

Rebuild 345 kV Lines 6607/6608 East Frankfort - Crete and 94507/97008 Crete - St. John

General Information

Proposing entity name	COMED
Company proposal ID	For internal use only
PJM Proposal ID	354
Project title	Rebuild 345 kV Lines 6607/6608 East Frankfort - Crete and 94507/97008 Crete - St. John
Project description	Rebuild 345 kV double circuit lines 6607/6608/97008 East Frankfort - University Park North - Crete and 94507/97008 Crete - St. John with twin bundled 1277 ACAR conductor. Upgrade terminal equipment at St. John and East Frankfort. Expected summer ratings for line 94507 are 1679/2011/2107/2280 N/E/STE/LD. Expected winter ratings for line 94507 are 2091/2339/2390/2390 N/E/STE/LD. Expected summer ratings for line 6607 are 1679/2011/2107/2280 N/E/STE/LD. Expected winter ratings for line 6607 are 2091/2339/2445/2648 N/E/STE/LD. Expected summer ratings for line 6608 are 1679/2011/2107/2280 N/E/STE/LD. Expected winter ratings for line 6608 are 2091/2339/2445/2648 N/E/STE/LD. Overall ratings for line 97008 will not change.
Project in-service date	11/2025
Tie-line impact	Yes
Interregional project	Yes
Interregional RTO name	MISO
Interregional cost allocation evaluation	No
Evaluated in interregional analysis under PJM Tariff or Operating Agreement provisions	No
Specify analysis and applicable Tariff or Operating Agreement provisions	
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Non public information

Project Components

1. Rebuild 5 miles of 345 kV double circuit in Illinois with twin bundled 1...
2. Upgrade St. John Terminal Equipment
3. Rebuild 12.7 miles of 345 kV double circuit with twin bundled 1277 ACAR ...
4. Rebuild 7 miles of 345 kV double circuit in Indiana with twin bundled 12...
5. Replace East Frankfort 345 kV CB 9-14

Transmission Line Upgrade Component

Component title	Rebuild 5 miles of 345 kV double circuit in Illinois with twin bundled 1277 ACAR conductor
Impacted transmission line	94507 & 97008
Point A	Crete
Point B	St. John
Point C	
Terrain description	Existing right-of-way on mostly flat terrain through farmland and some residential areas.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	1414 ACSR Paper Expanded
Hardware plan description	New line hardware will be used.
Tower line characteristics	The existing steel lattice structures were built in 1958.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings

Summer (MVA)	1679.000000	2011.000000
Winter (MVA)	2091.000000	2339.000000
Conductor size and type	Twin bundled 1277 ACAR	
Shield wire size and type	TBD	
Rebuild line length	5 Miles	
Rebuild portion description	5 miles of double circuit will be rebuilt using double circuit corten steel towers.	
Right of way	Existing ROW will be used.	
Construction responsibility	ComEd	
Additional comments	Contains non-public information	

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	\$17,499,998.00
Component cost (in-service year)	\$19,799,497.00

Substation Upgrade Component

Component title	Upgrade St. John Terminal Equipment
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Substation name	St. John
Substation zone	NIPSCO
Substation upgrade scope	Replace 345 kV line disconnect switch.
Transformer Information	
None	
New equipment description	New disconnect will be rated 4000A, 2390 MVA for all ratings.
Substation assumptions	N/A
Real-estate description	N/A
Construction responsibility	NIPSCO
Additional comments	
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	\$485,392.00
Component cost (in-service year)	\$546,313.00

Transmission Line Upgrade Component

Component title	Rebuild 12.7 miles of 345 kV double circuit with twin bundled 1277 ACAR conductor
Impacted transmission line	6607 & 6608 & 97008
Point A	East Frankfort
Point B	Crete
Point C	
Terrain description	Existing right of way on mostly flat terrain through farmland and some residential and industrial areas.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	1414 ACSR Paper Expanded
Hardware plan description	New line hardware will be used.
Tower line characteristics	The existing steel lattice structures were built in 1958.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1679.000000	2011.000000
Winter (MVA)	2091.000000	2339.000000
Conductor size and type	Twin bundled 1277 ACAR	
Shield wire size and type	TBD	
Rebuild line length	12.7 Miles	

Rebuild portion description	12.7 miles of double circuit will be rebuilt using double circuit corten steel towers.
Right of way	Existing ROW will be used.
Construction responsibility	ComEd

Additional comments

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	\$44,450,000.00
Component cost (in-service year)	\$50,290,730.00

Transmission Line Upgrade Component

Component title	Rebuild 7 miles of 345 kV double circuit in Indiana with twin bundled 1277 ACAR conductor
Impacted transmission line	94507 & 97008
Point A	Illinois/Indiana border
Point B	St. John
Point C	
Terrain description	Existing right-of-way on mostly flat terrain through farmland and some residential areas.

Existing Line Physical Characteristics

Operating voltage	345
Conductor size and type	1414 ACSR Paper Expanded
Hardware plan description	New line hardware will be used.
Tower line characteristics	The existing steel lattice structures were built in 1958.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	345.000000	345.000000
	Normal ratings	Emergency ratings
Summer (MVA)	1679.000000	2011.000000
Winter (MVA)	2091.000000	2339.000000
Conductor size and type	Twin bundled 1277 ACAR	
Shield wire size and type	TBD	
Rebuild line length	7 Miles	
Rebuild portion description	7 miles of double circuit will be rebuilt using double circuit corten steel towers.	
Right of way	Existing ROW will be used.	
Construction responsibility	ComEd	
Additional comments	Contains non-public information.	

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	\$24,500,002.00
Component cost (in-service year)	\$27,719,302.00

Substation Upgrade Component

Component title	Replace East Frankfort 345 kV CB 9-14
Substation name	East Frankfort
Substation zone	ComEd
Substation upgrade scope	Replace 345 kV CB 9-14 with a 3000A CB.

Transformer Information

None	
New equipment description	345 kV CB 9-14 to be replaced with a 3000A SF6 CB. New equipment ratings: Summer: 1868/2011/2404/2872 MVA N/LTE/STE/LD Winter: 2214/2339/2757/3275 MVA N/LTE/STE/LD
Substation assumptions	N/A
Real-estate description	
Construction responsibility	ComEd
Additional comments	

Component Cost Details - In Current Year \$

Engineering & design	Proprietary information
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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	\$2,000,000.00
Component cost (in-service year)	\$2,262,800.00

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	01/2022
Construction start date	03/2024

Project Duration (In Months)

46

Additional comments

None