Install 10MW Battery Energy Storage System (BESS) at Hollymeade substation

General Information

Proposing entity name	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Company proposal ID	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
PJM Proposal ID	533
Project title	Install 10MW Battery Energy Storage System (BESS) at Hollymeade substation
Project description	Proposal 15 is to install 10 MW battery energy storage device at Hollymeade 230 kV substation.
Project in-service date	06/2023
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	The redacted information is proprietary to the Company, therefore it is privileged and confidential.

Project Components

1. Hollymeade Substation 10 MW Battery Energy Storage Systems Installation

Substation Upgrade Component

Component title	Hollymeade Substation 10 MW Battery Energy Storage Systems Installation
Substation name	Hollymeade
Substation zone	193

Substation upgrade scope	Install a 10 MW Battery Bank at Hollymeade Substation. The scope includes one 230-34.5 kV Transformer and five branches of 2 MW BESS system. Each string consists of a 34.5 kV Circuit Breaker, associated switches, underground getaway, 34.5 kV-480V Pad mount Transformer, DC-AC converter/inverter and 2 MW battery trailer. This project will require a new 230 kV Circuit Switcher and Motor Operated switch on high side of the Transformer. In addition, this project installs one new Galvanized Steel Static Pole (9.008) and foundation at the expanded Hollymeade Substation as well as two spans (approximately 500 feet) of 7#7 Alumoweld shield wire tying in the new static pole to the existing static poles.

Transformer Information

	Name	**Capacity (MVA)**	
Transformer	TBD	22.4	
	High Side	**Low Side**	**Tertiary**
Voltage (kV)	230	34.5	N/A

New equipment description	Purchase and install substation material: 1. One (1), 230-34.5 kV, 22.4 MVA, Transformer 2. Three (3), 180 kV, 144 kV MCOV surge arresters 3. Three (3), 30 kV, 24.4 kV MCOV surge arresters 4. Five (5), 2.5 MVA, 34.5 kV-480V Pad mount Transformers 5. Five (5), 34.5 kV, 2000A, 25 kA Circuit Breakers 6. Thirty-six (36), 34.5 kV, 1200A Hook-stick Disconnect Switches 7. Fifteen (15), 30 kV, 24.4 kV MCOV surge arresters 8. Three (3), 34.5 kV Distribution bays 9. Five (5), 34.5 kV Getaway stand and foundation 10. One (1), 230kV, 1200A, 40 KAIC Circuit Switcher 11. One (1), Motor Operator, 20 IN-LB 12. Three (3), 34.5 kV PT, Relay Accuracy 13. Three (3), 34.5 kV, SMD-20 fuses with appropriate fuse links 14. Three (3), 23 kV, 12A current limiting fuses 15. Oil Containment for the Transformers 16. Five (5), 2 MW Battery Trailers 17. Five (5), 2 MW Inverter/Rectifier Units 18. Fifteen (15), Bushing CTs Pad Mount TX Low side 19. Relocation of some distribution circuits, spare transformer, driveway, and miscellaneous equipment 20. Substation Expansion- Site preparation, grounding, fencing 21. Conductors, connectors, foundations, structural steel, grounding, conduits, power cables, control cables, as per Dominion Standards 22. Install one new Galvanized Steel Static Pole (9.008) and foundation at the expanded Hollymeade Substation. 23. Install two spans (approximately 500 feet) of 7#7 Alumoweld shield wire tying in the new static pole to the existing static poles.
Substation assumptions	N/A
Real-estate description	The substation footprint will be expanded to accommodate the new equipment. Please review section A.1 Right-of-way land acquisition plan and approach in the attached Proposal 15 - Permitting and Real Estate Summary document attached in the supporting documents.

Construction responsibility	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Additional comments	The redacted information is proprietary to the Company, therefore it is privileged and confidential.

Component Cost Details - In Current Year $

Engineering & design	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Permitting / routing / siting	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
ROW / land acquisition	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Materials & equipment	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Construction & commissioning	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Construction management	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Overheads & miscellaneous costs	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Contingency	The redacted information is proprietary to the Company, therefore it is privileged and confidential.
Total component cost	$23,747,727.00
Component cost (in-service year)	$25,433,815.00

Congestion Drivers

CD #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type
ME-5	314749	6CHARLVL	314772	6PROFFIT	1	230	345	Market Efficiency

Existing Flowgates

None

New Flowgates

The redacted information is proprietary to the Company, therefore it is privileged and confidential.

Financial Information

Capital spend start date	01/2022
Construction start date	01/2023
Project Duration (In Months)	17

Additional comments

None