Tri-Segment 500kV Transmission Project

General Information

Proposing entity name	CONFIDENTIAL INFORMATION
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	CONFIDENTIAL INFORMATION
Company proposal ID	CONFIDENTIAL INFORMATION
PJM Proposal ID	20
Project title	Tri-Segment 500kV Transmission Project
Project description	The Tri-Segment 500 kV Transmission Project consists of three new 500 kV transmission lines and associated substations. The transmission route will extend from the existing Montour Substation to the new Cross Valley Substation, then to the new Grassy Path Substation, and finally to the new Beaver Brook Substation. Cross Valley Substation – Designed as a five-position breaker-and-a-half layout with a 500/230 kV transformer. A new 230 kV transmission line will connect this substation to the existing NESC Substation. Grassy Path Substation – Configured as a three-position ring bus with a 500/230 kV transformer. A new 230 kV transmission line will connect this substation to the existing Tomhicken Substation. Beaver Brook Substation – Configured as a three-position ring bus with two 500/230 kV transformers. Two new 230 kV transmission lines will connect this substation to the existing Slykerville Substation.
Email	CONFIDENTIAL INFORMATION
Project in-service date	06/2030
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	CONFIDENTIAL INFORMATION

Project Components

1. Cross Valley Substation
2. Grassy Path Substation
3. Beaver Brook Substation
4. Montour Substation Upgrade
5. NESC Substation Upgrade
6. Tomhicken Substation Upgrade
7. Slykerville Substation Expansion
8. Montour - Cross Valley 500kV Transmission Line
9. Cross Valley - Grassy Path 500kV Transmission Line
10. Grassy Path - Beaver Brook 500kV Transmission Line
11. Cross Valley - NESC 230kV Transmission Line
12. Grassy Path - Tomhicken 230kV Transmission Line
13. Beaver Brook - Slykerville #1 230kV Transmission Line
14. Beaver Brook - Slykerville #2 230kV Transmission Line
15. Sunbury - Susquehanna 500kV Loop-In

Greenfield Substation Component

Component title	Cross Valley Substation
Project description	CONFIDENTIAL INFORMATION
Substation name	Cross Valley
Substation description	The Cross Valley Substation will consist of a 5-position breaker and a half 500kV yard and a 500/230kV transformer.
Nominal voltage	AC
Nominal voltage	500/230

Transformer Information

Name	Capacity (MVA)

Transformer	Transformer #1		1034
	High Side	Low Side	Tertiary
Voltage (kV)	500	230	
Major equipment description	500 kV breaker and a half configuration with five (5) positions, Eight (8) circuit breakers, a 500/230kV transformer, and associated equipment.		
	Normal ratings		Emergency ratings
Summer (MVA)	3112.000000		3112.000000
Winter (MVA)	3112.000000		3112.000000
Environmental assessment	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been sited to avoid and minimize impacts to environmentally sensitive areas, including wetlands and waters, based on GIS data. While complete avoidance may not be possible, any impacts to wetlands or waterways will be minimized to the extent practicable. A qualified consultant will be engaged to perform a formal delineation of wetlands and waters to establish jurisdictional boundaries of aquatic resources within the Project area. The results will be used to refine Project siting, if necessary, and determine permitting requirements. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to these requirements, other permits may be necessary for Project construction. These are expected to be minor, as they typically require less effort to prepare and undergo less intensive review. Examples include Federal Aviation Administration airspace clearance and stormwater/erosion and sedimentation control permits (i.e., National Pollutant Discharge Elimination System [NPDES] Construction General Permit). Following project award, the Proposer will consult with local municipalities and applicable state and federal agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed, and identify appropriate avoidance and mitigation measures.		

Outreach plan	The Proposer will identify and engage key stakeholders—such as municipal officials, community leaders, and landowners within the Project area—early in the development process and maintain an open, ongoing dialogue throughout. Public meetings may be conducted to provide landowners and other interested community members with information about the Project and to gather input on local priorities and concerns. Project information will be made available through the Proposer's website, and notices of public meetings will be provided to affected landowners in accordance with Pennsylvania Public Utility Commission (PA PUC) requirements for the siting approval process.
Land acquisition plan	The Project will be located on new right-of-way (ROW) to be acquired by the Proposer. In addition, the Proposer will obtain any necessary easements required for site access. A dedicated Right-of-Way Manager will oversee all real estate activities for the Project, including appraisals, title searches, surveying, land acquisition, and restoration. A qualified right-of-way agent will make in-person contact with affected property owners to explain the Project and, as necessary, obtain permission to conduct surveys, archaeological studies, environmental assessments, and other pre-construction activities. The right-of-way agent will serve as the primary point of contact for negotiating acquisition of the substation site and any required easements on a mutually agreeable basis. If negotiations reach an impasse, the Proposer will have the ability to pursue property acquisition through eminent domain, consistent with the authority granted to public utilities under 66 Pa.C.S. § 1511. Right-of-way agents will continue to serve as liaisons with property owners throughout construction and the restoration process, ensuring that post-construction restoration is completed to a standard acceptable to the landowner and compliant with regulatory requirements.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION

Total component cost	$68,109,562.00
Component cost (in-service year)	$75,767,046.00

Greenfield Substation Component

Component title	Grassy Path Substation
Project description	CONFIDENTIAL INFORMATION
Substation name	Grassy Path
Substation description	The Grassy Path Substation will consist of a 3-position ring bus 500kV yard and a 500/230kV transformer.
Nominal voltage	AC
Nominal voltage	500/230

Transformer Information

	Name	Capacity (MVA)
Transformer	Transformer #1	1034

	High Side	Low Side	Tertiary
Voltage (kV)	500	230	

Major equipment description	500 kV ring bus configuration with three (3) positions, three (3) circuit breakers, a 500/230kV transformer, and associated equipment.

	Normal ratings	Emergency ratings
Summer (MVA)	3112.000000	3112.000000
Winter (MVA)	3112.000000	3112.000000

Environmental assessment	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been sited to avoid and minimize impacts to environmentally sensitive areas, including wetlands and waters, based on GIS data. While complete avoidance may not be possible, any impacts to wetlands or waterways will be minimized to the extent practicable. A qualified consultant will be engaged to perform a formal delineation of wetlands and waters to establish jurisdictional boundaries of aquatic resources within the Project area. The results will be used to refine Project siting, if necessary, and determine permitting requirements. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to these requirements, other permits may be necessary for Project construction. These are expected to be minor, as they typically require less effort to prepare and undergo less intensive review. Examples include Federal Aviation Administration airspace clearance and stormwater/erosion and sedimentation control permits (i.e., National Pollutant Discharge Elimination System [NPDES] Construction General Permit). Following project award, the Proposer will consult with local municipalities and applicable state and federal agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed, and identify appropriate avoidance and mitigation measures.
Outreach plan	The Proposer will identify and engage key stakeholders—such as municipal officials, community leaders, and landowners within the Project area—early in the development process and maintain an open, ongoing dialogue throughout. Public meetings may be conducted to provide landowners and other interested community members with information about the Project and to gather input on local priorities and concerns. Project information will be made available through the Proposer’s website, and notices of public meetings will be provided to affected landowners in accordance with Pennsylvania Public Utility Commission (PA PUC) requirements for the siting approval process.
Land acquisition plan	The Project will be located on new right-of-way (ROW) to be acquired by the Proposer. In addition, the Proposer will obtain any necessary easements required for site access. A dedicated Right-of-Way Manager will oversee all real estate activities for the Project, including appraisals, title searches, surveying, land acquisition, and restoration. A qualified right-of-way agent will make in-person contact with affected property owners to explain the Project and, as necessary, obtain permission to conduct surveys, archaeological studies, environmental assessments, and other pre-construction activities. The right-of-way agent will serve as the primary point of contact for negotiating acquisition of the substation site and any required easements on a mutually agreeable basis. If negotiations reach an impasse, the Proposer will have the ability to pursue property acquisition through eminent domain, consistent with the authority granted to public utilities under 66 Pa.C.S. § 1511. Right-of-way agents will continue to serve as liaisons with property owners throughout construction and the restoration process, ensuring that post-construction restoration is completed to a standard acceptable to the landowner and compliant with regulatory requirements.
Construction responsibility	CONFIDENTIAL INFORMATION

Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$41,364,539.00
Component cost (in-service year)	$46,015,108.00

Greenfield Substation Component

Component title	Beaver Brook Substation
Project description	CONFIDENTIAL INFORMATION
Substation name	Beaver Brook
Substation description	The Beaver Brook Substation will consist of a 3-position ring bus 500kV yard and two 500/230kV transformers.
Nominal voltage	AC
Nominal voltage	500/230

Transformer Information

Name	Capacity (MVA)

Transformer	Transformer #1		1034
	High Side	Low Side	Tertiary
Voltage (kV)	500	230	
	Name		Capacity (MVA)
Transformer	Transformer #2		1034
	High Side	Low Side	Tertiary
Voltage (kV)	500	230	

Major equipment description	500 kV ring bus configuration with three (3) positions, three (3) circuit breakers, two 500/230kV transformer, and associated equipment.	
	Normal ratings	Emergency ratings
Summer (MVA)	3112.000000	3112.000000
Winter (MVA)	3112.000000	3112.000000

Environmental assessment	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been sited to avoid and minimize impacts to environmentally sensitive areas, including wetlands and waters, based on GIS data. While complete avoidance may not be possible, any impacts to wetlands or waterways will be minimized to the extent practicable. A qualified consultant will be engaged to perform a formal delineation of wetlands and waters to establish jurisdictional boundaries of aquatic resources within the Project area. The results will be used to refine Project siting, if necessary, and determine permitting requirements. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to these requirements, other permits may be necessary for Project construction. These are expected to be minor, as they typically require less effort to prepare and undergo less intensive review. Examples include Federal Aviation Administration airspace clearance and stormwater/erosion and sedimentation control permits (i.e., National Pollutant Discharge Elimination System [NPDES] Construction General Permit). Following project award, the Proposer will consult with local municipalities and applicable state and federal agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed, and identify appropriate avoidance and mitigation measures.
Outreach plan	The Proposer will identify and engage key stakeholders—such as municipal officials, community leaders, and landowners within the Project area—early in the development process and maintain an open, ongoing dialogue throughout. Public meetings may be conducted to provide landowners and other interested community members with information about the Project and to gather input on local priorities and concerns. Project information will be made available through the Proposer’s website, and notices of public meetings will be provided to affected landowners in accordance with Pennsylvania Public Utility Commission (PA PUC) requirements for the siting approval process.
Land acquisition plan	The Project will be located on new right-of-way (ROW) to be acquired by the Proposer. In addition, the Proposer will obtain any necessary easements required for site access. A dedicated Right-of-Way Manager will oversee all real estate activities for the Project, including appraisals, title searches, surveying, land acquisition, and restoration. A qualified right-of-way agent will make in-person contact with affected property owners to explain the Project and, as necessary, obtain permission to conduct surveys, archaeological studies, environmental assessments, and other pre-construction activities. The right-of-way agent will serve as the primary point of contact for negotiating acquisition of the substation site and any required easements on a mutually agreeable basis. If negotiations reach an impasse, the Proposer will have the ability to pursue property acquisition through eminent domain, consistent with the authority granted to public utilities under 66 Pa.C.S. § 1511. Right-of-way agents will continue to serve as liaisons with property owners throughout construction and the restoration process, ensuring that post-construction restoration is completed to a standard acceptable to the landowner and compliant with regulatory requirements.
Construction responsibility	CONFIDENTIAL INFORMATION

Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$60,984,689.00
Component cost (in-service year)	$67,841,130.00

Substation Upgrade Component

Component title	Montour Substation Upgrade
Project description	CONFIDENTIAL INFORMATION
Substation name	Montour
Substation zone	236
Substation upgrade scope	The Montour Substation upgrade will consist of adding 1 500/230kV transformer to an open breaker and a half position.

Transformer Information

	Name	Capacity (MVA)
Transformer	Transformer #1	1034

	High Side	Low Side	Tertiary
Voltage (kV)	500	230	
New equipment description	A 500/230kV transformer, and associated equipment to connect to the open position.		
Substation assumptions	The substation can be expanded to the northeast to accommodate the expansion.		
Real-estate description	Additional real estate to the northeast that is already owned by the substation owner is required for this component.		
Construction responsibility	CONFIDENTIAL INFORMATION		
Benefits/Comments	CONFIDENTIAL INFORMATION		
Component Cost Details - In Current Year $			
Engineering & design	CONFIDENTIAL INFORMATION		
Permitting / routing / siting	CONFIDENTIAL INFORMATION		
ROW / land acquisition	CONFIDENTIAL INFORMATION		
Materials & equipment	CONFIDENTIAL INFORMATION		
Construction & commissioning	CONFIDENTIAL INFORMATION		
Construction management	CONFIDENTIAL INFORMATION		
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION		
Contingency	CONFIDENTIAL INFORMATION		
Total component cost	$24,192,367.00		
Component cost (in-service year)	$26,946,316.00		

Substation Upgrade Component

Component title	NESC Substation Upgrade
Project description	CONFIDENTIAL INFORMATION

Substation name	NESC
Substation zone	232
Substation upgrade scope	The NESC Substation upgrade will consist of adding 1 breaker and a half 230kV position.

Transformer Information

None

New equipment description	230 kV breaker and a half configuration addition with one (1) position, two (2) circuit breakers, and associated equipment.
Substation assumptions	The substation can be expanded to the south to accommodate the expansion.
Real-estate description	Additional real estate necessary for this component is already owned by the substation owner.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$4,572,217.00
Component cost (in-service year)	$5,092,698.00

Substation Upgrade Component

Component title	Tomhicken Substation Upgrade
Project description	CONFIDENTIAL INFORMATION
Substation name	Tomhicken
Substation zone	232
Substation upgrade scope	The Tomhicken Substation upgrade will consist of adding 1 breaker and a half 230kV position.

Transformer Information

None

New equipment description	230 kV breaker and a half configuration addition with one (1) position, two (2) circuit breakers, and associated equipment.
Substation assumptions	The substation can be expanded to the north to accommodate the expansion.
Real-estate description	Additional real estate necessary for this component is already owned by the substation owner.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION

Component Cost Details - In Current Year $

Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION

Contingency	CONFIDENTIAL INFORMATION
Total component cost	$4,572,217.00
Component cost (in-service year)	$5,092,698.00

Substation Upgrade Component

Component title	Slykerville Substation Expansion
Project description	CONFIDENTIAL INFORMATION
Substation name	Slykerville
Substation zone	232
Substation upgrade scope	The Slykerville Substation upgrade will consist of adding 2 breaker and a half 230kV positions.

Transformer Information

None

New equipment description	230 kV breaker and a half configuration addition with two (2) positions, three (3) circuit breakers, and associated equipment.
Substation assumptions	The substation can be expanded to the north to accommodate the expansion.
Real-estate description	Additional real estate necessary for this component is already owned by the substation owner.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION

Component Cost Details - In Current Year $

Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION

Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$9,144,435.00
Component cost (in-service year)	$10,185,396.00

Greenfield Transmission Line Component

Component title	Montour - Cross Valley 500kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Montour
Point B	Cross Valley
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	2707.000000	3112.000000
Winter (MVA)	2707.000000	3112.000000

Conductor size and type	Triple Bundle 954kcmil "Cardinal" ACSS/TW/MA3
Nominal voltage	AC
Nominal voltage	500
Line construction type	Overhead

General route description	The route heads generally easy away from the existing Montour Substation and traverses woodlands and farmland for approximately 32.4 miles before terminating at the new Cross Valley Substation. The route crosses several existing transmission lines and the Susquehanna River. There are no habitable structures within the right of way and route crosses XXX parcels. Based on desktop level data for mapped wetlands and floodplains, structures were sited such that there will be no permanent impact to these areas.
Terrain description	The terrain for the route is characterized by a mix of farmland, rolling hills, and woodlands. Traditional methods of access and construction are feasible along the majority of the route. Alternative methods of access and construction will be considered as needed.
Right-of-way width by segment	The new transmission line is approximately 32.4 miles in length with a right-of-way width planned to be 175 feet.
Electrical transmission infrastructure crossings	Over Berwick - Koonsville 69kV, Over Scott Alternate - Millville 69kV, Over Susquehanna - Montour 230kV, Over Susquehanna - Montour 230kV, Over Susquehanna - Sunbury 230kV
Civil infrastructure/major waterway facility crossing plan	The Proposer will obtain all required crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure intersected by the Project. Coordination will be conducted with all affected easement holders, including municipal and county road authorities, oil and gas pipeline operators, electric transmission owners, and local distribution utilities (electric, sewer, water, gas, fiber, and other communications) to ensure that the Project does not interfere with existing easement rights. The Proposer will obtain road occupancy permits from municipal and county jurisdictions, as well as the Pennsylvania Department of Transportation (PennDOT), for the placement of transmission facilities across or along public roads, in accordance with 67 Pa. Code Chapter 459 and applicable local ordinances. Crossing agreements will be secured with owners of existing oil and gas pipelines, transmission lines, and other utilities to ensure compliance with safety standards, operational requirements, and right-of-way conditions.

Environmental impacts	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been routed to avoid and minimize impacts to areas of environmental concern, including wetlands and waters, based on GIS data. Environmental impacts will be further minimized by collocating the proposed transmission line along corridors of existing linear development to the maximum extent practicable. The Proposer will engage a qualified consultant to conduct a delineation of wetlands and waters in order to establish jurisdictional boundaries of aquatic resources in the Project area. The results will be used to refine Project routing, if necessary, and determine permitting requirements. Any unavoidable impacts to regulated aquatic resources will be mitigated in accordance with applicable state and federal regulations. Aquatic resources that may be temporarily impacted during construction will be restored to pre-construction conditions in accordance with applicable permit requirements. Where unavoidable permanent impacts occur, compensatory mitigation will be implemented as required. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to the permits described above, other approvals may be required for Project construction. These are expected to be minor in nature, as they typically involve less effort to prepare and undergo a more streamlined review process. Examples include Federal Aviation Administration airspace clearance, stormwater and erosion/sedimentation control permits under Pennsylvania’s National Pollutant Discharge Elimination System (NPDES) Construction General Permit, roadway occupancy permits, and utility or railroad crossing agreements. Following Project award, the Proposer will consult with local jurisdictions and relevant state and federal permitting agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed for permitting, and identify appropriate avoidance and mitigation measures.
Tower characteristics	The towers will primarily consist of self-supported lattice towers in a delta configuration with drilled pier foundations.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION

Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$182,170,103.00
Component cost (in-service year)	$217,413,966.00

Greenfield Transmission Line Component

Component title	Cross Valley - Grassy Path 500kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Cross Valley
Point B	Grassy Path
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	2707.000000	3112.000000
Winter (MVA)	2707.000000	3112.000000

Conductor size and type	Triple Bundle 954kcmil "Cardinal" ACSS/TW/MA3
Nominal voltage	AC
Nominal voltage	500
Line construction type	Overhead

General route description	The route heads generally south away from the new Cross Valley Substation and traverses woodlands and farmland for approximately 7.6 miles before terminating at the new Grassy Path Substation. The route crosses several existing transmission lines. There are no habitable structures within the right of way and route crosses XXX parcels. Based on desktop level data for mapped wetlands and floodplains, structures were sited such that there will be no permanent impact to these areas.
Terrain description	The terrain for the route is characterized by a mix of farmland, rolling hills, and woodlands. Traditional methods of access and construction are feasible along the majority of the route. Alternative methods of access and construction will be considered as needed.
Right-of-way width by segment	The new transmission line is approximately 7.6 miles in length with a right-of-way width planned to be 175 feet.
Electrical transmission infrastructure crossings	Over Harwood - Berwick 69kV, Over Harwood - Berwick 69kV, Over Harwood - Berwick 69kV
Civil infrastructure/major waterway facility crossing plan	The Proposer will obtain all required crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure intersected by the Project. Coordination will be conducted with all affected easement holders, including municipal and county road authorities, oil and gas pipeline operators, electric transmission owners, and local distribution utilities (electric, sewer, water, gas, fiber, and other communications) to ensure that the Project does not interfere with existing easement rights. The Proposer will obtain road occupancy permits from municipal and county jurisdictions, as well as the Pennsylvania Department of Transportation (PennDOT), for the placement of transmission facilities across or along public roads, in accordance with 67 Pa. Code Chapter 459 and applicable local ordinances. Crossing agreements will be secured with owners of existing oil and gas pipelines, transmission lines, and other utilities to ensure compliance with safety standards, operational requirements, and right-of-way conditions.

Environmental impacts	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been routed to avoid and minimize impacts to areas of environmental concern, including wetlands and waters, based on GIS data. Environmental impacts will be further minimized by collocating the proposed transmission line along corridors of existing linear development to the maximum extent practicable. The Proposer will engage a qualified consultant to conduct a delineation of wetlands and waters in order to establish jurisdictional boundaries of aquatic resources in the Project area. The results will be used to refine Project routing, if necessary, and determine permitting requirements. Any unavoidable impacts to regulated aquatic resources will be mitigated in accordance with applicable state and federal regulations. Aquatic resources that may be temporarily impacted during construction will be restored to pre-construction conditions in accordance with applicable permit requirements. Where unavoidable permanent impacts occur, compensatory mitigation will be implemented as required. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to the permits described above, other approvals may be required for Project construction. These are expected to be minor in nature, as they typically involve less effort to prepare and undergo a more streamlined review process. Examples include Federal Aviation Administration airspace clearance, stormwater and erosion/sedimentation control permits under Pennsylvania’s National Pollutant Discharge Elimination System (NPDES) Construction General Permit, roadway occupancy permits, and utility or railroad crossing agreements. Following Project award, the Proposer will consult with local jurisdictions and relevant state and federal permitting agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed for permitting, and identify appropriate avoidance and mitigation measures.
Tower characteristics	The towers will primarily consist of self-supported lattice towers in a delta configuration with drilled pier foundations.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION

Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$50,788,068.00
Component cost (in-service year)	$60,613,871.00

Greenfield Transmission Line Component

Component title	Grassy Path - Beaver Brook 500kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Grassy Path
Point B	Beaver Brook
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	2707.000000	3112.000000
Winter (MVA)	2707.000000	3112.000000

Conductor size and type	Triple Bundle 954kcmil "Cardinal" ACSS/TW/MA3
Nominal voltage	AC
Nominal voltage	500
Line construction type	Overhead

General route description	The route heads generally south away from the new Grassy Path Substation and traverses woodlands and farmland for approximately 6.3 miles before terminating at the new Beaver Brook Substation. The route crosses several existing transmission lines. There are no habitable structures within the right of way and route crosses XXX parcels. Based on desktop level data for mapped wetlands and floodplains, structures were sited such that there will be no permanent impact to these areas.
Terrain description	The terrain for the route is characterized by a mix of farmland, rolling hills, and woodlands. Traditional methods of access and construction are feasible along the majority of the route. Alternative methods of access and construction will be considered as needed.
Right-of-way width by segment	The new transmission line is approximately 6.3 miles in length with a right-of-way width planned to be 175 feet.
Electrical transmission infrastructure crossings	Over Harwood - Berwick 69kV, Over Harwood - Berwick 69kV, Over Harwood - Hazelton 69kV
Civil infrastructure/major waterway facility crossing plan	The Proposer will obtain all required crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure intersected by the Project. Coordination will be conducted with all affected easement holders, including municipal and county road authorities, oil and gas pipeline operators, electric transmission owners, and local distribution utilities (electric, sewer, water, gas, fiber, and other communications) to ensure that the Project does not interfere with existing easement rights. The Proposer will obtain road occupancy permits from municipal and county jurisdictions, as well as the Pennsylvania Department of Transportation (PennDOT), for the placement of transmission facilities across or along public roads, in accordance with 67 Pa. Code Chapter 459 and applicable local ordinances. Crossing agreements will be secured with owners of existing oil and gas pipelines, transmission lines, and other utilities to ensure compliance with safety standards, operational requirements, and right-of-way conditions.

Environmental impacts	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been routed to avoid and minimize impacts to areas of environmental concern, including wetlands and waters, based on GIS data. Environmental impacts will be further minimized by collocating the proposed transmission line along corridors of existing linear development to the maximum extent practicable. The Proposer will engage a qualified consultant to conduct a delineation of wetlands and waters in order to establish jurisdictional boundaries of aquatic resources in the Project area. The results will be used to refine Project routing, if necessary, and determine permitting requirements. Any unavoidable impacts to regulated aquatic resources will be mitigated in accordance with applicable state and federal regulations. Aquatic resources that may be temporarily impacted during construction will be restored to pre-construction conditions in accordance with applicable permit requirements. Where unavoidable permanent impacts occur, compensatory mitigation will be implemented as required. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to the permits described above, other approvals may be required for Project construction. These are expected to be minor in nature, as they typically involve less effort to prepare and undergo a more streamlined review process. Examples include Federal Aviation Administration airspace clearance, stormwater and erosion/sedimentation control permits under Pennsylvania’s National Pollutant Discharge Elimination System (NPDES) Construction General Permit, roadway occupancy permits, and utility or railroad crossing agreements. Following Project award, the Proposer will consult with local jurisdictions and relevant state and federal permitting agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed for permitting, and identify appropriate avoidance and mitigation measures.
Tower characteristics	The towers will primarily consist of self-supported lattice towers in a delta configuration with drilled pier foundations.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION

Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$36,599,066.00
Component cost (in-service year)	$43,679,769.00

Greenfield Transmission Line Component

Component title	Cross Valley - NESC 230kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Cross Valley
Point B	NESC
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1034.000000	1034.000000
Winter (MVA)	1034.000000	1034.000000

Conductor size and type	Double Bundle 954kcmil "Cardinal" ACSS/TW/MA3
Nominal voltage	AC
Nominal voltage	230
Line construction type	Overhead
General route description	The route heads generally east away from the new Cross Valley Substation to the adjacent existing NESC substation.
Terrain description	The terrain for the route is farmland.

Right-of-way width by segment	The new transmission line is approximately 0.3 miles in length with a right-of-way width planned to be 125 feet.
Electrical transmission infrastructure crossings	N/A
Civil infrastructure/major waterway facility crossing plan	The Proposer will obtain all required crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure intersected by the Project. Coordination will be conducted with all affected easement holders, including municipal and county road authorities, oil and gas pipeline operators, electric transmission owners, and local distribution utilities (electric, sewer, water, gas, fiber, and other communications) to ensure that the Project does not interfere with existing easement rights. The Proposer will obtain road occupancy permits from municipal and county jurisdictions, as well as the Pennsylvania Department of Transportation (PennDOT), for the placement of transmission facilities across or along public roads, in accordance with 67 Pa. Code Chapter 459 and applicable local ordinances. Crossing agreements will be secured with owners of existing oil and gas pipelines, transmission lines, and other utilities to ensure compliance with safety standards, operational requirements, and right-of-way conditions.
Environmental impacts	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been routed to avoid and minimize impacts to areas of environmental concern, including wetlands and waters, based on GIS data. Environmental impacts will be further minimized by collocating the proposed transmission line along corridors of existing linear development to the maximum extent practicable. The Proposer will engage a qualified consultant to conduct a delineation of wetlands and waters in order to establish jurisdictional boundaries of aquatic resources in the Project area. The results will be used to refine Project routing, if necessary, and determine permitting requirements. Any unavoidable impacts to regulated aquatic resources will be mitigated in accordance with applicable state and federal regulations. Aquatic resources that may be temporarily impacted during construction will be restored to pre-construction conditions in accordance with applicable permit requirements. Where unavoidable permanent impacts occur, compensatory mitigation will be implemented as required. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to the permits described above, other approvals may be required for Project construction. These are expected to be minor in nature, as they typically involve less effort to prepare and undergo a more streamlined review process. Examples include Federal Aviation Administration airspace clearance, stormwater and erosion/sedimentation control permits under Pennsylvania’s National Pollutant Discharge Elimination System (NPDES) Construction General Permit, roadway occupancy permits, and utility or railroad crossing agreements. Following Project award, the Proposer will consult with local jurisdictions and relevant state and federal permitting agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed for permitting, and identify appropriate avoidance and mitigation measures.

Tower characteristics	The towers will primarily consist of self-supported tubular steel monopoles in a delta configuration with direct embed foundations.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$2,512,656.00
Component cost (in-service year)	$2,998,772.00

Greenfield Transmission Line Component

Component title	Grassy Path - Tomhicken 230kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Grassy Path
Point B	Tomhicken
Point C	

	Normal ratings	Emergency ratings

Summer (MVA)	1034.000000	1034.000000
Winter (MVA)	1034.000000	1034.000000
Conductor size and type	Double Bundle 954kcmil "Cardinal" ACSS/TW/MA3	
Nominal voltage	AC	
Nominal voltage	230	
Line construction type	Overhead	
General route description	The route heads generally east away from the new Grassy Path Substation to the adjacent existing Tomhicken substation.	
Terrain description	The terrain for the route is farmland.	
Right-of-way width by segment	The new transmission line is approximately 0.3 miles in length with a right-of-way width planned to be 125 feet.	
Electrical transmission infrastructure crossings	Over Harwood - Berwick 69kV	
Civil infrastructure/major waterway facility crossing plan	The Proposer will obtain all required crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure intersected by the Project. Coordination will be conducted with all affected easement holders, including municipal and county road authorities, oil and gas pipeline operators, electric transmission owners, and local distribution utilities (electric, sewer, water, gas, fiber, and other communications) to ensure that the Project does not interfere with existing easement rights. The Proposer will obtain road occupancy permits from municipal and county jurisdictions, as well as the Pennsylvania Department of Transportation (PennDOT), for the placement of transmission facilities across or along public roads, in accordance with 67 Pa. Code Chapter 459 and applicable local ordinances. Crossing agreements will be secured with owners of existing oil and gas pipelines, transmission lines, and other utilities to ensure compliance with safety standards, operational requirements, and right-of-way conditions.	

Environmental impacts	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been routed to avoid and minimize impacts to areas of environmental concern, including wetlands and waters, based on GIS data. Environmental impacts will be further minimized by collocating the proposed transmission line along corridors of existing linear development to the maximum extent practicable. The Proposer will engage a qualified consultant to conduct a delineation of wetlands and waters in order to establish jurisdictional boundaries of aquatic resources in the Project area. The results will be used to refine Project routing, if necessary, and determine permitting requirements. Any unavoidable impacts to regulated aquatic resources will be mitigated in accordance with applicable state and federal regulations. Aquatic resources that may be temporarily impacted during construction will be restored to pre-construction conditions in accordance with applicable permit requirements. Where unavoidable permanent impacts occur, compensatory mitigation will be implemented as required. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to the permits described above, other approvals may be required for Project construction. These are expected to be minor in nature, as they typically involve less effort to prepare and undergo a more streamlined review process. Examples include Federal Aviation Administration airspace clearance, stormwater and erosion/sedimentation control permits under Pennsylvania’s National Pollutant Discharge Elimination System (NPDES) Construction General Permit, roadway occupancy permits, and utility or railroad crossing agreements. Following Project award, the Proposer will consult with local jurisdictions and relevant state and federal permitting agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed for permitting, and identify appropriate avoidance and mitigation measures.
Tower characteristics	The towers will primarily consist of self-supported tubular steel monopoles in a delta configuration with direct embed foundations.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION

Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$2,512,656.00
Component cost (in-service year)	$2,998,772.00

Greenfield Transmission Line Component

Component title	Beaver Brook - Slykerville #1 230kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Beaver Brook
Point B	Slykerville
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1034.000000	1034.000000
Winter (MVA)	1034.000000	1034.000000

Conductor size and type	Double Bundle 954kcmil "Cardinal" ACSS/TW/MA3
Nominal voltage	AC
Nominal voltage	230
Line construction type	Overhead
General route description	The route heads generally east away from the new Beaver Brook Substation to the adjacent existing Slykerville substation.
Terrain description	The terrain for the route is farmland.

Right-of-way width by segment	The new transmission line is approximately 0.3 miles in length with a right-of-way width planned to be 125 feet.
Electrical transmission infrastructure crossings	N/A
Civil infrastructure/major waterway facility crossing plan	The Proposer will obtain all required crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure intersected by the Project. Coordination will be conducted with all affected easement holders, including municipal and county road authorities, oil and gas pipeline operators, electric transmission owners, and local distribution utilities (electric, sewer, water, gas, fiber, and other communications) to ensure that the Project does not interfere with existing easement rights. The Proposer will obtain road occupancy permits from municipal and county jurisdictions, as well as the Pennsylvania Department of Transportation (PennDOT), for the placement of transmission facilities across or along public roads, in accordance with 67 Pa. Code Chapter 459 and applicable local ordinances. Crossing agreements will be secured with owners of existing oil and gas pipelines, transmission lines, and other utilities to ensure compliance with safety standards, operational requirements, and right-of-way conditions.
Environmental impacts	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been routed to avoid and minimize impacts to areas of environmental concern, including wetlands and waters, based on GIS data. Environmental impacts will be further minimized by collocating the proposed transmission line along corridors of existing linear development to the maximum extent practicable. The Proposer will engage a qualified consultant to conduct a delineation of wetlands and waters in order to establish jurisdictional boundaries of aquatic resources in the Project area. The results will be used to refine Project routing, if necessary, and determine permitting requirements. Any unavoidable impacts to regulated aquatic resources will be mitigated in accordance with applicable state and federal regulations. Aquatic resources that may be temporarily impacted during construction will be restored to pre-construction conditions in accordance with applicable permit requirements. Where unavoidable permanent impacts occur, compensatory mitigation will be implemented as required. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to the permits described above, other approvals may be required for Project construction. These are expected to be minor in nature, as they typically involve less effort to prepare and undergo a more streamlined review process. Examples include Federal Aviation Administration airspace clearance, stormwater and erosion/sedimentation control permits under Pennsylvania’s National Pollutant Discharge Elimination System (NPDES) Construction General Permit, roadway occupancy permits, and utility or railroad crossing agreements. Following Project award, the Proposer will consult with local jurisdictions and relevant state and federal permitting agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed for permitting, and identify appropriate avoidance and mitigation measures.

Tower characteristics	The towers will primarily consist of self-supported tubular steel monopoles in a delta configuration with direct embed foundations.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION
Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$2,512,656.00
Component cost (in-service year)	$2,998,772.00

Greenfield Transmission Line Component

Component title	Beaver Brook - Slykerville #2 230kV Transmission Line
Project description	CONFIDENTIAL INFORMATION
Point A	Beaver Brook
Point B	Slykerville
Point C	

	Normal ratings	Emergency ratings

Summer (MVA)	1034.000000	1034.000000
Winter (MVA)	1034.000000	1034.000000
Conductor size and type	Double Bundle 954kcmil "Cardinal" ACSS/TW/MA3	
Nominal voltage	AC	
Nominal voltage	230	
Line construction type	Overhead	
General route description	The route heads generally east away from the new Beaver Brook Substation to the adjacent existing Slykerville substation.	
Terrain description	The terrain for the route is farmland.	
Right-of-way width by segment	The new transmission line is approximately 0.3 miles in length with a right-of-way width planned to be 125 feet.	
Electrical transmission infrastructure crossings	N/A	
Civil infrastructure/major waterway facility crossing plan	The Proposer will obtain all required crossing and encroachment permits, authorizations, and agreements for existing linear infrastructure intersected by the Project. Coordination will be conducted with all affected easement holders, including municipal and county road authorities, oil and gas pipeline operators, electric transmission owners, and local distribution utilities (electric, sewer, water, gas, fiber, and other communications) to ensure that the Project does not interfere with existing easement rights. The Proposer will obtain road occupancy permits from municipal and county jurisdictions, as well as the Pennsylvania Department of Transportation (PennDOT), for the placement of transmission facilities across or along public roads, in accordance with 67 Pa. Code Chapter 459 and applicable local ordinances. Crossing agreements will be secured with owners of existing oil and gas pipelines, transmission lines, and other utilities to ensure compliance with safety standards, operational requirements, and right-of-way conditions.	

Environmental impacts	The Project will require a Certificate of Public Convenience from the Pennsylvania Public Utility Commission (“PA PUC”) pursuant to 66 Pa.C.S. § 1101 et seq. The proposed Project has been routed to avoid and minimize impacts to areas of environmental concern, including wetlands and waters, based on GIS data. Environmental impacts will be further minimized by collocating the proposed transmission line along corridors of existing linear development to the maximum extent practicable. The Proposer will engage a qualified consultant to conduct a delineation of wetlands and waters in order to establish jurisdictional boundaries of aquatic resources in the Project area. The results will be used to refine Project routing, if necessary, and determine permitting requirements. Any unavoidable impacts to regulated aquatic resources will be mitigated in accordance with applicable state and federal regulations. Aquatic resources that may be temporarily impacted during construction will be restored to pre-construction conditions in accordance with applicable permit requirements. Where unavoidable permanent impacts occur, compensatory mitigation will be implemented as required. The U.S. Army Corps of Engineers (USACE) will review the Project for compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470 et seq.) and Section 7 of the Federal Endangered Species Act (16 U.S.C. § 1536(a)(2)), in coordination with the Pennsylvania State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Service (USFWS), respectively. In addition to the permits described above, other approvals may be required for Project construction. These are expected to be minor in nature, as they typically involve less effort to prepare and undergo a more streamlined review process. Examples include Federal Aviation Administration airspace clearance, stormwater and erosion/sedimentation control permits under Pennsylvania’s National Pollutant Discharge Elimination System (NPDES) Construction General Permit, roadway occupancy permits, and utility or railroad crossing agreements. Following Project award, the Proposer will consult with local jurisdictions and relevant state and federal permitting agencies to confirm permitting requirements, determine the types and scopes of environmental surveys and studies needed for permitting, and identify appropriate avoidance and mitigation measures.
Tower characteristics	The towers will primarily consist of self-supported tubular steel monopoles in a delta configuration with direct embed foundations.
Construction responsibility	CONFIDENTIAL INFORMATION
Benefits/Comments	CONFIDENTIAL INFORMATION
Component Cost Details - In Current Year $	
Engineering & design	CONFIDENTIAL INFORMATION
Permitting / routing / siting	CONFIDENTIAL INFORMATION
ROW / land acquisition	CONFIDENTIAL INFORMATION
Materials & equipment	CONFIDENTIAL INFORMATION

Construction & commissioning	CONFIDENTIAL INFORMATION
Construction management	CONFIDENTIAL INFORMATION
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION
Contingency	CONFIDENTIAL INFORMATION
Total component cost	$2,512,656.00
Component cost (in-service year)	$2,998,772.00

Transmission Line Upgrade Component

Component title	Sunbury - Susquehanna 500kV Loop-In
Project description	CONFIDENTIAL INFORMATION
Impacted transmission line	Sunbury - Susquehanna
Point A	Sunbury
Point B	Susquehanna
Point C	
Terrain description	The loop-in occurs on farmland.
Existing Line Physical Characteristics	
Operating voltage	500
Conductor size and type	Conductor utilized will match the existing
Hardware plan description	N/A
Tower line characteristics	The new structures will match the existing tower line characteristics.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	500.000000	500.000000

	Normal ratings	Emergency ratings
Summer (MVA)	2707.000000	3112.000000
Winter (MVA)	3207.000000	3566.000000
Conductor size and type	Conductor utilized will match the existing	
Shield wire size and type	Shield wire utilized will match the existing	
Rebuild line length	0.5 miles	
Rebuild portion description	The loop-in will require the construction of approximately 0.5 miles of new 500 kV transmission line. The right-of-way width is assumed to be 200 feet.	
Right of way	Approximately 0.5 miles of new right-of-way will be required for the loop-in. The right-of-way width is assumed to be 200 feet.	
Construction responsibility	CONFIDENTIAL INFORMATION	
Benefits/Comments	CONFIDENTIAL INFORMATION	
Component Cost Details - In Current Year $		
Engineering & design	CONFIDENTIAL INFORMATION	
Permitting / routing / siting	CONFIDENTIAL INFORMATION	
ROW / land acquisition	CONFIDENTIAL INFORMATION	
Materials & equipment	CONFIDENTIAL INFORMATION	
Construction & commissioning	CONFIDENTIAL INFORMATION	
Construction management	CONFIDENTIAL INFORMATION	
Overheads & miscellaneous costs	CONFIDENTIAL INFORMATION	
Contingency	CONFIDENTIAL INFORMATION	
Total component cost	$1,738,302.00	
Component cost (in-service year)	$2,045,580.00	

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
2025W1-32GD-LL46	208013	SUMT2_B4	208090	SUMT	2	230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL34	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL43	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL44	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL36	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL37	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL38	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL39	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL40	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL41	200022	SUSQ	208116	SUSQTR21	21	500/230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL17	208113	SUSQ	207972	TOMH	2	230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL18	208113	SUSQ	207972	TOMH	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL7	208113	SUSQ	207972	TOMH	2	230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL8	208113	SUSQ	207972	TOMH	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-LL61	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL62	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL58	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL59	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL2	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL3	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL19	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL11	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL21	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-32GD-LL42	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL47	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL48	314902	8CARSON	314914	8MDLTHAN	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL76	314902	8CARSON	314914	8MDLTHAN	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL69	314902	8CARSON	314914	8MDLTHAN	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL70	314902	8CARSON	314914	8MDLTHAN	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL66	314902	8CARSON	314914	8MDLTHAN	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL67	314902	8CARSON	314914	8MDLTHAN	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL63	314908	8ELMONT	314911	8LADYSMITH	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL75	314908	8ELMONT	314911	8LADYSMITH	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL24	314908	8ELMONT	314911	8LADYSMITH	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL50	314908	8ELMONT	314911	8LADYSMITH	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL33	314908	8ELMONT	314911	8LADYSMITH	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL22	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL23	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL5	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL6	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL45	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL35	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL16	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL31	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL32	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL9	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL60	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL53	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL74	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL68	314914	8MDLTHAN	314918	8NO ANNA	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL30	314923	8SEPTA	314924	8SURRY	1	500	345	2032 Generation Deliverability	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-32GD-LL27	314923	8SEPTA	314924	8SURRY	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL28	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL29	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL25	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL26	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL12	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL13	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL14	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL15	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL20	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL49	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL10	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL4	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL1	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL54	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL55	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL56	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL57	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL51	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL52	314924	8SURRY	314903	8CHCKAHM	1	500	345	2032 Generation Deliverability	Included
2025W1-32GD-LL64	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL65	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL71	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL72	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-LL73	314924	8SURRY	314903	8CHCKAHM	1	500	345	Generation Deliverability	Included
2025W1-32GD-W3	208120	SU10	208113	SUSQ	2	230	229	2032 Generation Deliverability	Included
2025W1-32GD-W4	208120	SU10	208113	SUSQ	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-W1	208113	SUSQ	207972	TOMH	2	230	229	2032 Generation Deliverability	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-32GD-W2	208113	SUSQ	207972	TOMH	1	230	229	2032 Generation Deliverability	Included
2025W1-32GD-W5	208113	SUSQ	207972	TOMH	2	230	229	2032 Generation Deliverability	Included
2025W1-32GD-W6	208113	SUSQ	207972	TOMH	1	230	229	2032 Generation Deliverability	Included
2025W1-GD-LL192	208113	SUSQ	207972	TOMH	2	230	229	Generation Deliverability	Included
2025W1-GD-LL194	208113	SUSQ	207972	TOMH	1	230	229	Generation Deliverability	Included
2025W1-GD-LL195	208113	SUSQ	207972	TOMH	2	230	229	Generation Deliverability	Included
2025W1-GD-S13	207915	GLBR	208120	SU10	1	230	229	Generation Deliverability	Included
2025W1-GD-S14	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-GD-S161	207915	GLBR	208120	SU10	1	230	229	Generation Deliverability	Included
2025W1-GD-S162	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-GD-S163	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-GD-S164	207915	GLBR	208120	SU10	2	230	229	Generation Deliverability	Included
2025W1-GD-S168	207915	GLBR	208120	SU10	1	230	229	Generation Deliverability	Included
2025W1-GD-S180	208120	SU10	208113	SUSQ	2	230	229	Generation Deliverability	Included
2025W1-GD-S452	208113	SUSQ	207972	TOMH	2	230	229	Generation Deliverability	Included
2025W1-GD-S454	208113	SUSQ	207972	TOMH	1	230	229	Generation Deliverability	Included
2025W1-GD-S464	208120	SU10	208113	SUSQ	1	230	229	Generation Deliverability	Included
2025W1-GD-S478	207973	FRAC	208072	SIEG	1	230	229	Generation Deliverability	Included
2025W1-GD-S481	208113	SUSQ	207972	TOMH	2	230	229	Generation Deliverability	Included
2025W1-GD-S483	208113	SUSQ	207972	TOMH	1	230	229	Generation Deliverability	Included
2025W1-GD-W377	208113	SUSQ	207972	TOMH	2	230	229	Generation Deliverability	Included
2025W1-GD-W378	208113	SUSQ	207972	TOMH	1	230	229	Generation Deliverability	Included
2025W1-N11-ST111	207972	TOMH	208113	SUSQ	2	230	229	N-1-1 Thermal	Included
2025W1-N11-ST112	207972	TOMH	208113	SUSQ	2	230	229	N-1-1 Thermal	Included
2025W1-N11-ST115	207972	TOMH	208113	SUSQ	1	230	229	N-1-1 Thermal	Included
2025W1-N11-ST117	207972	TOMH	208113	SUSQ	1	230	229	N-1-1 Thermal	Included
2025W1-N11-ST49	207972	TOMH	207977	HARW	2	230	229	N-1-1 Thermal	Included
2025W1-N11-ST50	207972	TOMH	207977	HARW	2	230	229	N-1-1 Thermal	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-ST51	207972	TOMH	207977	HARW	1	230	229	N-1-1 Thermal	Included
2025W1-N11-ST52	207972	TOMH	207977	HARW	1	230	229	N-1-1 Thermal	Included
2025W1-N11-ST81	207972	TOMH	208113	SUSQ	2	230	229	N-1-1 Thermal	Included
2025W1-N11-ST82	207972	TOMH	208113	SUSQ	2	230	229	N-1-1 Thermal	Included
2025W1-N11-ST90	207972	TOMH	208113	SUSQ	1	230	229	N-1-1 Thermal	Included
2025W1-N11-ST91	207972	TOMH	208113	SUSQ	1	230	229	N-1-1 Thermal	Included

New Flowgates

CONFIDENTIAL INFORMATION

Financial Information

Capital spend start date	01/2026
Construction start date	06/2028
Project Duration (In Months)	53

Cost Containment Commitment

Cost cap (in current year)	CONFIDENTIAL INFORMATION
Cost cap (in-service year)	CONFIDENTIAL INFORMATION

Components covered by cost containment

1. Cross Valley Substation - Proposer
2. Grassy Path Substation - Proposer
3. Beaver Brook Substation - Proposer
4. Montour - Cross Valley 500kV Transmission Line - Proposer
5. Cross Valley - Grassy Path 500kV Transmission Line - Proposer
6. Grassy Path - Beaver Brook 500kV Transmission Line - Proposer

7. Cross Valley - NESC 230kV Transmission Line - Proposer

8. Grassy Path - Tomhicken 230kV Transmission Line - Proposer

9. Beaver Brook - Slykerville #1 230kV Transmission Line - Proposer

10. Beaver Brook - Slykerville #2 230kV Transmission Line - 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	Yes
AFUDC	No
Escalation	No
Additional Information	CONFIDENTIAL 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?	CONFIDENTIAL INFORMATION
Additional cost containment measures not covered above	CONFIDENTIAL INFORMATION

Additional Comments

None