Combination of PEBO 215A + WOP 1F + SOP 8E

General Information

Proposing entity name	Proprietary Company Information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	Proprietary Company Information
PJM Proposal ID	175
Project title	Combination of PEBO 215A + WOP 1F + SOP 8E
Project description	This proposal is a combination of multiple other solutions to deliver an overall complete solution. C Combination of: PEBO 215A (2022-W3-948) WOP 1F (2022-W3-853) SOP 8E (2022-W3-663) Various brownfield components required to meet reliability needs
Email	Proprietary Company Information
Project in-service date	06/2028
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	Yes
Additional benefits	

Project Components

1. 50d - Add 2nd Transformer and SVC & Cap Bank to future Mars Substation
2. 50P - Red Lion to Hope Creek 500 kV Upgrade
3. 50e - Upgrade Transformer 1 and add new Transformer 2 at existing Pleasant View substation
4. 50g - Add 2nd Transformer at existing Goose Creek substation
5. 50i - Lady Smith CT to St. John's 230kV Upgrade

6. 50j - Lady Smith CT to Summit 230 kV Upgrade
7. 50k - Cashs's Corner to Hollymeade 230kV upgrade
8. 50L - Cashs's Corner to Gordonsville 230kV upgrade
9. 50M - Charlottesville to Proffit DP 230kV upgrade
10. 50n - Remington CT to Remington 230kV upgrade
11. 50o - Remington CT to GIM Run 230kV upgrade
12. Combination 43 - PEBO 215A + WOP 1F + SOP 8E

Substation Upgrade Component

Component title	50d - Add 2nd Transformer and SVC & Cap Bank to future Mars Substation
Project description	Proprietary Company Information
Substation name	Mars
Substation zone	Dominion
Substation upgrade scope	Add 2nd transformer (1440 MVA) and SVC(-300 to 500) & Cap Bank (293.8) to existing Mars substation

Transformer Information

	Name	**Capacity (MVA)**
Transformer	Transformer 2	1440

	High Side	**Low Side**	**Tertiary**
Voltage (kV)	500	230	N/A

New equipment description	Add 2nd transformer (1440 MVA) and SVC(-300 to 500) & Cap Bank (293.8) to existing Mars substation
Substation assumptions	Substation has not been built yet. Assumed that substation can accommodate new equipment as needed.
Real-estate description	No expansion of substation fence anticipated

Construction responsibility	Proprietary Company Information
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,519,064.45

Transmission Line Upgrade Component

Component title	50P - Red Lion to Hope Creek 500 kV Upgrade
Project description	Proprietary Company Information
Impacted transmission line	Redlion - Hope Creek 500kV
Point A	Redlion
Point B	Hope Creek
Point C	N/A
Terrain description	Work required is within existing ROW.

Existing Line Physical Characteristics

Operating voltage	500
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize existing line hardware to extent possible.
Tower line characteristics	Utilize existing towers to extent practicable.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	500.000000	500.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	4295.000000	4357.000000
Winter (MVA)	5066.000000	5196.000000
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	23.7 miles	
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.	
Right of way	Use of existing ROW to extent practicable.	
Construction responsibility	Proprietary Company Information	
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process	

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information

Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,519,064.00

Substation Upgrade Component

Component title	50e - Upgrade Transformer 1 and add new Transformer 2 at existing Pleasant View substation
Project description	Proprietary Company Information
Substation name	Pleasant View
Substation zone	Dominion
Substation upgrade scope	Upgrade Pleasant View Transformer 1 (500/230kV) with 1440 MVA transformer to remove violation and add Transformer 2 (500/230kV) with 1440 MVA at existing Pleasant View substation

Transformer Information

	Name	**Capacity (MVA)**
Transformer	Transformer 1	1440

	High Side	**Low Side**	**Tertiary**
Voltage (kV)	500	230	N/A

	Name	**Capacity (MVA)**
Transformer	Transformer 2	1440

	High Side	Low Side	Tertiary
Voltage (kV)	500	230	N/A
New equipment description	Upgrade Pleasant View Transformer 1 (500/230kV) with 1440 MVA transformer to remove violation and add Transformer 2 (500/230kV) with 1440 MVA at existing Pleasant View substation		
Substation assumptions	Space within the substation fence appears is available.		
Real-estate description	No expansion of substation fence anticipated		
Construction responsibility	Proprietary Company Information		
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process		
Component Cost Details - In Current Year $			
Engineering & design	Proprietary Company Information		
Permitting / routing / siting	Proprietary Company Information		
ROW / land acquisition	Proprietary Company Information		
Materials & equipment	Proprietary Company Information		
Construction & commissioning	Proprietary Company Information		
Construction management	Proprietary Company Information		
Overheads & miscellaneous costs	Proprietary Company Information		
Contingency	Proprietary Company Information		
Total component cost	$5,000,000.00		
Component cost (in-service year)	$5,519,064.45		

Substation Upgrade Component

Component title	50g - Add 2nd Transformer at existing Goose Creek substation
Project description	Proprietary Company Information

Substation name	Goose Creek
Substation zone	Dominion
Substation upgrade scope	Add 2nd Transformer (1440 MVA) at existing Goose Creek substation to remove violation

Transformer Information

	Name	Capacity (MVA)
Transformer	Transformer 2	1440

	High Side	Low Side	Tertiary
Voltage (kV)	500	230	N/A

New equipment description	Add 2nd Transformer (1440 MVA) at existing Goose Creek substation to remove violation
Substation assumptions	Space within the substation fence appears is available.
Real-estate description	No expansion of substation fence anticipated
Construction responsibility	Proprietary Company Information
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information

Contingency	Proprietary Company Information
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,519,064.45

Transmission Line Upgrade Component

Component title	50i - Lady Smith CT to St. John's 230kV Upgrade
Project description	Proprietary Company Information
Impacted transmission line	Lady Smith CT - St. John's 230kV
Point A	Lady Smith CT
Point B	St. John's
Point C	N/A
Terrain description	Work required is within existing ROW.

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize existing line hardware to extent possible.
Tower line characteristics	Utilize existing towers to extent practicable.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1573.000000	1809.000000

Winter (MVA)	1648.000000	1896.000000
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	12.48 miles	
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.	
Right of way	Use of existing ROW to extent practicable.	
Construction responsibility	Proprietary Company Information	
Benefits/Comments	Dominion	

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,519,064.00

Transmission Line Upgrade Component

Component title	50j - Lady Smith CT to Summit 230 kV Upgrade
Project description	Proprietary Company Information

Impacted transmission line	Lady Smith CT - Summit 230kV
Point A	Lady Smith CT
Point B	Summit
Point C	N/A
Terrain description	Work required is within existing ROW.

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize existing line hardware to extent possible.
Tower line characteristics	Utilize existing towers to extent practicable.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1573.000000	1809.000000
Winter (MVA)	1648.000000	1896.000000

Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings
Shield wire size and type	Utilize existing shield wire to extent practicable
Rebuild line length	10.78 miles
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.
Right of way	Use of existing ROW to extent practicable.

Construction responsibility	Proprietary Company Information
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,519,064.00

Transmission Line Upgrade Component

Component title	50k - Cashs's Corner to Hollymeade 230kV upgrade
Project description	Proprietary Company Information
Impacted transmission line	Cashs's Corner - Hollymeade 230kV
Point A	Cashs's Corner
Point B	Hollymeade
Point C	N/A
Terrain description	Work required is within existing ROW.

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize existing line hardware to extent possible.
Tower line characteristics	Utilize existing towers to extent practicable.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1573.000000	1809.000000
Winter (MVA)	1648.000000	1896.000000

Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings
Shield wire size and type	Utilize existing shield wire to extent practicable
Rebuild line length	12.66 miles
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.
Right of way	Use of existing ROW to extent practicable.
Construction responsibility	Proprietary Company Information
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information

Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,519,064.00

Transmission Line Upgrade Component

Component title	50L - Cashs's Corner to Gordonsville 230kV upgrade
Project description	Proprietary Company Information
Impacted transmission line	Cashs's Corner -Gordonsville 230kV
Point A	Cashs's Corner
Point B	Gordonsville
Point C	N/A
Terrain description	Work required is within existing ROW.

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize existing line hardware to extent possible.
Tower line characteristics	Utilize existing towers to extent practicable.

Proposed Line Characteristics

	Designed	**Operating**

Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1573.000000	1809.000000
Winter (MVA)	1648.000000	1896.000000
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Shield wire size and type	Utilize existing shield wire to extent practicable	
Rebuild line length	2.83 miles	
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.	
Right of way	Use of existing ROW to extent practicable.	
Construction responsibility	Proprietary Company Information	
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process	
Component Cost Details - In Current Year $		
Engineering & design	Proprietary Company Information	
Permitting / routing / siting	Proprietary Company Information	
ROW / land acquisition	Proprietary Company Information	
Materials & equipment	Proprietary Company Information	
Construction & commissioning	Proprietary Company Information	
Construction management	Proprietary Company Information	
Overheads & miscellaneous costs	Proprietary Company Information	
Contingency	Proprietary Company Information	
Total component cost	$1,400,000.00	
Component cost (in-service year)	$1,545,338.00	

Transmission Line Upgrade Component

Component title	50M - Charlottesville to Proffit DP 230kV upgrade
Project description	Proprietary Company Information
Impacted transmission line	Charlottesville to Proffit DP 230kV
Point A	Charlottesville
Point B	Proffit DP
Point C	N/A
Terrain description	Work required is within existing ROW.

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize existing line hardware to extent possible.
Tower line characteristics	Utilize existing towers to extent practicable.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1573.000000	1809.000000
Winter (MVA)	1648.000000	1896.000000
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Shield wire size and type	Utilize existing shield wire to extent practicable	

Rebuild line length	15.77 miles
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.
Right of way	Use of existing ROW to extent practicable.
Construction responsibility	Proprietary Company Information
Benefits/Comments	Proprietary Company Information
Component Cost Details - In Current Year $	
Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$5,000,000.00
Component cost (in-service year)	$5,519,064.00

Transmission Line Upgrade Component

Component title	50n - Remington CT to Remington 230kV upgrade
Project description	Proprietary Company Information
Impacted transmission line	Remington CT to Remington 230kV
Point A	Remington CT
Point B	Remington

Point C	N/A
Terrain description	Rebuild is within existing ROW

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize existing line hardware to extent possible.
Tower line characteristics	Utilize existing towers to extent practicable.

Proposed Line Characteristics

	Designed	**Operating**
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1573.000000	1809.000000
Winter (MVA)	1648.000000	1896.000000

Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings
Shield wire size and type	Utilize existing shield wire to extent practicable
Rebuild line length	0.54 miles
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.
Right of way	Use of existing ROW to extent practicable.
Construction responsibility	Proprietary Company Information
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information

Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$1,134,000.00
Component cost (in-service year)	$1,251,724.00

Transmission Line Upgrade Component

Component title	50o - Remington CT to GIM Run 230kV upgrade
Project description	Proprietary Company Information
Impacted transmission line	Remington CT to GIM Run 230kV
Point A	Remington CT
Point B	GIM Run
Point C	N/A
Terrain description	Rebuild is within utility ROW

Existing Line Physical Characteristics

Operating voltage	230
Conductor size and type	Incumbent / Current Transmission owner specific
Hardware plan description	Utilize anticipated line hardware to extent possible.
Tower line characteristics	Utilize anticipated towers to extent practicable.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	230.000000	230.000000
	Normal ratings	**Emergency ratings**
Summer (MVA)	1573.000000	1809.000000
Winter (MVA)	1648.000000	1896.000000
Conductor size and type	Incumbent / Transmission Owner to select conductor to achieve the required ratings	
Shield wire size and type	Utilize anticipated shield wire to extent practicable	
Rebuild line length	1.71	
Rebuild portion description	Proposing to upgrade limiting elements to achieve specific rating.	
Right of way	Use of ROW to extent practicable.	
Construction responsibility	Proprietary Company Information	
Benefits/Comments	Resolves reliability issues identified per PJM's Gen. Deliv. Process	

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information

Contingency	Proprietary Company Information
Total component cost	$1,400,000.00
Component cost (in-service year)	$1,545,338.00

Greenfield Substation Component

Component title	Combination 43 - PEBO 215A + WOP 1F + SOP 8E
Project description	Proprietary Company Information
Substation name	Combination 44
Substation description	Combination of PEBO 215A + WOP 1F + SOP 8E
Nominal voltage	AC
Nominal voltage	500/230

Transformer Information

None

Major equipment description	Combination of PEBO 215A + WOP 1F + SOP 8E

	Normal ratings	Emergency ratings
Summer (MVA)	0.000000	0.000000
Winter (MVA)	0.000000	0.000000

Environmental assessment	Combination of PEBO 215A + WOP 1F + SOP 8E
Outreach plan	Combination of PEBO 215A + WOP 1F + SOP 8E
Land acquisition plan	Combination of PEBO 215A + WOP 1F + SOP 8E
Construction responsibility	Proprietary Company Information
Benefits/Comments	Proprietary Company Information

Component Cost Details - In Current Year $

Engineering & design	Proprietary Company Information
Permitting / routing / siting	Proprietary Company Information
ROW / land acquisition	Proprietary Company Information
Materials & equipment	Proprietary Company Information
Construction & commissioning	Proprietary Company Information
Construction management	Proprietary Company Information
Overheads & miscellaneous costs	Proprietary Company Information
Contingency	Proprietary Company Information
Total component cost	$2,486,712,050.00
Component cost (in-service year)	$2,798,816,320.00

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

Proprietary Company Information

Financial Information

Capital spend start date	09/2023
Construction start date	07/2025

Project Duration (In Months)	57

Cost Containment Commitment

Cost cap (in current year)	Proprietary Company Information
Cost cap (in-service year)	Proprietary Company Information

Components covered by cost containment

1. Combination 43 - PEBO 215A + WOP 1F + SOP 8E - NEETMA

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	Proprietary Company 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?	Proprietary Company Information
Additional cost containment measures not covered above	Proprietary Company Information

Additional Comments

None