

Lauschtown - Brandywine - Pilottown 500 kV line and Sugars Bridge 230 kV Station (Increased brownfield alternative)

General Information

Proposing entity name	Proprietary Information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Proprietary Information
Company proposal ID	Proprietary Information
PJM Proposal ID	391
Project title	Lauschtown - Brandywine - Pilottown 500 kV line and Sugars Bridge 230 kV Station (Increased brownfield alternative)

Project description	Construct a new Pilottown 500 kV Switching Station with three breaker and a half bays, eight 500 kV 4000 A breakers, and 16 500 kV 4000 A MODs. The station design will have room for 1 future 500 kV breaker and a half bay. Construct a new Brandywine 500/230 kV Substation with four 500 kV breaker and a half bays and two 230 kV breaker and a half bays. There will be 10 500 kV 4000 A breakers, 20 500 kV 4000 A MODs, six 230 kV 4000 A breakers, and 12 230 kV 4000 A MODs. Brandywine Substation will have two new 500/230 kV 750 MVA transformers. The station design will have room for 1 future 230 kV breaker and a half bay. Bifurcate the Bramah - Rock Springs 500 kV line and bring it in and out of the new Pilottown 500 kV Switching Station. Upgrade Bramah 500 kV yard. Add one new 500 kV 4000 A breaker and two 500 kV 4000 A MODs. Upgrade Rock Springs 500 kV yard to accommodate the new termination for the Rock Springs - Pilottown 500 kV # 2 line. Add one new 500 kV bay, two 500 kV 4000 A breakers, and four 500 kV 4000 A MODs. Bifurcate the Limerick - Peach Bottom 500 kV line and bring it in and out of the new Brandywine 500/230 kV Substation. Construct a new Pilottown - Brandywine 500 kV line (41 miles) with two segments: (1) a greenfield section from Pilottown to where the new line intersects the existing Peach Bottom - Limerick 500 kV line, and (2) a brownfield segment double-circuiting the new line with the Peach Bottom - Limerick 500 kV line. Construct a new Lauschtown - Brandywine 500 kV greenfield line (16.7 miles), maximizing existing PPL ROW along the way as much as feasible. Upgrade Lauschtown 500 kV yard to accommodate the new termination for the Lauschtown - Brandywine 500 kV line. Add two new 500 kV 4000 A breakers and four 500 kV 4000 A MODs. Construct a new Sugars Bridge 230 kV Switching Station. Bifurcate the existing Newlinville - Bradford 230 kV DCT line and bring the lines in and out of the new Sugars Bridge 230 kV station. Construct a new Brandywine - Sugars Bridge 230 kV DCT line (12 miles). Rebuild the existing Bramah - Pilottown - Rock Springs 500 kV line as a double-circuit 500 kV line. Rebuild the Bradford - Planebrook 230 kV 1 & 2 lines using double-bundle 1590 54/19 ACSR conductor. Upgrade Chichester 230 kV Substation to a breaker and a half layout. Upgrade station equipment at Bradford 230 kV Substation to accommodate 1295/1604 MVA summer ratings on the Planebrook and Sugars Bridge (formerly Newlineville) line terminals.
Email	Proprietary Information
Project in-service date	05/2031
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	Proprietary Information

Project Components

1. Pilottown 500 kV Switching Station
2. Brandywine 500/230 kV Substation
3. Sugars Bridge 230 kV Switching Station
4. Lauschtown 500 kV Yard Upgrade (termination for new Lauschtown - Brandywine 500 kV line)
5. Bramah 500 kV Yard Upgrade (termination for 2nd line from Pilottown)
6. Rock Springs 500 kV Yard Upgrade (termination for 2nd line from Pilottown)
7. Bradford 230 kV Substation Upgrade
8. Planebrook 230 kV Substation Upgrade (ratings upgrades on Bradford line terminals)
9. Chichester 230 kV Substation Upgrade
10. Bramah - Rock Springs 500 kV line bifurcation
11. Peach Bottom - Limerick 500 kV line bifurcation
12. Newlinville - Bradford 230 kV 1 & 2 line bifurcation
13. Bramah - Pilottown 500 kV # 2 line (DCT with existing line)
14. Pilottown - Rock Springs 500 kV # 2 line (DCT with existing line)
15. Sugars Bridge - Bradford 230 kV 1 & 2 DCT line rebuild
16. Planebrook - Bradford 230 kV # 1 line rebuild
17. Planebrook - Bradford 230 kV # 2 line rebuild
18. Lauschtown - Brandywine 500 kV line
19. Pilottown - Brandywine 500 kV line (Greenfield segment)
20. Brandywine - Sugars Bridge 230 kV 1 & 2 DCT lines
21. Pilottown - Brandywine 500 kV line (brownfield segment: DCT rebuild with existing Peach Bottom - Limerick 500 kV line)

Greenfield Substation Component

Component title	Pilottown 500 kV Switching Station
Project description	Proprietary Information
Substation name	Pilottown 500 kV Switching Station
Substation description	Construct a new Pilottown 500 kV Switching Station with three breaker and a half bays, eight 500 kV 4000 A breakers, and 16 500 kV 4000 A MODs. The station design will have room for 1 future 500 kV breaker and a half bay.

Nominal voltage	AC	
Nominal voltage	500	
Transformer Information		
None		
Major equipment description	Three breaker and a half bays Eight 500 kV 4000 A breakers 16 500 kV 4000 A MODs	
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Environmental assessment	Based on the topography of the region, Developer anticipates that PADEP Chapter 105 Water Obstruction and Encroachment approvals and corresponding U.S. Army Corps of Engineers Section 404 authorization, with associated Section 401 Water Quality Certification will be required. Due to the size of the proposed substation and the prevalence of pocket wetlands in region, minor wetland mitigation may be required depending on the final siting of the yard and associated storm water basins. The project will also require a Chapter 102 NPDES stormwater permit, including erosion and sediment control and post-construction stormwater management plans. Environmental resource reviews will include PNDI coordination with the Pennsylvania Game Commission, Fish and Boat Commission, and DCNR, as well as Endangered Species Act consultation with the U.S. Fish and Wildlife Service due to the potential presence of listed bat species and bog turtle habitat. Avian and eagle reviews under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act are also anticipated. Because of the extent of ground disturbing activities expected, the project will require an archaeological review through the Pennsylvania State Historic Preservation Office (PA SHPO), including evaluation of archaeological resources and potential visual effects on historic properties. Construction activities will require various transportation and crossing approvals, including PennDOT Highway Occupancy Permits and oversize/overweight hauling permits for major equipment deliveries, along with at least one to two minimum use driveway permits for permanent site access.	

Outreach plan	Developer's public outreach plan will guide engagement with communities, landowners, government agencies, elected officials, and other stakeholders for a proposed major electric transmission infrastructure project in eastern Pennsylvania. The project team will identify key stakeholders, evaluate the study area and environmental setting, document potentially affected municipalities and agencies, and establish communication protocols for the routing, permitting, and siting process. The project team will begin stakeholder engagement early and continue it throughout project development. Planned outreach will include public open houses, direct coordination with local and state officials, notifications to property owners, project fact sheets, media communications, and opportunities for public feedback. The team will use input gathered through these activities to inform route selection and other project-development decisions. The project will follow a preliminary schedule covering stakeholder outreach, public meetings, route evaluation and selection, regulatory filings, construction, and energization. Throughout these phases, the project team will maintain transparent communications, build stakeholder awareness, respond to public input, and support the permitting and siting process through proactive engagement.
Land acquisition plan	The Developer acquires future substation sites by evaluating multiple location alternatives, selecting sites that best meet engineering and environmental objectives, engaging affected stakeholders, and obtaining the necessary property interests through a structured land acquisition process integrated with project siting and permitting activities. Several candidate parcels within a reasonable distance from the targeted EHV transmission line have been identified as part of this project development process, known as a functional area. The potential substation sites will then go through a multi-disciplinary planning and siting process that considers system reliability needs, constructability, environmental constraints, land use, permitting requirements, access, and impacts to nearby communities. Candidate locations are screened to avoid or minimize effects on residences, sensitive environmental resources, cultural and historic resources, conservation lands, existing development, and other infrastructure conflicts. Alternative locations are assessed before a preferred site is selected. Once a preferred location is identified, The Developer undertakes property-owner engagement and negotiation, public communications as needed, and coordination with local officials and regulatory agencies. Property rights are typically acquired through negotiated purchases or easements, supported by surveys, title research, appraisals, and right-of-way activities. Land acquisition efforts are coordinated with project permitting, engineering, and environmental review to support the development of transmission and substation facilities.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information

Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$80,861,535.00
Component cost (in-service year)	\$95,719,670.00

Greenfield Substation Component

Component title	Brandywine 500/230 kV Substation		
Project description	Proprietary Information		
Substation name	Brandywine 500/230 kV Substation		
Substation description	Construct a new Brandywine 500/230 kV Substation with four 500 kV breaker and a half bays and two 230 kV breaker and a half bays. There will be 10 500 kV 4000 A breakers, 20 500 kV 4000 A MODs, six 230 kV 4000 A breakers, and 12 230 kV 4000 A MODs. Brandywine Substation will have two new 500/230 kV 750 MVA transformers. The station design will have room for 1 future 230 kV breaker and a half bay.		
Nominal voltage	AC		
Nominal voltage	500/230		

Transformer Information

	Name		Capacity (MVA)
Transformer	Brandywine T1		750
	High Side	Low Side	Tertiary
Voltage (kV)	500	230	

	Name	Capacity (MVA)
Transformer	Brandywine T2	750
	High Side	Low Side Tertiary
Voltage (kV)	500	230
Major equipment description	Four 500 kV breaker and a half bays Two 230 kV breaker and a half bays 10 500 kV 4000 A breakers 20 500 kV 4000 A MODs Six 230 kV 4000 A breakers 12 230 kV 4000 A MODs Two new 500/230 kV 750 MVA transformers	
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Environmental assessment	Based on the topography of the region, Developer anticipates that PADEP Chapter 105 Water Obstruction and Encroachment approvals and corresponding U.S. Army Corps of Engineers Section 404 authorization, with associated Section 401 Water Quality Certification will be required. Due to the size of the proposed substation and the prevalence of pocket wetlands in region, minor wetland mitigation may be required depending on the final siting of the yard and associated storm water basins. The project will also require a Chapter 102 NPDES stormwater permit, including erosion and sediment control and post-construction stormwater management plans. Environmental resource reviews will include PNDI coordination with the Pennsylvania Game Commission, Fish and Boat Commission, and DCNR, as well as Endangered Species Act consultation with the U.S. Fish and Wildlife Service due to the potential presence of listed bat species and bog turtle habitat. Avian and eagle reviews under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act are also anticipated. Because of the extent of ground disturbing activities expected, the project will require an archaeological review through the Pennsylvania State Historic Preservation Office (PA SHPO), including evaluation of archaeological resources and potential visual effects on historic properties. Construction activities will require various transportation and crossing approvals, including PennDOT Highway Occupancy Permits and oversize/overweight hauling permits for major equipment deliveries, along with at least one to two minimum use driveway permits for permanent site access.	

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Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information

Materials & equipment	Proprietary Information	
Construction & commissioning	Proprietary Information	
Construction management	Proprietary Information	
Overheads & miscellaneous costs	Proprietary Information	
Contingency	Proprietary Information	
Total component cost	\$173,456,901.00	
Component cost (in-service year)	\$205,329,237.00	
Greenfield Substation Component		
Component title	Sugars Bridge 230 kV Switching Station	
Project description	Proprietary Information	
Substation name	Sugars Bridge 230 kV Switching Station	
Substation description	Construct a new Sugars Bridge 230 kV Switching Station with 3 breaker and a half bays, nine 230 kV 4000 A breakers, and 18 230 kV 4000 A MODs. The station design will have room for 1 future 230 kV breaker and a half bay. Bifurcate the existing Newlinville - Bradford 230 kV DCT line and bring the lines in and out of the new Sugars Bridge 230 kV station.	
Nominal voltage	AC	
Nominal voltage	230	
Transformer Information		
None		
Major equipment description	Three 230 kV breaker and a half bays Nine 230 kV 4000 A breakers 18 230 kV 4000 A MODs	
	Normal ratings	Emergency ratings
Summer (MVA)	1660.000000	1909.000000
Winter (MVA)	1967.000000	2187.000000

Environmental assessment

Based on the topography of the region, Developer anticipates that PADEP Chapter 105 Water Obstruction and Encroachment approvals and corresponding U.S. Army Corps of Engineers Section 404 authorization, with associated Section 401 Water Quality Certification will be required. Due to the size of the proposed substation and the prevalence of pocket wetlands in region, minor wetland mitigation may be required depending on the final siting of the yard and associated storm water basins. The project will also require a Chapter 102 NPDES stormwater permit, including erosion and sediment control and post-construction stormwater management plans. Environmental resource reviews will include PNDI coordination with the Pennsylvania Game Commission, Fish and Boat Commission, and DCNR, as well as Endangered Species Act consultation with the U.S. Fish and Wildlife Service due to the potential presence of listed bat species and bog turtle habitat. Avian and eagle reviews under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act are also anticipated. Because of the extent of ground disturbing activities expected, the project will require an archaeological review through the Pennsylvania State Historic Preservation Office (PA SHPO), including evaluation of archaeological resources and potential visual effects on historic properties. Construction activities will require various transportation and crossing approvals, including PennDOT Highway Occupancy Permits and oversize/overweight hauling permits for major equipment deliveries, along with at least one to two minimum use driveway permits for permanent site access.

Outreach plan

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Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$40,180,327.00
Component cost (in-service year)	\$47,563,377.00

Substation Upgrade Component

Component title	Lauschtown 500 kV Yard Upgrade (termination for new Lauschtown - Brandywine 500 kV line)
Project description	Proprietary Information
Substation name	Lauschtown
Substation zone	PPL
Substation upgrade scope	Lauschtown 500 kV Yard Upgrade (termination for new Lauschtown - Brandywine 500 kV line). Two new 500 kV 4000 A breakers and four 500 kV 4000 A MODs.
Transformer Information	
None	
New equipment description	Two 500 kV 4000 A breakers Four 500 kV 4000 A MODs
Substation assumptions	No assumptions for this station. Station is owned by Developer and no yard perimeter expansion is required to accommodate this upgrade.
Real-estate description	Station is owned by Developer and no yard perimeter expansion is required to accommodate this upgrade.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information

Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$26,721,247.00
Component cost (in-service year)	\$31,631,219.00
Substation Upgrade Component	
Component title	Bramah 500 kV Yard Upgrade (termination for 2nd line from Pilottown)
Project description	Proprietary Information
Substation name	Bramah
Substation zone	PECO
Substation upgrade scope	Upgrade Bramah 500 kV yard to accommodate the new termination for the Bramah - Pilottown 500 kV # 2 line. Add one new 500 kV 4000 A breaker and two 500 kV 4000 A MODs. (Assumes there is room in an existing bay of the new Bramah Substation. No FERC 715 one-line yet available).
Transformer Information	
None	
New equipment description	One 500 kV 4000 A breaker Two 500 kV 4000 A MODs
Substation assumptions	Assumes there is room in an existing bay of the new Bramah Substation. No FERC 715 one-line yet available.
Real-estate description	New station not in-service as yet. Assumed no additional real estate necessary.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information

ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$9,466,789.00
Component cost (in-service year)	\$10,205,829.00
Substation Upgrade Component	
Component title	Rock Springs 500 kV Yard Upgrade (termination for 2nd line from Pilottown)
Project description	Proprietary Information
Substation name	Rock Springs
Substation zone	DPL
Substation upgrade scope	Upgrade Rock Springs 500 kV yard to accommodate the new termination for the Rock Springs - Pilottown 500 kV # 2 line. Add one new 500 kV bay, two 500 kV 4000 A breakers, and four 500 kV 4000 A MODs.
Transformer Information	
None	
New equipment description	One 500 kV bay Two 500 kV 4000 A breakers Four 500 kV 4000 A MODs
Substation assumptions	Assumed the substation perimeter fence would need to be expanded to the southeast to fit an additional bay.
Real-estate description	Land for the proposed expansion is immediately adjacent to the site and appears to be owned by the station operator.
Construction responsibility	Proprietary Information

Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$18,933,578.00
Component cost (in-service year)	\$20,411,658.00
Substation Upgrade Component	
Component title	Bradford 230 kV Substation Upgrade
Project description	Proprietary Information
Substation name	Bradford
Substation zone	PECO
Substation upgrade scope	Upgrade station equipment at Bradford 230 kV Substation to accommodate 1295/1604 MVA summer ratings on the Planebrook and Sugars Bridge (formerly Newlineville) line terminals. Replace four 230 kV 3000 A breakers and eight 230 kV 3000 A MODs.
Transformer Information	
None	
New equipment description	Four 230 kV 3000 A breakers Eight 230 kV 3000 A MODs

Substation assumptions	Assumes that Bradford bus is capable of handling the increased thermal capacity of the new Sugars Bridge source lines. Bus ratings for this station are unavailable to Developer. If a nodal analysis with accurate ratings for the bus indicates that a bus upgrade is required, Developer recommends that this station be redesigned to a breaker and a half configuration.
Real-estate description	No station expansion required to accommodate this upgrade work.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$14,471,424.00
Component cost (in-service year)	\$15,601,159.00
Substation Upgrade Component	
Component title	Planebrook 230 kV Substation Upgrade (ratings upgrades on Bradford line terminals)
Project description	Proprietary Information
Substation name	Planebrook
Substation zone	PECO

Substation upgrade scope	Planebrook Substation Upgrade: Replace existing Bradford line terminal equipment with two new 230 kV 3000 A breakers and four 230 kV 3000 A MODs.
Transformer Information	
None	
New equipment description	Two 230 kV 3000 A breakers Four 230 kV 3000 A MODs
Substation assumptions	Assumes that existing Planebrook Substation terminal equipment for the Bradford 230 kV lines would thermally limit the rebuilt Bradford - Planebrook 230 kV 1 & 2 lines and need to be replaced. If existing equipment is not limiting, this upgrade component will not be necessary.
Real-estate description	No station expansion is necessary to accommodate this upgrade work.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$7,235,712.00
Component cost (in-service year)	\$7,800,579.00
Substation Upgrade Component	

Component title	Chichester 230 kV Substation Upgrade
Project description	Proprietary Information
Substation name	Chichester
Substation zone	PECO
Substation upgrade scope	Upgrade Chichester 230 kV Substation to a breaker and a half layout with 4 bays, 12 230 kV 4000 A breakers, and 24 230 kV 4000 A MODs
Transformer Information	
None	
New equipment description	4 breaker and a half bays 12 230 kV 4000 A breakers 24 230 kV 4000 A MODs
Substation assumptions	Assumes PECO is able to upgrade this yard in place with no real estate acquisition.
Real-estate description	No yard expansion anticipated to accommodate this upgrade.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$62,727,393.00

Component cost (in-service year)	\$67,624,307.00
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Transmission Line Upgrade Component

Component title	Bramah - Rock Springs 500 kV line bifurcation
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Project description	Proprietary Information
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Impacted transmission line	Bramah - Rock Springs 500 kV line
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Point A	Bramah
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Point B	Rock Springs
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Point C	
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Terrain description	The line is located on farmland immediately adjacent to the proposed Pilottown switchyard.
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Existing Line Physical Characteristics

Operating voltage	500
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Conductor size and type	Double-bundle 2493 ACAR conductor
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Hardware plan description	Bifurcation will include all new hardware and infrastructure associated with the taps to Pilottown.
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Tower line characteristics	Existing line is composed of single-circuit horizontal 500 kV towers.
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Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Conductor size and type	Triple bundle 1113 ACSS conductor	

Shield wire size and type	Dual OPGW
Rebuild line length	Less than 1 mile
Rebuild portion description	Proposed bifurcation point is immediately adjacent to proposed Pilottown switchyard.
Right of way	ROW will be located on Pilottown switchyard parcel.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$7,356,134.00
Component cost (in-service year)	\$7,930,402.00
Transmission Line Upgrade Component	
Component title	Peach Bottom - Limerick 500 kV line bifurcation
Project description	Proprietary Information
Impacted transmission line	Peach Bottom - Limerick 500 kV line
Point A	Peach Bottom

Point B	Limerick	
Point C		
Terrain description	The line is located in a forested area immediately adjacent to the proposed Brandywine switchyard.	
Existing Line Physical Characteristics		
Operating voltage	500	
Conductor size and type	Double-bundle 2493 ACAR conductor	
Hardware plan description	Bifurcation will include all new hardware and infrastructure associated with the taps to Brandywine.	
Tower line characteristics	The existing line is composed of 500 kV single-circuit horizontal towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Conductor size and type	Triple bundle 1113 ACSS conductor	
Shield wire size and type	Dual OPGW	
Rebuild line length	Less than 1 mile	
Rebuild portion description	Proposed bifurcation point is immediately adjacent to proposed Brandywine Substation.	
Right of way	ROW will be located on Brandywine Substation parcel.	
Construction responsibility	Proprietary Information	
Benefits/Comments	Proprietary Information	

Component Cost Details - In Current Year \$

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$7,356,134.00
Component cost (in-service year)	\$7,930,402.00

Transmission Line Upgrade Component

Component title	Newlinville - Bradford 230 kV 1 & 2 line bifurcation
Project description	Proprietary Information
Impacted transmission line	Newlinville - Bradford 230 kV line
Point A	Newlinville
Point B	Sugars Bridge
Point C	Bradford
Terrain description	The line is located in a forested area immediately adjacent to the proposed Sugars Bridge Substation.
Existing Line Physical Characteristics	
Operating voltage	230

Conductor size and type	Unknown	
Hardware plan description	Bifurcation will include all new hardware and infrastructure associated with the taps to Sugars Bridge.	
Tower line characteristics	Line is composed of double-circuit 230 kV towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1295.000000	1604.000000
Winter (MVA)	1295.000000	1604.000000
Conductor size and type	Double-Bundle 1590 54/19 ACSR conductor	
Shield wire size and type	Dual OPGW	
Rebuild line length	Less than 1 mile	
Rebuild portion description	Proposed bifurcation point is immediately adjacent to proposed Sugars Bridge Substation.	
Right of way	ROW will be located on Sugars Bridge Substation parcel.	
Construction responsibility	Proprietary Information	
Benefits/Comments	Proprietary Information	
Component Cost Details - In Current Year \$		
Engineering & design	Proprietary Information	
Permitting / routing / siting	Proprietary Information	
ROW / land acquisition	Proprietary Information	
Materials & equipment	Proprietary Information	

Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$3,156,871.00
Component cost (in-service year)	\$3,403,317.00
Transmission Line Upgrade Component	
Component title	Bramah - Pilottown 500 kV # 2 line (DCT with existing line)
Project description	Proprietary Information
Impacted transmission line	Bramah - Rock Springs 500 kV line
Point A	Bramah
Point B	Pilottown
Point C	Rock Springs
Terrain description	Consists of farmland and a significant Susquehanna River crossing.
Existing Line Physical Characteristics	
Operating voltage	500
Conductor size and type	Double-bundle 2493 ACAR conductor
Hardware plan description	All hardware and infrastructure associated with the line will be removed and replaced to facilitate the 500 kV DCT rebuild.
Tower line characteristics	Existing line is composed of 500 kV single-circuit horizontal towers.
Proposed Line Characteristics	
	Designed
	Operating

Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Conductor size and type	Triple bundle 1113 ACSS conductor	
Shield wire size and type	Dual OPGW	
Rebuild line length	8.96 miles	
Rebuild portion description	Developer proposes to completely remove and rebuild the existing Bramah to Piliottown 500kV line to utilize the transmission corridor for a new DCT 500kV path to Piliottown. The proposed transmission structures will be composed of DCT 500kV steel monopoles. The existing 500kV circuit will be replaced on the new poles with new larger conductor. The second circuit of the structure will be the proposed second 500kV line to Piliottown.	
Right of way	Existing ROW will be used.	
Construction responsibility	Proprietary Information	
Benefits/Comments	Proprietary Information	
Component Cost Details - In Current Year \$		
Engineering & design	Proprietary Information	
Permitting / routing / siting	Proprietary Information	
ROW / land acquisition	Proprietary Information	
Materials & equipment	Proprietary Information	
Construction & commissioning	Proprietary Information	
Construction management	Proprietary Information	
Overheads & miscellaneous costs	Proprietary Information	
Contingency	Proprietary Information	

Total component cost	\$133,187,322.00
Component cost (in-service year)	\$143,584,803.00

Transmission Line Upgrade Component

Component title	Pilottown - Rock Springs 500 kV # 2 line (DCT with existing line)	
Project description	Proprietary Information	
Impacted transmission line	Bramah - Rock Springs 500 kV line	
Point A	Bramah	
Point B	Pilottown	
Point C	Rock Springs	
Terrain description	Farmland.	
Existing Line Physical Characteristics		
Operating voltage	500	
Conductor size and type	Double-bundle 2493 ACAR conductor	
Hardware plan description	All hardware and infrastructure associated with the line will be removed and replaced to facilitate the 500 kV DCT rebuild.	
Tower line characteristics	Existing line is composed of 500 kV single-circuit horizontal towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000

Conductor size and type	Triple bundle 1113 ACSS conductor
Shield wire size and type	Dual OPGW
Rebuild line length	2.68 miles
Rebuild portion description	Developer proposes to completely remove and rebuild the existing Rock Springs to Piliottown 500kV line to utilize the transmission corridor for a new DCT 500kV path to Piliottown. The proposed transmission structures will be composed of DCT 500kV steel monopoles. The existing 500kV circuit will be replaced on the new poles with new larger conductor. The second circuit of the structure will be the proposed second 500kV line to Piliottown.
Right of way	The existing ROW will be used.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$19,616,356.00
Component cost (in-service year)	\$21,147,738.00
Transmission Line Upgrade Component	
Component title	Sugars Bridge - Bradford 230 kV 1 & 2 DCT line rebuild

Project description	Proprietary Information	
Impacted transmission line	Newlinville - Bradford 230 kV line	
Point A	Newlinville	
Point B	Sugars Bridge	
Point C	Bradford	
Terrain description	Rolling forested hills punctuated by the Brandywine creek and its tributaries.	
Existing Line Physical Characteristics		
Operating voltage	230	
Conductor size and type	Unknown	
Hardware plan description	All new hardware and infrastructure.	
Tower line characteristics	Line is composed of double-circuit 230 kV towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1660.000000	1909.000000
Winter (MVA)	1967.000000	2187.000000
Conductor size and type	Double-bundle 1590 54/19 ACSS conductor	
Shield wire size and type	Dual OPGW	
Rebuild line length	1.11 miles	

Rebuild portion description	Developer proposes to completely remove and rebuild the existing Sugars Bridge to Bradford 230kV line to utilize the transmission corridor for a new DCT 230kV hi-capacity path to Bradford. The proposed transmission structures will be composed of DCT 230kV steel monopoles. The existing 230kV circuits will be replaced on the new poles with new larger conductor.
Right of way	Existing ROW will be utilized.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$4,896,587.00
Component cost (in-service year)	\$5,278,847.00
Transmission Line Upgrade Component	
Component title	Planebrook - Bradford 230 kV # 1 line rebuild
Project description	Proprietary Information
Impacted transmission line	Planebrook - Bradford 230 kV # 1 line
Point A	Planebrook

Point B	Bradford	
Point C		
Terrain description	Low density suburban development and forested area.	
Existing Line Physical Characteristics		
Operating voltage	230	
Conductor size and type	Unknown	
Hardware plan description	All new hardware and infrastructure.	
Tower line characteristics	Existing line is composed of 230 kV single-circuit horizontal towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1295.000000	1604.000000
Winter (MVA)	1295.000000	1604.000000
Conductor size and type	Double-bundle 1590 54/19 ACSR conductor	
Shield wire size and type	Dual OPGW	
Rebuild line length	6.5 miles	
Rebuild portion description	Developer proposes to completely remove and rebuild the existing Bradford to Planebrook 230kV line to utilize the transmission corridor for a new 230kV hi-capacity path between the two stations. The proposed transmission structures will be composed of SCT 230kV steel monopoles. The existing 230kV circuit will be replaced on the new poles with new larger conductor.	
Right of way	Existing ROW will be utilized.	
Construction responsibility	Proprietary Information	

Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$27,359,554.00
Component cost (in-service year)	\$29,495,421.00
Transmission Line Upgrade Component	
Component title	Planebrook - Bradford 230 kV # 2 line rebuild
Project description	Proprietary Information
Impacted transmission line	Planebrook - Bradford 230 kV # 2 line
Point A	Planebrook
Point B	Bradford
Point C	
Terrain description	Low density suburban development and forested area.
Existing Line Physical Characteristics	
Operating voltage	230

Conductor size and type	Unknown	
Hardware plan description	All new hardware and infrastructure.	
Tower line characteristics	Existing line is composed of 230 kV single-circuit horizontal towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1295.000000	1604.000000
Winter (MVA)	1295.000000	1604.000000
Conductor size and type	Double-bundle 1590 54/19 ACSR conductor	
Shield wire size and type	Dual OPGW	
Rebuild line length	6.5 miles	
Rebuild portion description	Developer proposes to completely remove and rebuild the existing Bradford to Planebrook 230kV line to utilize the transmission corridor for a new 230kV hi-capacity path between the two stations. The proposed transmission structures will be composed of SCT 230kV steel monopoles. The existing 230kV circuit will be replaced on the new poles with new larger conductor.	
Right of way	Existing ROW will be utilized.	
Construction responsibility	Proprietary Information	
Benefits/Comments	Proprietary Information	
Component Cost Details - In Current Year \$		
Engineering & design	Proprietary Information	
Permitting / routing / siting	Proprietary Information	
ROW / land acquisition	Proprietary Information	

Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$27,359,554.00
Component cost (in-service year)	\$29,495,421.00

Greenfield Transmission Line Component

Component title	Lauschtown - Brandywine 500 kV line
Project description	Proprietary Information
Point A	Lauschtown
Point B	Brandywine
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Conductor size and type	Triple-bundle 1113 ACSS conductor	
Nominal voltage	AC	
Nominal voltage	500	
Line construction type	Overhead	

General route description	For the Lauschtown to Brandywine Creek project, the route is approximately 16.65 miles long and passes within 300 feet of 13 residences. The route crosses 15 NWI identified wetlands and intersects 22 high sensitivity areas and one state or federal land parcel. It includes 1.04 miles of terrain with slopes exceeding 15 percent and 17 significant turn angles greater than 30 degrees. The route includes 9.62 miles of greenfield routing and 7.03 miles of brownfield/co-location, with no rebuilding of existing facilities.
Terrain description	Land use within the three Brandywine Creek projects study area in eastern Pennsylvania is largely suburban, with structures concentrated in Chester County around Coatesville. Crop fields and pastureland are concentrated within the southern portion of the study area near Pilottown, while forest cover is more prevalent east of Pilottown and south of Coatesville.
Right-of-way width by segment	Uniform 200 foot ROW width for the entire line.
Electrical transmission infrastructure crossings	None
Civil infrastructure/major waterway facility crossing plan	No major transmission lines or waterways are crossed
Environmental impacts	The project's primary approval is a Pennsylvania Public Utility Commission (PUC) Certificate of Public Convenience (CPCN), which authorizes the siting and construction of the 500 kV transmission line and is expected to drive the overall permitting schedule. Because the route crosses streams, wetlands, and Special Protection waters, it will require PADEP Chapter 105 Water Obstruction and Encroachment approval and corresponding U.S. Army Corps of Engineers Section 404 authorization, with associated Section 401 Water Quality Certification. The project will also require a Chapter 102 NPDES stormwater permit, including erosion and sediment control and post-construction stormwater management plans. Environmental resource reviews will include PNDI coordination with the Pennsylvania Game Commission, Fish and Boat Commission, and DCNR, as well as Endangered Species Act consultation with the U.S. Fish and Wildlife Service due to the potential presence of listed bat species and bog turtle habitat. Avian and eagle reviews under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act are also anticipated. Because federal permits are expected, the project will require Section 106 historic and archaeological review through the Pennsylvania State Historic Preservation Office (PA SHPO), including evaluation of archaeological resources and potential visual effects on historic properties. Construction activities will require various transportation and crossing approvals, including PennDOT Highway Occupancy Permits, possible railroad crossing approvals, and oversize/overweight hauling permits for major equipment deliveries. FAA obstruction reviews may also be required for taller transmission structures.

Tower characteristics	Developer proposes a new SCT 500kV steel pole monopole transmission line between Laucshtown and Brandywine Station. Line will be constructed with (3) 1113 54/19 ACSS in a delta framed configuration with (2) OPGWs for relay communication between the sites and high-speed protection. Steel poles will be supported by steel concrete cassion foundations. Self-weathering steel will be used for proposed structures for robust low maintenance operations and minimize viewshed impacts to the landscape compared to galvanized steel. Conductor assemblies will utilize glass insulator assemblies.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$96,336,573.00
Component cost (in-service year)	\$114,038,213.00
Greenfield Transmission Line Component	
Component title	Pilottown - Brandywine 500 kV line (Greenfield segment)
Project description	Proprietary Information
Point A	Brandywine
Point B	Pilottown

Point C

	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Conductor size and type	Triple-bundle 1113 ACSS conductor	
Nominal voltage	AC	
Nominal voltage	500	
Line construction type	Overhead	
General route description	The proposed transmission line would extend from the Pilottown 500-kV Switchyard in southern Lancaster County, Pennsylvania, generally following existing transmission corridors northward to the Susquehanna River crossing and then westward through York County to the Peach Bottom transmission complex. The route primarily utilizes existing utility rights-of-way and rebuilt transmission corridors where feasible, traversing a mix of agricultural, woodland, and rural landscapes while minimizing the need for new corridor development.	
Terrain description	Land use within the three Brandywine Creek projects study area in eastern Pennsylvania is largely suburban, with structures concentrated in Chester County around Coatesville. Crop fields and pastureland are concentrated within the southern portion of the study area near Pilottown, while forest cover is more prevalent east of Pilottown and south of Coatesville.	
Right-of-way width by segment	Developer proposes a 200 foot ROW width for the entire corridor.	
Electrical transmission infrastructure crossings	Peach Bottom - Newlinville 230 kV line	
Civil infrastructure/major waterway facility crossing plan	No waterway crossings, no prominent highways.	

Environmental impacts	The project will require a Pennsylvania Public Utility Commission (PUC) Certificate of Public Convenience (CPCN) for siting and construction of the 500 kV transmission line. The CPCN proceeding is expected to be the critical-path permitting activity and will require demonstration of project need, route alternatives, and environmental impacts. The route will require federal and state water resource permits, including a PADEP Chapter 105 Water Obstruction and Encroachment Permit, U.S. Army Corps of Engineers Section 404 authorization, and associated Section 401 Water Quality Certification for stream and wetland impacts. A Chapter 102 NPDES stormwater permit with erosion and sediment control and post-construction stormwater management plans will also be required because corridor disturbance exceeds one acre. The project will undergo substantial natural resource and wildlife review, including Endangered Species Act consultation, Migratory Bird Treaty Act and Bald Eagle Act coordination, and PNDI review with the Pennsylvania Game Commission, Fish and Boat Commission, and DCNR. Route C includes a crossing of Scenic River-designated Octoraro Creek, which adds DCNR Scenic Rivers review and may increase wetland and environmental permitting requirements. Because federal permits are anticipated, Section 106 historic and cultural resource review through the Pennsylvania State Historic Preservation Office will be required, including archaeological and visual-effects evaluations for the transmission line corridor. Construction will require various transportation and crossing approvals, including PennDOT Highway Occupancy Permits, possible rail crossing approvals, oversize/overweight hauling permits, and potentially FAA obstruction evaluations for taller transmission structures.
Tower characteristics	Developer proposes a new SCT 500kV steel pole monopole transmission line between Brandywine and Piliottown Station. Line will be constructed with (3) 1113 54/19 ACSS in a delta framed configuration with (2) OPGWs for relay communication between the sites and high-speed protection. Steel poles will be supported by steel concrete cassion foundations. Self-weathering steel will be used for proposed structures for robust low maintenance operations and minimize viewshed impacts to the landscape compared to galvanized steel. Conductor assemblies will utilize glass insulator assemblies.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information

Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$25,187,260.00
Component cost (in-service year)	\$29,814,613.00

Greenfield Transmission Line Component

Component title	Brandywine - Sugars Bridge 230 kV 1 & 2 DCT lines
Project description	Proprietary Information
Point A	Brandywine
Point B	Sugars Bridge
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1660.000000	1909.000000
Winter (MVA)	1967.000000	2187.000000
Conductor size and type	Double-bundle 1590 54/19 ACSS conductor	
Nominal voltage	AC	
Nominal voltage	230	
Line construction type	Overhead	

General route description	For the Brandywine Creek to Sugar's Bridge project, the route is approximately 12.82 miles long and passes within 300 feet of 22 residences. The route crosses 18 remotely identified wetlands and intersects 15 high sensitivity areas and no state or federal land parcels. It includes 2.16 miles of terrain with slopes exceeding 15 percent and 24 significant turn angles greater than 30 degrees. The route includes 9.58 miles of greenfield routing and 3.24 miles of brownfield/co-location, with no rebuilding of existing facilities.
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Terrain description	Land use within the three Brandywine Creek projects study area in eastern Pennsylvania is largely suburban, with structures concentrated in Chester County around Coatesville. Crop fields and pastureland are concentrated within the southern portion of the study area near Pilottown, while forest cover is more prevalent east of Pilottown and south of Coatesville.
Right-of-way width by segment	Developer proposes a 150 foot width ROW for the entire corridor.
Electrical transmission infrastructure crossings	Peach Bottom - Limerick 500 kV line
Civil infrastructure/major waterway facility crossing plan	No significant waterway crossings. One limited-access highway crossing of Interstate 30.
Environmental impacts	The project's primary approval is a Pennsylvania Public Utility Commission (PUC) Certificate of Public Convenience (CPCN), which authorizes the siting and construction of the 500 kV transmission line and is expected to drive the overall permitting schedule. Because the route crosses streams, wetlands, and Special Protection waters, it will require PADEP Chapter 105 Water Obstruction and Encroachment approval and corresponding U.S. Army Corps of Engineers Section 404 authorization, with associated Section 401 Water Quality Certification. The project will also require a Chapter 102 NPDES stormwater permit, including erosion and sediment control and post-construction stormwater management plans. Environmental resource reviews will include PNDI coordination with the Pennsylvania Game Commission, Fish and Boat Commission, and DCNR, as well as Endangered Species Act consultation with the U.S. Fish and Wildlife Service due to the potential presence of listed bat species and bog turtle habitat. Avian and eagle reviews under the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act are also anticipated. Because federal permits are expected, the project will require Section 106 historic and archaeological review through the Pennsylvania State Historic Preservation Office (PA SHPO), including evaluation of archaeological resources and potential visual effects on historic properties. Construction activities will require various transportation and crossing approvals, including PennDOT Highway Occupancy Permits, possible railroad crossing approvals, and oversize/overweight hauling permits for major equipment deliveries. FAA obstruction reviews may also be required for taller transmission structures.
Tower characteristics	Developer proposes a new DCT 230kV steel pole monopole transmission line between Brandywine and Sugars Bridge Station. Line will be constructed with (2) 1590 54/19 ACSS in a vertical framed configuration with (2) OPGWs for relay communication between the sites and high-speed protection. Steel poles will be supported by steel concrete cassion foundations. Self-weathering steel will be used for proposed structures for robust low maintenance operations and minimize viewshed impacts to the landscape compared to galvanized steel. Conductor assemblies will utilize glass insulator assemblies.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information

Component Cost Details - In Current Year \$

Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$78,092,356.00
Component cost (in-service year)	\$92,441,660.00

Transmission Line Upgrade Component

Component title	Pilottown - Brandywine 500 kV line (brownfield segment: DCT rebuild with existing Peach Bottom - Limerick 500 kV line)
Project description	Proprietary Information
Impacted transmission line	Peach Bottom - Limerick 500 kV line
Point A	Peach Bottom
Point B	Limerick
Point C	

Terrain description	The route between Pilottown and Brandywine traverses the rolling uplands of southeastern Pennsylvania's Piedmont Province. Terrain consists primarily of agricultural valleys, forested ridges, and gently to moderately sloping uplands dissected by numerous streams and river valleys. The most significant topographic feature is the Susquehanna River near Pilottown, where steep valley slopes and substantial elevation changes occur. Further east of the river, the route crosses predominantly rolling agricultural and woodland terrain with localized steep slopes along stream corridors before terminating in the Brandywine area.	
Existing Line Physical Characteristics		
Operating voltage	500	
Conductor size and type	Double-bundle 2493 ACAR conductor	
Hardware plan description	All hardware and infrastructure associated with the line will be removed and replaced to facilitate the 500 kV DCT rebuild.	
Tower line characteristics	Existing line is composed of 500 kV single-circuit horizontal towers.	
Proposed Line Characteristics		
	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	3610.000000	4150.000000
Winter (MVA)	4276.000000	4755.000000
Conductor size and type	Triple bundle 1113 ACSS conductor	
Shield wire size and type	Dual OPGW	
Rebuild line length	35.7 miles	
Rebuild portion description	Developer proposes to completely remove and rebuild the existing Peach Bottom to Limerick 500kV line for 35.7 miles to utilize the transmission corridor for a new DCT 500kV path to Pilottown. The proposed transmission structures will be composed of DCT 500kV steel monopoles. The existing 500kV circuit will be replaced on the new poles with new larger conductor. The second circuit of the structure will be the proposed new 500kV line from Brandywine to Pilottown.	

Right of way	Existing ROW will be used.
Construction responsibility	Proprietary Information
Benefits/Comments	Proprietary Information
Component Cost Details - In Current Year \$	
Engineering & design	Proprietary Information
Permitting / routing / siting	Proprietary Information
ROW / land acquisition	Proprietary Information
Materials & equipment	Proprietary Information
Construction & commissioning	Proprietary Information
Construction management	Proprietary Information
Overheads & miscellaneous costs	Proprietary Information
Contingency	Proprietary Information
Total component cost	\$350,151,955.00
Component cost (in-service year)	\$377,487,127.00

Congestion Drivers

None

Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST2	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST5	213869	PCHBTMTP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST6	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST7	213846	EXCLUDED_FROM_COMPETITION	213869	PCHBTMTP	1	230	230	Summer N-1-1	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2026W1-N11-ST16	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST17	213846	EXCLUDED_FROM_COMPETITION	213846	TRCHBTMP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST31	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST32	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST33	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST46	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST49	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST50	213846	EXCLUDED_FROM_COMPETITION	213846	TRCHBTMP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST51	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST52	213846	EXCLUDED_FROM_COMPETITION	213846	TRCHBTMP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST53	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST54	213846	EXCLUDED_FROM_COMPETITION	213846	TRCHBTMP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST66	213846	EXCLUDED_FROM_COMPETITION	213846	TRCHBTMP	1	230	230	Summer N-1-1	Included
2026W1-N11-ST67	213844	EXCLUDED_FROM_COMPETITION	213846	EXCLUDED_FROM_COMPETITION	1	230	230	Summer N-1-1	Included
2026W1-N11-ST102	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST104	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST105	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST106	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST107	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST111	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-N11-ST112	213869	PCHBTMP	214087	COOPER2	1	230	230	Summer N-1-1	Included
2026W1-GD-S302	213559	DELCOTAP	228401	MCKLTON	1	230	230/234	Summer Gen Deliv	Included
2026W1-GD-S560	213559	DELCOTAP	228401	MCKLTON	1	230	230/234	Summer Gen Deliv	Included
2026W1-GD-S304	213559	DELCOTAP	228401	MCKLTON	1	230	230/234	Summer Gen Deliv	Included
2026W1-GD-S303	213559	DELCOTAP	228401	MCKLTON	1	230	230/234	Summer Gen Deliv	Included
2026W1-GD-S305	213559	DELCOTAP	228401	MCKLTON	1	230	230/234	Summer Gen Deliv	Included

New Flowgates

Proprietary Information

Financial Information

Capital spend start date 02/2027

Construction start date 01/2030

Project Duration (In Months) 51

Cost Containment Commitment

Cost cap (in current year) Proprietary Information

Cost cap (in-service year) Proprietary Information

Components covered by cost containment

1. Pilottown 500 kV Switching Station - PROPOSER
2. Brandywine 500/230 kV Substation - PROPOSER
3. Sugars Bridge 230 kV Switching Station - PROPOSER
4. Lauschtown 500 kV Yard Upgrade (termination for new Lauschtown - Brandywine 500 kV line) - PROPOSER
5. Lauschtown - Brandywine 500 kV line - PROPOSER
6. Pilottown - Brandywine 500 kV line (Greenfield segment) - PROPOSER
7. Brandywine - Sugars Bridge 230 kV 1 & 2 DCT lines - PROPOSER

Cost elements covered by cost containment

Engineering & design Yes

Permitting / routing / siting No

ROW / land acquisition No

Materials & equipment Yes

Construction & commissioning Yes

Construction management	Yes
Overheads & miscellaneous costs	No
Taxes	No
AFUDC	No
Escalation	No
Additional Information	Proprietary Information
Is the proposer offering a binding cap on ROE?	No
Is the proposer offering a Debt to Equity Ratio cap?	Proprietary Information
Additional cost containment measures not covered above	Proprietary Information
Additional Comments	
None	