Goodenow-Lemon Lake 345kV Greenfield Line and Stations (Robust)

General Information

Proposing entity name	Company confidential and proprietary information.
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Company confidential and proprietary information.
Company proposal ID	Company confidential and proprietary information.
PJM Proposal ID	597
Project title	Goodenow-Lemon Lake 345kV Greenfield Line and Stations (Robust)
Project description	Designated Entity Statement of Intent: The Proposing Entity seeks consideration as the Designated Entity for the Project. If selected, the Proposing Entity reserves the right to assign the Project to any of its affiliate(s) if circumstances deem appropriate. Any future assignment to affiliate(s) would be with PJM-established entities. The Proposing Entity does not foresee any potential assignment materially impacting the Project's constructability or schedule. Tap Bloom–Davis Creek 345kV line (ComEd) and tap Burnham-Davis Creek 345kV line (ComEd) and construct a greenfield (Goodenow 345kV) substation as (2) three-breaker ring buses with a tie, in Illinois. Tap St. John-Rollin Schahfer 345kV line (NIPSCO) and construct a greenfield (Lemon Lake 345kV) substation as a three-breaker ring in Indiana. Construct a 13.90-mile low impedance double-circuit line (wired in a 6-wire single-circuit configuration) 345kV greenfield line connecting Goodenow-Lemon Lake 345kV. Equipment on the through path of Bloom-Davis Creek 345kV, Burnham-Davis Creek 345kV, and St. John-Schahfer 345kV will meet or exceed existing line ratings. Tie-line Impact Info: The proposal topology connects equipment owned by more than one Transmission Owner, in this case ComEd (PJM) and NIPSCO (MISO). Greenfield Goodenow 345kV station taps the Bloom-Davis Creek 345kV ComEd and Burnham-Davis Creek 345kV ComEd transmission lines and the greenfield Lemon Lake 345kV station taps the St. John-Schahfer 345kV NIPSCO transmission line with a new greenfield line connecting the two new stations. Interregional Project Info: The proposed project is not a solution to a cross-border issue project between PJM and MISO. The proposed project only addresses an issue solely identified by PJM. The proposed connection with NIPSCO will be coordinated directly with NIPSCO. Please note: The impedance, ratings, and results provided in this proposal assume that NEET supplemental projects (s2509 & s2631), ComEd East Frankfort-Crete/Crete-St. John rebuild (proposal #977 in 2021 RTEP window #2) and an AEP submitted Dumont-Stillwell Sag Study (proposal #2022-MDW1-165) were already applied in the case first. These assumptions are also contained in the modeling files and ratings below as this project taps lines included in those previous submissions, therefore changing the impedance.

Email	Company confidential and proprietary information.
Project in-service date	01/2027
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Company confidential and proprietary information.

Project Components

1. Lemon Lake - IN Border 345kV
2. Goodenow 345 kV Station
3. Lemon Lake 345 kV Station
4. Bloom Station Breaker
5. Bloom-Goodenow, and Goodenow-Davis Creek 345kV cut ins
6. St. John-Lemon Lake and Lemon Lake-Rollin Schahfer 345kV cut ins
7. Goodenow-IL Border
8. Burnham-Goodenow, and Goodenow-Davis Creek 345kV cut ins

Greenfield Transmission Line Component

Component title	Lemon Lake - IN Border 345kV
Project description	Company confidential and proprietary information.
Point A	Goodenow 345kV
Point B	Lemon Lake 345kV
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	2433.000000	2490.000000

Winter (MVA)	2696.000000	2983.000000
Conductor size and type	2 – bundled, 954 kcmil 54/7 Stranded “Cardinal” ACSR	
Nominal voltage	AC	
Nominal voltage	345	
Line construction type	Overhead	
General route description	The Proposing Entity reviewed a range of siting alternatives for the Proposed Solution evaluating each with respect to potential impacts to the surrounding communities and the environment, constructability, operations and maintenance considerations, and cost effectiveness. Solutions were initially considered within a broad study area, as the solution needed to tap the Bloom-Davis Creek 345kV line (ComEd) and the St. John-Rollin Schahfer 345kV line (NIPSCO). This area was further refined based on an assessment of the existing infrastructure and the availability of property and/or suitable space. Potential routes that were evaluated and determined to be unsuitable due to length, circuitousness, constructability issues, major permitting concerns, or expected high costs, were dismissed and not investigated further. Starting at the proposed Goodenow Substation in Illinois (location shown in attachments), the Conceptual Route runs nearly straight east to the proposed Lemon Lake Substation located in Indiana (location shown in attachments). The Conceptual Route is approximately 13.90 miles in length and is located in mainly agricultural areas with rural residential development. The conceptual route will cross the West Creek, Norfolk Southern Railroad, CSX Railroad, U.S. Route 41, and the Cedar Creek. The Conceptual Route also crosses one-transmission line, the existing Dumont-Wilton Center 765kV Line owned by Indiana Michigan Power Company. Multiple local road crossings will be also required. Many of the identified constraints in the area were avoided or minimized by paralleling the previously mentioned Dumont-Wilton Center 765kV transmission line. There are no identified habitable structures located within the proposed ROW and only a few barns/outbuildings may be impacted. Two private airstrips are located in the vicinity of the conceptual route. While there is no specific FAA requirement for private airstrips, the Proposing Entity believes it can mitigate any potential concerns since the proposed structures will be shorter than the existing structures being paralleled. The Conceptual Route is the most direct route between the two proposed stations, has the least overall impact to land use and environmental resources, and parallels the existing Dumont-Wilton Center 765kV Line for nearly the entire route. Based on the constraints identified within the Project Area, the Conceptual Route represents a logical and constructible route.	
Terrain description	The Project terrain is flat agricultural lands with a small portion of residential lands (location shown in attachments).	

Right-of-way width by segment	The proposed Goodenow-Lemon Lake 345kV Line will require the acquisition of 13.90 miles of transmission line with 150’ wide ROW. The IL portion is 2.71 miles & 10.87 miles in IN. The project will begin at the Proposing Entity’s proposed Lemon Lake Station in Indiana and runs in a westerly direction to the Proposing Entity’s Goodenow Station in Illinois. The tabletop analysis found there were no public lands required for this Project. The private land use is predominantly agricultural and a small portion of residential that the tabletop analysis found and was verified through the County Clerk’s Offices which classified/assessed the land use as agricultural and residential. The private land requirements include acquiring 150’ (75’/75’) wide ROW where the land use is predominantly agricultural & flat lands. The Proposing Entity will use proven land acquisition processes and approaches that have been successfully employed on projects over the years. The Proposing Entity’s initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and or mortgages. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity will negotiate with landowners based on the fair market value of the property needed for the ROW easements. Market data studies and appraisals, both general and for specific tracts, will be conducted to establish values and a basis for acquisition negotiations. The Proposing Entity will also pay for any crop damage and/or physical damage to property resulting from the construction and/or maintenance of the transmission line. Good Faith negotiations must be made with all landowners. Negotiations will be done in an ethical, non-confrontational and non-threatening manner with the landowners. The long-term relationship with the landowners is paramount and will be kept in mind in all negotiations and honesty, integrity and professionalism will be displayed at all times. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary fee purchase agreement between the company and the property owner cannot be reached, and other viable alternatives do not exist, the company may exercise the right of eminent domain to secure required property through condemnation proceedings.
Electrical transmission infrastructure crossings	The Project will involve one (1) electrical transmission infrastructure crossing under the existing Dumont-Wilton Center 765kV Line owned by Indiana Michigan Power Company. Two custom horizontal deadend structures will be used for crossing under the existing 765kV line.
Civil infrastructure/major waterway facility crossing plan	The Project will not involve any civil infrastructure/major waterway facility crossings.

Environmental impacts	Land use along the proposed Lemon Lake-Goodenow 345kV corridor is predominantly undeveloped or agricultural and largely parallels an existing 765kV transmission line. The proposed line intersects seven FEMA-mapped floodplains and/or floodways and National Wetlands Inventory-mapped wetlands are located within the central and eastern portion of the route. Named and unnamed streams also transect the route in various locations. Based on existing aerial photography, the proposed route likely has unmapped wetland or drainage features. To ensure appropriate due diligence for environmental protection, studies will be completed for the right-of-way and proposed access routes including a wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the line route or structure locations will be adjusted to completely avoid or minimize impacts to sensitive environmental features. Examples of minimizing impacts to regulated waters or floodplains along the proposed route include installing timber mats within regulated wetlands or floodplains and temporarily bridging across streams. All areas designated for temporary impact will be restored to pre-existing condition following construction. It is anticipated unavoidable impacts to regulated wetlands or streams would be covered under a Nationwide Permit with appropriate offsetting mitigation as directed by the US Army Corps of Engineers, Indiana Department of Environmental Management and/or Illinois EPA. Construction will be covered under a general construction storm water permit from the Indiana Department of Environmental Management and Illinois EPA and appropriate best management practices will be installed prior to construction to manage storm water runoff. The proposed solution and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule or cost.
Tower characteristics	The new 345kV line will require 79 galvanized steel self-supporting structures. The predominate structure type (68 structures) will be tangent double circuit BOLD lattice towers. Additionally, the line will also require 9 vertically configured lattice tower deadend structures. Finally, two custom horizontal deadend structures will be used for crossing under the existing 765kV line. The BOLD configured tangent towers will be constructed on concrete pier foundations using bent stubs and secondary cages. The deadend poles will be constructed on concrete pier foundations utilizing full-length anchor bolt cages.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year $	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.

Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	$24,441,586.00
Component cost (in-service year)	$26,707,981.00

Greenfield Substation Component

Component title	Goodenow 345 kV Station
Project description	Company confidential and proprietary information.
Substation name	Goodenow
Substation description	Construct a greenfield switching station to install (2) 3-breaker ring buses with a tie that will interconnect the following 345KV lines = LEMON LAKE, BLOOM, BURNHAM, and DAVIS CREEK so the lines involved are electrically tied. This scope is also assuming that the land adjacent to the location at which these lines converge is available for purchase.
Nominal voltage	AC
Nominal voltage	345

Transformer Information

None

Major equipment description: Install 6 – 345kV, 4000A, 63kA Circuit Breakers along with their corresponding 4000A double-end break disconnect switches.

	Normal ratings	**Emergency ratings**
Summer (MVA)	1409.000000	1959.000000
Winter (MVA)	1781.000000	2200.000000

Environmental assessment	Land use at the proposed parcel for Goodenow Station is currently undeveloped and predominantly agricultural. Pike Creek runs through the area and there are mapped riparian and FEMA floodplain areas along Pike Creek. This Illinois County has listed threatened and endangered species and based on existing aerial photography, the potential parcel may contain unmapped wetland or drainage features. To ensure appropriate due diligence for environmental protection, studies will be completed for the development parcel including an environmental site assessment(s), wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the station will be sited on a property and designed to avoid impacts to sensitive features. For example, Pike Creek and its adjacent riparian and floodplain areas will be avoided. It is not anticipated impacts to regulated wetlands or streams will be necessary as part of this solution. Major regulatory approvals for the proposed solution are not anticipated to exceed any general performance standard or require any variance to be readily permitted. Construction will be covered under a general construction storm water permit from the Illinois EPA and appropriate best management practices will be installed prior to construction to manage storm water runoff. Additionally, appropriate post-construction storm water controls will be implemented as necessitated by the design. The components of the proposed solution and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.
Outreach plan	Public outreach is a critical component to the Proposing Entity’s siting process, so efforts will include properly informing the public; federal, state and local agencies; local governments; and other key stakeholders on the need for, and benefits of, this Project. The Proposing Entity’s approach to public outreach is to be candid and transparent at all times, and to offer a variety of tools and means for impacted parties to engage with our staff. Public outreach also will involve collecting information about landowner properties, which will be considered during the final siting process. Proactive and interactive communication strategies and tools will assist siting efforts by soliciting comments and concerns from persons and entities affected by the Project. These strategies and tools also will assist in garnering support for the line siting process, as well as promote clear communication to landowners during land/ROW acquisition. The Proposing Entity will host two (2) public open house meetings in Indiana and Illinois respectively to engage with the community and collect feedback on the Project. Each landowner whose property lies within 1,000 feet of the proposed stations and transmission line will be invited to attend an open house and will be given the opportunity to review detailed Project area maps and provide comment as it relates to the Project and their property. These comments are a key component on refining the project. The Proposing Entity will also advertise in local newspapers so that community members may participate in the open house. Also, the Proposing Entity will host an interactive website so the public can obtain the same information that’s provided at the open house, submit their comments, and receive regular and timely Project updates. Open houses will consist of multiple informational stations set as a workshop-style event, designed to educate the public on different aspects of the Project, including: purpose, need, engineering, structure type, and Land/ROW acquisition processes. While the Proposing Entity is confident in the route selected, it is important before beginning the Project to obtain public vetting before initiating land/ROW acquisition. This process can identify unique items such as wells, geological formations, and other features that must be considered in selecting the route to acquire land/ROW upon.

Land acquisition plan	The Proposing Entity will use proven land acquisition processes and approaches that have been successfully employed on projects over the years. The Proposing Entity's initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and or mortgages. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity will negotiate with property owners based on the fair market value of the needed for the station site and access road (both fee purchases). Market data studies and appraisals, both general and for specific tracts, will be conducted to establish values and a basis for acquisition negotiations. Good Faith negotiations must be made with all landowners. Negotiations will be done in an ethical, non-confrontational and non-threatening manner with the landowners. The long-term relationship with the landowners is paramount and will be kept in mind in all negotiations, and honesty, integrity and professionalism will be displayed at all times. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary fee purchase agreement between the company and the property owner cannot be reached, and other viable alternatives do not exist, the company may exercise the right of eminent domain to secure required property through condemnation proceedings.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.

Component Cost Details - In Current Year $

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	$59,080,000.00
Component cost (in-service year)	$68,489,912.00

Greenfield Substation Component

Component title	Lemon Lake 345 kV Station
Project description	Company confidential and proprietary information.
Substation name	Lemon Lake
Substation description	Construct a greenfield switching station to install a 3-breaker ring bus that will interconnect the following 345KV lines = R.M. SCHAFER, ST. JOHN, and GOODENOW. This scope is also assuming that the land adjacent to the location at which these lines converge is available for purchase and it will require minimum grading on a parcel of approximately 500’ x 800’ in size. On this parcel we will require a fenced area of approximately 315’ x 505’. Access to this site will require a drive access road approx. 416’ in length from the nearest accessible road to the east of this proposed location.
Nominal voltage	AC
Nominal voltage	345

Transformer Information

None

Major equipment description: Install 3 – 345kV, 4000A, 63kA Circuit Breakers along with their corresponding 4000A double-end break disconnect switches.

	Normal ratings	**Emergency ratings**
Summer (MVA)	1409.000000	1959.000000
Winter (MVA)	1781.000000	2200.000000

Environmental assessment	Land use at the proposed parcel for Lemon Lake Station is currently undeveloped and predominantly agricultural. National Wetlands Inventory-mapped wetlands are located on the southeastern portion of the parcel. This County in Indiana has listed threatened and endangered species and based on existing aerial photography, the parcel may contain unmapped wetland or drainage features. To ensure appropriate due diligence for environmental protection, studies will be completed for the development parcel including an environmental site assessment(s), wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the station will be sited on the property and designed to avoid impacts to sensitive features. It is not anticipated that regulated wetlands or streams will be necessary as part of this solution. Major regulatory approvals for the proposed solution would not be anticipated to exceed any general performance standard or require any variance to be readily permitted. Construction will be covered under a general construction storm water permit from the Indiana Department of Environmental Management and appropriate best management practices will be installed prior to construction to manage storm water runoff. Additionally, appropriate post-construction storm water controls will be implemented as necessitated by the design. The components of the proposed solution and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.
Outreach plan	Public outreach is a critical component to the Proposing Entity’s siting process, so efforts will include properly informing the public; federal, state and local agencies; local governments; and other key stakeholders on the need for, and benefits of, this Project. The Proposing Entity’s approach to public outreach is to be candid and transparent at all times, and to offer a variety of tools and means for impacted parties to engage with our staff. Public outreach also will involve collecting information about landowner properties, which will be considered during the final siting process. Proactive and interactive communication strategies and tools will assist siting efforts by soliciting comments and concerns from persons and entities affected by the Project. These strategies and tools also will assist in garnering support for the line siting process, as well as promote clear communication to landowners during land/ROW acquisition. The Proposing Entity will host two (2) public open house meetings in Indiana and Illinois respectively to engage with the community and collect feedback on the Project. Each landowner whose property lies within 1,000 feet of the proposed stations and transmission line will be invited to attend an open house and will be given the opportunity to review detailed Project area maps and provide comment as it relates to the Project and their property. These comments are a key component on refining the project. The Proposing Entity will also advertise in local newspapers so that community members may participate in the open house. Also, the Proposing Entity will host an interactive website so the public can obtain the same information that is provided at the open house, submit their comments, and receive regular and timely Project updates. Open houses will consist of multiple informational stations set as a workshop-style event, designed to educate the public on different aspects of the Project, including: purpose, need, engineering, structure type, and Land/ROW acquisition processes. While the Proposing Entity is confident in the route selected, it is important before beginning the Project to obtain public vetting before initiating land/ROW acquisition. This process can identify unique items such as wells, geological formations, and other features that must be considered in selecting the route to acquire land/ROW upon.

Land acquisition plan	The proposed Lemon Lake Station will be sited per the attachments. The tabletop analysis found there were no public lands required for this Project. The private land use is agricultural as tabletop analysis found and was verified through the County Clerk's Office that classified/assessed the land use as agricultural. The private land requirements include approximately 8.34 acres for the new station site/detention pond/grading and 0.28 acres of access road to the new station site. The total Project acreage is 8.62 acres to be purchased in fee. Station site and access road placement were chosen to minimize impacting farming operations. The Proposing Entity will use proven land acquisition processes and approaches that have been successfully employed on projects over the years. The Proposing Entity's initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and or mortgages. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity will negotiate with property owners based on the fair market value of the property needed for the station site and access road (both fee purchases). Market data studies and appraisals, both general and for specific tracts, will be conducted to establish values and a basis for acquisition negotiations. Good Faith negotiations must be made with all landowners. Negotiations will be done in an ethical, non-confrontational and non-threatening manner with the landowners. The long-term relationship with the landowners is paramount and will be kept in mind in all negotiations, and honesty, integrity and professionalism will be displayed at all times. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary fee purchase agreement between the company and the property owner cannot be reached, and other viable alternatives do not exist, the company may exercise the right of eminent domain to secure required property through condemnation proceedings.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year $	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.

Contingency	Company confidential and proprietary information.
Total component cost	$11,283,885.00
Component cost (in-service year)	$12,330,206.00

Substation Upgrade Component

Component title	Bloom Station Breaker
Project description	Company confidential and proprietary information.
Substation name	Bloom Station
Substation zone	ComEd
Substation upgrade scope	Add a breaker to Bloom Station including necessary foundations, control cables, breaker jumpers, surge arrestors, and control relays.

Transformer Information

None

New equipment description	• Breaker • Foundations • Control cables • Breaker Jumpers • Surge arrestors
Substation assumptions	The Proposing Entity is assuming that there is room (OR “there is an open position available”) for an additional breaker at the station. Another assumption is that there will be no need to add line side CCVTs and wave traps for line protection work.
Real-estate description	There is no anticipation of expanding the current foot print of Bloom Station. Therefore no additional real estate will be required.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.

Component Cost Details - In Current Year $

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.

Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	$575,000.00
Component cost (in-service year)	$628,318.00

Greenfield Transmission Line Component

Component title	Bloom-Goodenow, and Goodenow-Davis Creek 345kV cut ins	
Project description	Company confidential and proprietary information.	
Point A	Bloom (ComEd) 345kV	
Point B	Goodenow 345kV (tap station)	
Point C	Davis Creek (ComEd) 345kV	
	Normal ratings	**Emergency ratings**
Summer (MVA)	1334.000000	1590.000000
Winter (MVA)	1528.000000	1781.000000
Conductor size and type	two-bundle 954 (54/7) ACSR Cardinal	
Nominal voltage	AC	
Nominal voltage	345	
Line construction type	Overhead	
General route description	The proposed route is the most direct route between the proposed station and the existing transmission line. No alternatives were developed due to the route’s direct, short length.	

Terrain description	The Project terrain is flat agricultural lands for the two (2) 345kV lines to loop in and out of the proposed Goodenow Station.
Right-of-way width by segment	The Project will be sited per the attachments. The tabletop analysis found there were no public lands required for this Project. The private land use is agricultural as tabletop analysis found and was verified through the County Clerk's Office which classified/assessed the land use as agricultural. The private land requirements include four (4) new 345kV lines to loop in & out of the proposed Goodenow Station off of the existing Davis Creek-Bloom 345kV line and existing Davis Creek-Burnham 345kV line. Detailed engineering analysis will determine path and ROW requirements after further analysis. The Proposing Entity will use proven land acquisition processes and approaches that have been successfully employed on projects over the years. The Proposing Entity's initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and or mortgages. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity will negotiate with landowners based on the fair market value of the property needed for the ROW easements. Market data studies and appraisals, both general and for specific tracts, will be conducted to establish values and a basis for acquisition negotiations. The Proposing Entity will also pay for any crop damage and/or physical damage to property resulting from the construction and/or maintenance of the transmission line. Good Faith negotiations must be made with all landowners. Negotiations will be done in an ethical, non-confrontational and non-threatening manner with the landowners. The long-term relationship with the landowners is paramount and will be kept in mind in all negotiations and honesty, integrity and professionalism will be displayed at all times. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary fee purchase agreement between the company and the property owner cannot be reached, and other viable alternatives do not exist, the company may exercise the right of eminent domain to secure required property through condemnation proceedings.
Electrical transmission infrastructure crossings	The component of the project involves one (1) electrical transmission infrastructure crossing under the existing Bloom–Burnham 345kV Circuit owned by ComEd Power Company. Bloom–Goodenow–Davis Creek 345kV tie-in will utilize two short 6-pole deadened structures to cross under the Bloom–Burnham 345kV circuit.
Civil infrastructure/major waterway facility crossing plan	The Project in Will County, Illinois will not involve any civil infrastructure/major waterway facility crossings.

Environmental impacts	Land use at the proposed parcel for Goodenow Station is currently undeveloped and predominantly agricultural. Pike Creek runs through the parcel and there are mapped riparian and FEMA floodplain areas along Pike Creek. This County in Illinois has listed threatened and endangered species and based on existing aerial photography, the parcel may contain unmapped wetland or drainage features. To ensure appropriate due diligence for environmental protection, studies will be completed for the development parcel including an environmental site assessment(s), wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the station will be sited on the property and designed to avoid impacts to sensitive features. For example, Pike Creek and its adjacent riparian and floodplain areas will be avoided. It is not anticipated that impacts to regulated wetlands or streams will be necessary as part of this solution. Major regulatory approvals for the proposed solution is not anticipated to exceed any general performance standard or require any variance to be readily permitted. Construction will be covered under a general construction storm water permit from the Illinois EPA and appropriate best management practices will be installed prior to construction to manage storm water runoff. Additionally, appropriate post-construction storm water controls will be implemented as necessitated by the design. The components of the proposed solution and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.
Tower characteristics	Final line design will determine structure types, foundations and quantities for these tie lines.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year $	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.

Total component cost	$3,953,600.00
Component cost (in-service year)	$4,583,306.00

Greenfield Transmission Line Component

Component title	St. John-Lemon Lake and Lemon Lake-Rollin Schahfer 345kV cut ins
Project description	Company confidential and proprietary information.
Point A	St. John (NIPSCO) 345kV
Point B	Lemon Lake 345kV (tap station)
Point C	Rollin Schahfer (NIPSCO) 345kV

	Normal ratings	**Emergency ratings**
Summer (MVA)	1314.000000	1592.000000
Winter (MVA)	1546.000000	1772.000000

Conductor size and type	two-bundle 954 (54/7) ACSR Cardinal
Nominal voltage	AC
Nominal voltage	345
Line construction type	Overhead
General route description	The proposed route is the most direct route between the proposed station and the existing transmission line. No alternatives were developed due to the route’s direct, short length.
Terrain description	The Project terrain is flat agricultural lands for the two (2) 345kV lines to loop in and out of the proposed Lemon Lake Station.

Right-of-way width by segment	The Project will be sited per the attachments. The tabletop analysis found there were no public lands required for this Project. The private land use is agricultural as tabletop analysis found and was verified through the County Clerk's Office which classified/assessed the land use as agricultural. The private land requirements include two (2) new 345kV lines to loop in & out of the proposed Lemon Lake Station off of the existing St. John-R. M. Schahfer 345kV Line. The two (2) new 345kV lines will require 0.03 of a mile of 150' (75'/75') wide ROW each in Indiana (location shown in attachments) where the land use is predominantly agricultural and flat lands. The Proposing Entity will use proven land acquisition processes and approaches that have been successfully employed on projects over the years. The Proposing Entity's initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and or mortgages. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity will negotiate with landowners based on the fair market value of the property needed for the ROW easements. Market data studies and appraisals, both general and for specific tracts, will be conducted to establish values and a basis for acquisition negotiations. The Proposing Entity will also pay for any crop damage and/or physical damage to property resulting from the construction and/or maintenance of the transmission line. Good Faith negotiations must be made with all landowners. Negotiations will be done in an ethical, non-confrontational and non-threatening manner with the landowners. The long-term relationship with the landowners is paramount and will be kept in mind in all negotiations and honesty, integrity and professionalism will be displayed at all times. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary fee purchase agreement between the company and the property owner cannot be reached, and other viable alternatives do not exist, the company may exercise the right of eminent domain to secure required property through condemnation proceedings.
Electrical transmission infrastructure crossings	This Project Component will not involve any electrical transmission infrastructure crossings.
Civil infrastructure/major waterway facility crossing plan	This Project Component will not involve any civil infrastructure/major waterway facility crossings.

Environmental impacts	Land use at the proposed parcel for Lemon Lake Station is currently undeveloped and predominantly agricultural. National Wetlands Inventory-mapped wetlands are located on the southeastern portion of the parcel. This Indiana County has listed threatened and endangered species and based on existing aerial photography, the parcel may contain unmapped wetland or drainage features. To ensure appropriate due diligence for environmental protection, studies will be completed for the development parcel including an environmental site assessment(s), wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the station will be sited on the property and designed to avoid impacts to sensitive features. It is not anticipated that regulated wetlands or streams will be necessary as part of this solution. Major regulatory approvals for the proposed solution would not be anticipated to exceed any general performance standard or require any variance to be readily permitted. Construction will be covered under a general construction storm water permit from the Indiana Department of Environmental Management and appropriate best management practices will be installed prior to construction to manage storm water runoff. Additionally, appropriate post-construction storm water controls will be implemented as necessitated by the design. The components of the proposed solution and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.
Tower characteristics	Each new 345kV tie line will require two tubular galvanized steel, deadend monopole structures. The vertically configured pole will be constructed on a concrete pier foundation using a full-length anchor bolt cage. Drawings of the structures and configuration can be found in the attached file under the Supporting Documents section titled “Proposed Structure Types”.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year $	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.

Contingency	Company confidential and proprietary information.
Total component cost	$1,616,554.00
Component cost (in-service year)	$1,766,453.00

Greenfield Transmission Line Component

Component title	Goodenow-IL Border
Project description	Company confidential and proprietary information.
Point A	Goodenow 345kV
Point B	Lemon Lake 345kV
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	2433.000000	2490.000000
Winter (MVA)	2696.000000	2983.000000

Conductor size and type	two-bundle 1277 ACAR
Nominal voltage	AC
Nominal voltage	345
Line construction type	Overhead

General route description	The Proposing Entity reviewed a range of siting alternatives for the Proposed Solution evaluating each with respect to potential impacts to the surrounding communities and the environment, constructability, operations and maintenance considerations, and cost effectiveness. Solutions were initially considered within a broad study area, as the solution needed to tap the Bloom-Davis Creek 345kV line (ComEd) and the St. John-Rollin Schahfer 345kV line (NIPSCO). This area was further refined based on an assessment of the existing infrastructure and the availability of property and/or suitable space. Potential routes that were evaluated and determined to be unsuitable due to length, circuitousness, constructability issues, major permitting concerns, or expected high costs, were dismissed and not investigated further. Starting at the proposed Goodenow Substation in Illinois (location shown in attachments), the Conceptual Route runs nearly straight east to the proposed Lemon Lake Substation located in Indiana (location shown in attachments). The Conceptual Route is approximately 13.90 miles in length and is located in mainly agricultural areas with rural residential development. The conceptual route will cross the West Creek, Norfolk Southern Railroad, CSX Railroad, U.S. Route 41, and the Cedar Creek. The Conceptual Route also crosses one-transmission line, the existing Dumont-Wilton Center 765kV Line owned by Indiana Michigan Power Company. Multiple local road crossings will be also required. Many of the identified constraints in the area were avoided or minimized by paralleling the previously mentioned Dumont-Wilton Center 765kV transmission line. There are no identified habitable structures located within the proposed ROW and only a few barns/outbuildings may be impacted. Two private airstrips are located in the vicinity of the conceptual route. While there is no specific FAA requirement for private airstrips, the Proposing Entity believes it can mitigate any potential concerns since the proposed structures will be shorter than the existing structures being paralleled. The Conceptual Route is the most direct route between the two proposed stations, has the least overall impact to land use and environmental resources, and parallels the existing Dumont-Wilton Center 765kV Line for nearly the entire route. Based on the constraints identified within the Project Area, the Conceptual Route represents a logical and constructible route.
Terrain description	The Project terrain is flat agricultural lands with a small portion of residential lands (location shown in attachments).

Right-of-way width by segment	The proposed Goodenow-Lemon Lake 345kV Line will require the acquisition of 13.90 miles of transmission line with 165’ wide ROW. The IL portion is 2.71 miles & 10.87 miles in IN. The project will begin at the Proposing Entity’s proposed Lemon Lake Station in Indiana and runs in a westerly direction to the Proposing Entity’s Goodenow Station in Illinois. The tabletop analysis found there were no public lands required for this Project. The private land use is predominantly agricultural and a small portion of residential that the tabletop analysis found and was verified through the County Clerk’s Offices which classified/assessed the land use as agricultural and residential. The private land requirements include acquiring 165’ (82.5’/82.5’) wide ROW where the land use is predominantly agricultural & flat lands. The Proposing Entity will use proven land acquisition processes and approaches that have been successfully employed on projects over the years. The Proposing Entity’s initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and or mortgages. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity will negotiate with landowners based on the fair market value of the property needed for the ROW easements. Market data studies and appraisals, both general and for specific tracts, will be conducted to establish values and a basis for acquisition negotiations. The Proposing Entity will also pay for any crop damage and/or physical damage to property resulting from the construction and/or maintenance of the transmission line. Good Faith negotiations must be made with all landowners. Negotiations will be done in an ethical, non-confrontational and non-threatening manner with the landowners. The long-term relationship with the landowners is paramount and will be kept in mind in all negotiations and honesty, integrity and professionalism will be displayed at all times. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary fee purchase agreement between the company and the property owner cannot be reached, and other viable alternatives do not exist, the company may exercise the right of eminent domain to secure required property through condemnation proceedings.
Electrical transmission infrastructure crossings	The Project will involve one (1) electrical transmission infrastructure crossing under the existing Dumont-Wilton Center 765kV Line owned by Indiana Michigan Power Company. Two custom horizontal deadend structures will be used for crossing under the existing 765kV line.
Civil infrastructure/major waterway facility crossing plan	The Project will not involve any civil infrastructure/major waterway facility crossings.

Environmental impacts	Land use along the proposed Lemon Lake-Goodenow 345kV corridor is predominantly undeveloped or agricultural and largely parallels an existing 765kV transmission line. The proposed line intersects seven FEMA-mapped floodplains and/or floodways and National Wetlands Inventory-mapped wetlands are located within the central and eastern portion of the route. Named and unnamed streams also transect the route in various locations. Based on existing aerial photography, the proposed route likely has unmapped wetland or drainage features. To ensure appropriate due diligence for environmental protection, studies will be completed for the right-of-way and proposed access routes including a wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the line route or structure locations will be adjusted to completely avoid or minimize impacts to sensitive environmental features. Examples of minimizing impacts to regulated waters or floodplains along the proposed route include installing timber mats within regulated wetlands or floodplains and temporarily bridging across streams. All areas designated for temporary impact will be restored to pre-existing condition following construction. It is anticipated unavoidable impacts to regulated wetlands or streams would be covered under a Nationwide Permit with appropriate offsetting mitigation as directed by the US Army Corps of Engineers, Indiana Department of Environmental Management and/or Illinois EPA. Construction will be covered under a general construction storm water permit from the Indiana Department of Environmental Management and Illinois EPA and appropriate best management practices will be installed prior to construction to manage storm water runoff. The proposed solution and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule or cost.
Tower characteristics	The new 345kV line will require approximately 15 tubular galvanized steel self-supporting structures. The predominate structure type will be a tangent monopole with suspension insulators supported by davit arms. Deadend poles quantities and sizes will be established in the final design. Finally, two custom horizontal deadend structures might be used for crossing under the existing 765kV line, subject to final line design.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.

Component Cost Details - In Current Year $

Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.

Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.
Total component cost	$22,220,800.00
Component cost (in-service year)	$25,759,997.00

Greenfield Transmission Line Component

Component title	Burnham-Goodenow, and Goodenow-Davis Creek 345kV cut ins
Project description	Company confidential and proprietary information.
Point A	Burnham (ComEd) 345kV
Point B	Goodenow 345kV (tap station)
Point C	Davis Creek (ComEd) 345kV

	Normal ratings	Emergency ratings
Summer (MVA)	1334.000000	1590.000000
Winter (MVA)	1528.000000	1781.000000

Conductor size and type	two-bundle 954 (54/7) ACSR Cardinal
Nominal voltage	AC
Nominal voltage	345
Line construction type	Overhead
General route description	The proposed route is the most direct route between the proposed station and the existing transmission line. No alternatives were developed due to the route’s direct, short length.
Terrain description	The Project terrain is flat agricultural lands for the two (2) 345kV lines to loop in and out of the proposed Goodenow Station.

Right-of-way width by segment	The Project will be sited per the attachments. The tabletop analysis found there were no public lands required for this Project. The private land use is agricultural as tabletop analysis found and was verified through the County Clerk's Office which classified/assessed the land use as agricultural. The private land requirements include four (4) new 345kV lines to loop in & out of the proposed Goodenow Station off of the existing Davis Creek-Bloom 345kV line and existing Davis Creek-Burnham 345kV line. Detailed engineering analysis will determine path and ROW requirements after further analysis. The Proposing Entity will use proven land acquisition processes and approaches that have been successfully employed on projects over the years. The Proposing Entity's initial land acquisition step is to verify current ownership by an examination of title, current property tax status, as well as document any liens, and or mortgages. The Proposing Entity will also research the status of the subsurface estate, whether or not it is severed from the surface. Once ownership is established, the Proposing Entity will negotiate with landowners based on the fair market value of the property needed for the ROW easements. Market data studies and appraisals, both general and for specific tracts, will be conducted to establish values and a basis for acquisition negotiations. The Proposing Entity will also pay for any crop damage and/or physical damage to property resulting from the construction and/or maintenance of the transmission line. Good Faith negotiations must be made with all landowners. Negotiations will be done in an ethical, non-confrontational and non-threatening manner with the landowners. The long-term relationship with the landowners is paramount and will be kept in mind in all negotiations and honesty, integrity and professionalism will be displayed at all times. Negotiations will continue as long as practical to reach a voluntary agreement. If, and only if, it becomes evident that a voluntary fee purchase agreement between the company and the property owner cannot be reached, and other viable alternatives do not exist, the company may exercise the right of eminent domain to secure required property through condemnation proceedings.
Electrical transmission infrastructure crossings	The component of the project involves one (1) electrical transmission infrastructure crossing under the existing Bloom–Burnham 345kV Circuit owned by ComEd Power Company. Bloom–Goodenow–Davis Creek 345kV tie-in will utilize two short 6-pole deadened structures to cross under the Bloom–Burnham 345kV circuit.
Civil infrastructure/major waterway facility crossing plan	The Project in Will County, Illinois will not involve any civil infrastructure/major waterway facility crossings.

Environmental impacts	Land use at the proposed parcel for Goodenow Station is currently undeveloped and predominantly agricultural. Pike Creek runs through the parcel and there are mapped riparian and FEMA floodplain areas along Pike Creek. This County in Illinois has listed threatened and endangered species and based on existing aerial photography, the parcel may contain unmapped wetland or drainage features. To ensure appropriate due diligence for environmental protection, studies will be completed for the development parcel including an environmental site assessment(s), wetland and stream delineation, threatened and endangered species review, and cultural resource study. Following these studies, the station will be sited on the property and designed to avoid impacts to sensitive features. For example, Pike Creek and its adjacent riparian and floodplain areas will be avoided. It is not anticipated that impacts to regulated wetlands or streams will be necessary as part of this solution. Major regulatory approvals for the proposed solution is not anticipated to exceed any general performance standard or require any variance to be readily permitted. Construction will be covered under a general construction storm water permit from the Illinois EPA and appropriate best management practices will be installed prior to construction to manage storm water runoff. Additionally, appropriate post-construction storm water controls will be implemented as necessitated by the design. The components of the proposed solution and all associated impacts are typical of energy infrastructure projects and would not represent a risk to the overall project schedule, cost, or ability to meet the identified requirements of the RFP.
Tower characteristics	Final line design will determine structure types, foundations and quantities for these tie lines.
Construction responsibility	Company confidential and proprietary information.
Benefits/Comments	Company confidential and proprietary information.
Component Cost Details - In Current Year $	
Engineering & design	Company confidential and proprietary information.
Permitting / routing / siting	Company confidential and proprietary information.
ROW / land acquisition	Company confidential and proprietary information.
Materials & equipment	Company confidential and proprietary information.
Construction & commissioning	Company confidential and proprietary information.
Construction management	Company confidential and proprietary information.
Overheads & miscellaneous costs	Company confidential and proprietary information.
Contingency	Company confidential and proprietary information.

Total component cost	$3,953,600.00
Component cost (in-service year)	$4,583,306.00

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
MDW1-GD-W172	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W171	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W188	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W190	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W185	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W332	270728	E FRANKFO; B	274750	CRETE EC ;BP	1	345	222	Winter Gen Deliv	Included
MDW1-GD-W331	270728	E FRANKFO; B	274750	CRETE EC ;BP	1	345	222	Winter Gen Deliv	Included
MDW1-GD-W309	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W404	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W419	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Winter Gen Deliv	Included
MDW1-GD-W392	274804	UNIV PK N;RP	243229	05OLIVE	1	345	205/222	Winter Gen Deliv	Included
MDW1-GD-W393	274804	UNIV PK N;RP	243229	05OLIVE	1	345	205/222	Winter Gen Deliv	Included
MDW1-GD-S1620	255113	17STILLWELL	243219	05DUMONT	1	345	205/217	Summer Gen Deliv	Included
MDW1-ME-01	255113	17STILLWELL	243219	05DUMONT	1	345	205/217	Market Efficiency	Included
MDW1-ME-02	274804	UNIV PK N;RP	243229	05OLIVE	1	345	205/222	Market Efficiency	Included
MDW1-ME-04	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Market Efficiency	Included
MDW1-ME-03	270728	E FRANKFO; B	274750	CRETE EC ;BP	1	345	222	Winter Gen Deliv	Included

New Flowgates

Financial Information

Capital spend start date	05/2023
Construction start date	03/2024
Project Duration (In Months)	44

Cost Containment Commitment

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

Components covered by cost containment

1. Lemon Lake - IN Border 345kV - AEP
2. Goodenow 345 kV Station - AEP
3. Lemon Lake 345 kV Station - AEP
4. Goodenow-IL Border - AEP

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	Yes

AFUDC	Yes
Escalation	Yes
Additional Information	Company confidential and proprietary information.
Is the proposer offering a binding cap on ROE?	Yes
Would this ROE cap apply to the determination of AFUDC?	Yes
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?	Company confidential and proprietary information.

Additional Comments

None