Trainer (PECO) - Delco Tap (PECO) - Mickleton (ACE)

General Information

Proposing entity name	PE
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	
PJM Proposal ID	125
Project title	Trainer (PECO) - Delco Tap (PECO) - Mickleton (ACE)
Project description	Reconductor 2301 / 220-38 line Trainer - Delco - Mickleton to increase ratings of facility to minimum 1094 MVA rating. Replace substation terminal equipment to achieve minimum rating. Replace structures with 500/230KV double-circuit poles for future potential 500KV expansion (ACE only).
Email	Proprietary Information
Project in-service date	06/2032
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	New structures to be built to 500KV standards, along with 500KV double circuit poles, for potential future expansion supports vision for future potential load growth in region. Perspective load growth in this corridor would likely require a 500kV path.

Project Components

1. Trainer - Delco Tap - Mickleton Rebuild (PECO Portion)
2. Delco Tap - Mickleton Rebuild (ACE Portion)
3. Mickleton Substation Upgrades (ACE)

4. Trainer and Delco Tap Substation Upgrades (PECO)

Transmission Line Upgrade Component

Component title	Trainer - Delco Tap - Mickleton Rebuild (PECO Portion)
Project description	Reconductor line segments between Trainer - Delco Tap, and Delco Tap to first structure after river crossing. Reconductoring past that point will be constructed by ACE. Reinforcement of transmission structures.
Impacted transmission line	230KV 220-34 Trainer - Delco Tap, 230KV 220-34/2301 Delco Tap - Mickleton
Point A	Trainer
Point B	Delco Tap
Point C	2301 River Crossing point
Terrain description	220-34 Trainer - Delco Tap runs along freight rail ROW. 220-34 Delco Tap - Mickleton crosses Delaware River at existing river crossing ROW.
Existing Line Physical Characteristics	
Operating voltage	230
Conductor size and type	900 kcmil 20/7 ACSR (CANARY), 1113 kcmil 28/19 ACSS/TW (Del River Crossing)
Hardware plan description	Install standard connection hardware.
Tower line characteristics	8 steel structures on 220-38 Trainer - Delco tap, 2 river tower structures on segment Delco Tap - Mickleton
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1083.000000	1228.000000

Winter (MVA)	1138.000000	1282.000000
Conductor size and type	1467.8 kcmil ACSS/TW (St. Croix), new conductor being developed by Southwire for river crossing section.	
Shield wire size and type	Install 0.638" OPGW on section between Delco Tap and point C (first tower in NJ) Existing shield wire will remain between Trainer - Delco Tap.	
Rebuild line length	1.9 miles	
Rebuild portion description	Reconductor entire 220-38 Trainer - Delco Tap section, reconductor 220-38 Delco Tap - Mickleton section up to first transmission tower on NJ side of Delaware River. Reinforce 8 steel structures between Trainer and Delco Tap, and 2 river crossing towers.	
Right of way	Existing ROW will be utilized.	
Construction responsibility	PECO	
Benefits/Comments	IDV provided	
Component Cost Details - In Current Year $		
Engineering & design	detailed cost	
Permitting / routing / siting	detailed cost	
ROW / land acquisition	detailed cost	
Materials & equipment	detailed cost	
Construction & commissioning	detailed cost	
Construction management	detailed cost	
Overheads & miscellaneous costs	detailed cost	
Contingency	detailed cost	
Total component cost	$5,629,218.58	
Component cost (in-service year)	$6,533,729.41	

Transmission Line Upgrade Component

Component title	Delco Tap - Mickleton Rebuild (ACE Portion)
Project description	Reconductor line segments between Mickleton and the first transmission structure in New Jersey on the 2301 line Delco Tap - Mickleton. Reconductoring past that point will be constructed by PECO. Replacement of tower structures.
Impacted transmission line	2301 Delco Tap - Mickleton
Point A	First transmission structure before Delaware river
Point B	Mickleton
Point C	
Terrain description	Flat, rural
Existing Line Physical Characteristics	
Operating voltage	230
Conductor size and type	946.7 kcmil 35/7 ACSS/TW (Fraser), 1113 kcmil 30/7 ACSS/TW (Blue Jay)
Hardware plan description	Install standard connection hardware and insulators.
Tower line characteristics	43 steel lattice tower structures to be removed and replaced by 27 DC Tangent – 500kV/230kV towers and 16 DC Deadend – 500kV/230kV towers.
Proposed Line Characteristics	

	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	Emergency ratings
Summer (MVA)	998.000000	1195.000000
Winter (MVA)	1195.000000	1195.000000
Conductor size and type	Double-bundled 959.6 kcmil 26/7 ACSS/TW (Suwanee)	

Shield wire size and type	Install 0.638" OPGW along full length of line.
Rebuild line length	7.5 miles
Rebuild portion description	Reconductor entire section between Mickleton substation and the last transmission tower in New Jersey before the Delaware River Crossing. Replacement of all transmission towers.
Right of way	Existing ROW will be utilized.
Construction responsibility	ACE
Benefits/Comments	Transmission structures to utilize dual 500KV/230KV design for future potential 500KV line (500KV arms will not be included / part of scope)
Component Cost Details - In Current Year $	
Engineering & design	detailed cost
Permitting / routing / siting	detailed cost
ROW / land acquisition	detailed cost
Materials & equipment	detailed cost
Construction & commissioning	detailed cost
Construction management	detailed cost
Overheads & miscellaneous costs	detailed cost
Contingency	detailed cost
Total component cost	$58,263,723.04
Component cost (in-service year)	$67,342,724.64

Substation Upgrade Component

Component title	Mickleton Substation Upgrades (ACE)
Project description	Replacement of substation equipment at Mickleton substation to achieve minimum 2301 Delco Tap - Mickleton line summer emergency rating of 1094 MVA.

Substation name	Mickleton
Substation zone	ACE
Substation upgrade scope	Replacement of (1) 2000A circuit switcher with 3000A MOD, (1) 3000A relay, (1) circuit breaker, conduit, takeoff structures, and associated CCVTs.

Transformer Information

None

New equipment description	3000A MOD, relays, and circuit breaker. Equipment replacements to achieve minimum 1094 MVA Summer emergency rating.
Substation assumptions	Assumptions made that existing equipment foundations in yard are adequate for replacements. Assumptions made that future load growth will not be grow more than currently forecasted for the Mickleton 230KV yard.
Real-estate description	
Construction responsibility	ACE
Benefits/Comments	New equipment to be built to 500KV standards
Component Cost Details - In Current Year $	
Engineering & design	detailed cost
Permitting / routing / siting	detailed cost
ROW / land acquisition	detailed cost
Materials & equipment	detailed cost
Construction & commissioning	detailed cost
Construction management	detailed cost
Overheads & miscellaneous costs	detailed cost
Contingency	detailed cost
Total component cost	$2,773,036.12

Component cost (in-service year)	$3,223,971.57

Substation Upgrade Component

Component title	Trainer and Delco Tap Substation Upgrades (PECO)
Project description	Replacement of substation equipment at Trainer and Delco Tap to achieve 1094 MVA summer emergency rating (breaker, circuit switcher, and relays).
Substation name	Trainer, Delco Tap
Substation zone	PECO
Substation upgrade scope	Replacement of (1) circuit breaker and associated CTs, (2) circuit switchers, and (2) relays.

Transformer Information

None

New equipment description	Replace oil filled circuit breaker with higher rated breaker. Replacement of circuit switcher with higher rated circuit breaker. Equipment replacements to achieve minimum 1094 MVA Summer emergency rating.
Substation assumptions	Assumptions made that replacement breakers fit footprint of existing equipment with adequate foundation. Assumptions made that existing control house has space for new relaying. Assumptions made that river crossing cofferdam tower islands are adequate and do not require additional improvements.
Real-estate description	
Construction responsibility	PECO
Benefits/Comments	
Component Cost Details - In Current Year $	
Engineering & design	detailed cost
Permitting / routing / siting	detailed cost
ROW / land acquisition	detailed cost
Materials & equipment	detailed cost

Construction & commissioning	detailed cost
Construction management	detailed cost
Overheads & miscellaneous costs	detailed cost
Contingency	detailed cost
Total component cost	$916,384.42
Component cost (in-service year)	$1,063,630.37

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

None

Financial Information

Capital spend start date	01/2026
Construction start date	09/2031
Project Duration (In Months)	77

Additional Comments

None