ACE 05

General Information

Proposing entity name	AE
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	05
PJM Proposal ID	797
Project title	ACE 05
Project description	Build new transition vault connecting 275 kV off shore cables and 275 kV on shore cables, build new 275 kV transmission lines between transition vault and new 275-230 kV substation near Cardiff, and build new 275-230 kV substation near Cardiff connected to existing substation at Cardiff
Email	michael.donnelly@peco-energy.com
Project in-service date	06/2028
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	See NJ BPU Data Collection Form and supporting documents for additional information about this proposal. The cost details and work schedule are provided in the NJ BPU Data Collection Form and supporting documents.

Project Components

1. Build new substation at Cardiff near existing substation at Cardiff
2. Build new 275 kV transmission lines from transition vault to new Cardiff...

Greenfield Substation Component

Component title	Build new substation at Cardiff near existing substation at Cardiff
Project description	Build a new substation at Cardiff near existing substation at Cardiff. New substation will contain 275-230 kV transformers, harmonic filtering and voltage compensation equipment. See NJ BPU Data Collection Form and supporting documents for additional information.
Substation name	New Cardiff
Substation description	New substation will contain 275-230 kV transformers, harmonic filtering and voltage compensation equipment. See NJ BPU Data Collection Form and supporting documents for additional information.
Nominal voltage	AC
Nominal voltage	275 kV - 230 kV

Transformer Information

None

Major equipment description	Transformers - 275 kV to 230 kV.	
	Normal ratings	**Emergency ratings**
Summer (MVA)	1200.000000	1200.000000
Winter (MVA)	1200.000000	1200.000000
Environmental assessment	See NJ BPU Data Collection Form and supporting documents for additional information.	
Outreach plan	See NJ BPU Data Collection Form and supporting documents for additional information.	
Land acquisition plan	New substation will be built on land near the existing Cardiff substation that is owned by ACE. See NJ BPU Data Collection Form and supporting documents for additional information.	
Construction responsibility	ACE	
Benefits/Comments	See NJ BPU Data Collection Form and supporting documents for additional information.	

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	$.00
Total component cost	$97,659,128.00
Component cost (in-service year)	$97,659,128.00

Greenfield Transmission Line Component

Component title	Build new 275 kV transmission lines from transition vault to new Cardiff substation
Project description	Build three new 275 kV underground transmission lines from a transition vault located near the shore to the new substation located near Cardiff substation.
Point A	Transition point
Point B	New Cardiff
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1200.000000	1200.000000
Winter (MVA)	1200.000000	1200.000000
Conductor size and type	5000 kcmil CU XLPE	
Nominal voltage	AC	

Nominal voltage	275 kV
Line construction type	Underground
General route description	See NJ BPU Data Collection Form and attachments. See routing study included with this submission.
Terrain description	Relatively flat
Right-of-way width by segment	Lines will be built underground. See NJ BPU Data Collection Form and attachments. See routing study included with this submission.
Electrical transmission infrastructure crossings	See NJ BPU Data Collection Form and attachments. See routing study included with this submission.
Civil infrastructure/major waterway facility crossing plan	See NJ BPU Data Collection Form and attachments.
Environmental impacts	See NJ BPU Data Collection Form and attachments.
Tower characteristics	Transmission lines will be constructed underground. See NJ BPU Data Collection Form and attachments for information. See routing study for duct bank layout.
Construction responsibility	ACE
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	$.00

Total component cost	$135,053,677.00
Component cost (in-service year)	$135,053,677.00

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
28-GD-W15	214277	RICHMOND35	214012	WANEETA3	1	230	230	Gen Deliv (winter)	Included
28-GD-S2-W9	214277	RICHMOND35	214012	WANEETA3	1	230	230	Gen Deliv (winter)	Included
28-GD-S2-W9	200066	PCHBTM1N	270072	FUR RUN_500	1	500	230/225	Gen Deliv (winter)	Included
35-GD-S2-W1	200066	PCHBTM1N	270072	FUR RUN_500	1	500/500	230/225	Gen Deliv (winter)	Included
35-GD-S2-W1	214277	RICHMOND35	214012	WANEETA3	1	230/230	230/230	Gen Deliv (winter)	Included
35-GD-W16	214277	RICHMOND35	214012	WANEETA3	1	230/230	230/230	Gen Deliv (winter)	Included
35-GD-W5	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Gen Deliv (winter)	Included
35-GD-W6	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Gen Deliv (winter)	Included
35-GD-S2-W1	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Gen Deliv (winter)	Included
35-GD-S2-W3	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Gen Deliv (winter)	Included
35-GD-S2-W5	200064	PCHBTM1S	200004	CNASTONE	1	500/500	230/232	Gen Deliv (winter)	Included
28-GD-S2-W3	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W3	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W1	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W2	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W3	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W3	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-W4	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-W5	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-W110	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
28-GD-W111	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-W112	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-W16	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W96	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W38	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-W37	200064	PCHBTM1S	200004	CNASTONE	1	500	232/230	Gen Deliv (winter)	Included
28-GD-S2-S132	227900	CARDIFF C	219100	NEWFRDM	1	230	231/234	Gen Deliv (Summer)	Included
28-GD-S2-W142	227900	CARDIFF C	219100	NEWFRDM	1	230	231/234	Gen Deliv (winter)	Included
28-GD-S2-W122	227900	CARDIFF C	219100	NEWFRDM	1	230	231/234	Gen Deliv (winter)	Included
28-GD-S2-W137	227900	CARDIFF C	219100	NEWFRDM	1	230	231/234	Gen Deliv (winter)	Included
28-GD-S2-W140	227900	CARDIFF C	219100	NEWFRDM	1	230	231/234	Gen Deliv (winter)	Included
28-GD-S2-S134	227934	CARDIFF2	227945	LEWIS #2	1	138	234	Gen Deliv (Summer)	Included
28-GD-S2-S138	227945	LEWIS #2	227902	LEWIS #1	1	138	234	Gen Deliv (Summer)	Included
35-GD-S2-S84	227900	CARDIFF C	219100	NEWFRDM	1	230/230	234/231	Gen Deliv (Summer)	Included
35-GD-S2-W7	227900	CARDIFF C	219100	NEWFRDM	1	230/230	234/231	Gen Deliv (winter)	Included
35-GD-S2-W38	227900	CARDIFF C	219100	NEWFRDM	1	230/230	234/231	Gen Deliv (winter)	Included
35-GD-S2-W102	227900	CARDIFF C	219100	NEWFRDM	1	230/230	234/231	Gen Deliv (winter)	Included
35-GD-S2-W98	227900	CARDIFF C	219100	NEWFRDM	1	230/230	234/231	Gen Deliv (winter)	Included

New Flowgates

None

Financial Information

Capital spend start date	01/2023
Construction start date	01/2023
Project Duration (In Months)	65

Additional Comments

None