes	No
AFUDC	No
Escalation	No
Additional Information	Proprietary & Confidential Information
Is the proposer offering a binding cap on ROE?	Yes
Would this ROE cap apply to the determination of AFUDC?	No
Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable?	No
Is the proposer offering a Debt to Equity Ratio cap?	Proprietary & Confidential Information
Additional cost containment measures not covered above	Proprietary & Confidential Information

Additional Comments

As per confirmation by PJM, the Project Capital Expenditures Section will be automatically redacted by PJM.