Crete - St. John SmartValve

General Information

Proposing entity name	COMED
Company proposal ID	Internal use only
PJM Proposal ID	241
Project title	Crete - St. John SmartValve
Project description	Install 18 Smart Wires SmartValve devices outside of Crete substation on 345 kV line 94507.
Project in-service date	11/2025
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Devices are controllable.

Project Components

1. Install 18 SmartValve Devices

Substation Upgrade Component

Component title	Install 18 SmartValve Devices
Substation name	Crete
Substation zone	ComEd
Substation upgrade scope	Grade and fence an area of approximately 100X300 feet on ComEd owned property. Install 18 SmartValve devices in series with line 94507 and a bypass MOD.

Transformer Information

None

New equipment description	18 SmartValve 10-3600i devices (6 per phase) will be installed in series with line 94507. The devices are rated at 2151 MVA normal and 2581 MVA emergency and will not change the overall rating of the line.
Substation assumptions	ComEd owned land directly north of Crete substation and adjacent to the ROW can be graded and fenced to house the SmartValves.
Real-estate description	ComEd owns the required land.
Construction responsibility	ComEd
Additional comments	The SmartValves have the capability to self bypass during fault conditions within 1 ms, so there will be no impact to line relaying. The SmartValves can be set to automatically increase impedance to maintain current below a set value and to have no impact for currents below the setpoint. The SmartValves will have the ability to insert from zero to at least 5.5 Ohms of reactive impedance into the circuit at predicted current levels. Additional units can be added in the future if conditions warrant.

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	$12,000,000.00
Component cost (in-service year)	$13,576,800.00

Congestion Drivers

None

Existing Flowgates

FG #	From Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type
GD-W3	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Gen Deliv (winter)
GD-W4	274750	CRETE EC ;BP	255112	17STJOHN	1	345	217/222	Gen Deliv (winter)

New Flowgates

None

Financial Information

Capital spend start date	01/2023
Construction start date	05/2025
Project Duration (In Months)	34

Additional comments

None