

PJM RTEP – 2016/17 RTEP Long Term Proposal Window

Project Proposal Report by

**Exelon Corporation/ComEd and American Electric
Power**

New Cottage Grove 345kV Substation Proposal



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Table of Contents

EXECUTIVE SUMMARY3

COMPANY EVALUATION INFORMATION.....3

PROPOSED PROJECT CONSTRUCTABILITY INFORMATION5

ANALYTICAL ASSESSMENT6

APPENDIX A8

APPENDIX B12

APPENDIX C.....14

APPENDIX D15

A. Executive Summary

Proposing Entity: AEP - Exelon

AEP and Exelon (parent company of ComEd) seek to be the Designated Entities for the new Cottage Grove 345kV Substation. Ultimately, AEP and ComEd intend to construct, own, and operate respective portions of the project through their established joint venture company, RITELine Illinois, LLC.

Additional information regarding AEP and Exelon and its subsidiaries, including ComEd, qualifications and the qualifications of the intended owner of the Project are found in Section B.

A general description of the proposed project

The solution consists of the installation of a new substation at Cottage Grove located in Crete, Illinois. The new substation consists of two ring buses with a normal open bus-tie breaker. This substation is designed to have an ultimate breaker and a half bus configuration if the bus-tie breaker needs to run normally closed or if additional elements are connected.

This proposal is being submitted targeting RPM benefits. The proposal assumes American Electric Power (AEP) will complete the 345KV Dequine to Eugene line upgrade (b2777) and 345kV Dequine to Meadow Lake line upgrade (b2668 and b2776) projects by 6/1/2021. The proposed project will increase the thermal CETL of the ComEd zone to 6,210 MW.

Total proposed project cost:

\$62.8 million. This includes cost to mitigate reliability issues identified by ComEd, as detailed in Appendix C.

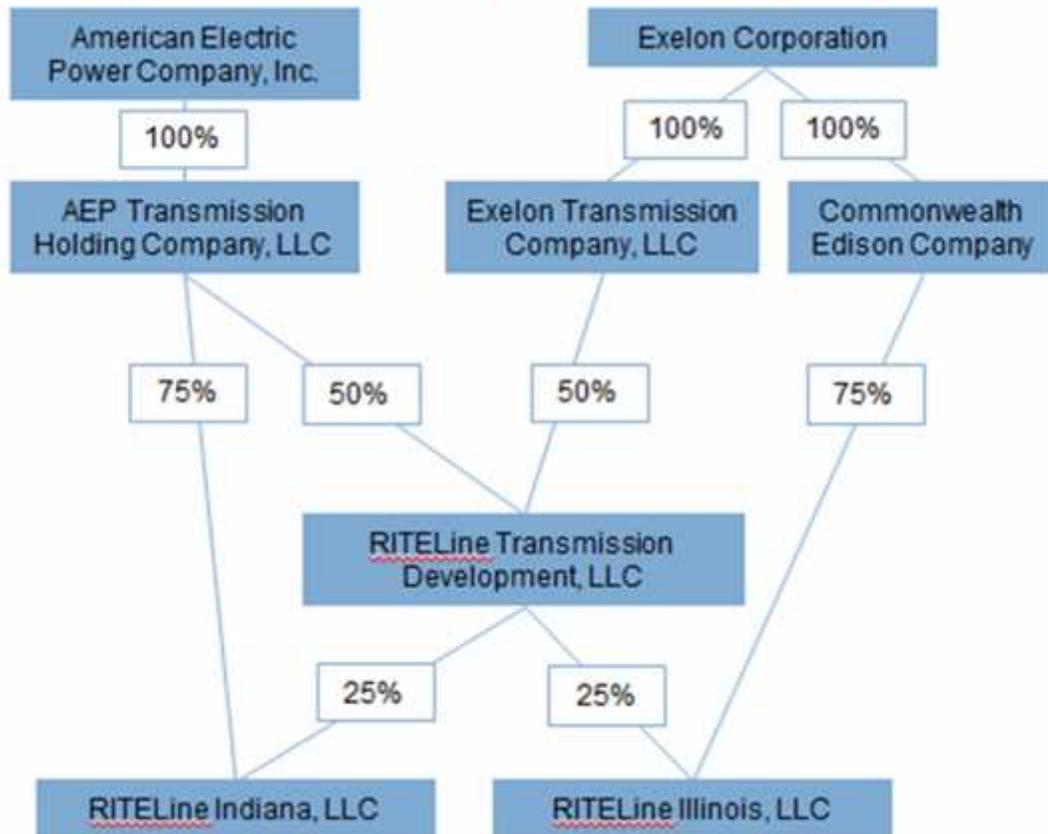
Overall schedule duration:

Approximately 3 years from time of PJM approval. Expected in service date of 06/01/2021, assuming PJM Board approval by end of 1st Quarter 2018.

B. Company Evaluation Information

As stated above, AEP and Exelon/ ComEd intend to construct, own, and operate respective portions of the project through their established joint venture company, RITELine Illinois. The figure below provides a diagram of the existing ownership structure for AEP, Exelon and the RITELine Companies, including RITELine Illinois, LLC.

RITELine Companies Ownership Structure



Exelon Corporation (Exelon) is pre-qualified for designated entity status with PJM ID 13-04 responds to the Request for Proposal (RFP) – PJM RTEP 2016/17 RTEP Long Term Proposal Window issued by PJM on November 1, 2016.

AEP has received Pre-Qualification status from PJM under ID 13-05 indicating satisfaction of the pre-qualification requirements for Designated Entity status as defined in the PJM OA in section 1.5.8(a). Consequently, AEP is eligible as a Designated Entity to construct, own and operate facilities within PJM's footprint. The information as posted on PJM's website reflects the Company's current qualifications.

C. Proposed Project Constructability Information

1. Component Scope

The solution consists of the installation of a new substation at Cottage Grove in Crete, Illinois. The new substation will have two ring buses with a normal open bus-tie breaker and is designed to have an ultimate breaker and a half bus configuration if the bus-tie breaker needs to run normally closed or if additional elements are connected. See detail in section C.1.a. This project cost is estimated to be \$62.8 million in 2017 dollars and \$66.9 million in in-service year dollars assuming a 06/01/2021 installation date and assuming approval by PJM Board of Managers by 03/31/2018. The timeline and estimated costs provided are based on reasonable assumptions for permitting and regulatory approval as discussed below in section C.1.d and as such are subject to change pending said regulatory and permitting approvals.

1.a Greenfield New Substation Element Detail

The new substation Cottage Grove will be located near the intersection of 345kV lines Crete – St John (94507), University Park North EC – Olive (97008), Davis Creek – Bloom (17907), and Davis Creek – Burnham (17704). There will be eight lines connected to this new substation, and each line will have a motor operated disconnect switch (MOD). A total of nine 345kV breakers and twenty-six MOD switches will be installed at the new Cottage Grove substation. The design of the new substation has considered the potential of expanding/upgrading to breaker and a half configuration in the future.

1.a.1 See Appendix C for more project detail.

1.a.2 See Appendix A for geographic and one-line representations.

1.b Specific Location of interconnection with incumbent TO facilities and assumptions that were made for this proposal

This proposal was made based on the assumption of American Electric Power (AEP) will complete the upgrades for 345kV lines, Dequine to Eugene (b2777) and Dequine to Meadow Lake (b2668 and b2776), by 06/01/2021.

1.c Generation/ Transmission Outages Coordination

ComEd will coordinate outages for construction with generation owners and neighboring utilities.

1.d Environmental, Permitting and Land Acquisition

ComEd will consult with all applicable regulatory agencies as required when constructing new transmission facilities. ComEd will ensure that necessary documentation is supplied and procedures are followed throughout the duration of the project. This would include studies and permitting for constructability and construction methods, site access, equipment staging, environmental impacts, and development of mitigation plans to address any impacts if determined to be necessary. Specific environmental studies will be required to identify the presence of wetlands, floodplain, threatened and endangered species, and historic preservation sites. ComEd would require any necessary permits to be obtained to comply with local, state, and federal environmental regulations.

Because the proposed project involves construction of a substation, ComEd believes that no CPCN will be required.

The project will not require the acquisition of new land rights for the construction, operation, and maintenance of the substation as the land is currently owned by ComEd.

The timeline and estimated costs provided are based on reasonable assumptions for permitting and regulatory approval as discussed above and as such are subject to change pending said regulatory and permitting approvals.

2.a Project Component Cost Estimates

Costs are stated above, see Appendix D for detail project cost estimates.

2.b ComEd or its contractors will construct all facilities associated with this proposal.

3.a Schedule

See Appendix B for preliminary schedule; dates assume PJM Board of Managers approval no later than 03/31/2018 as well as all regulatory and permit approvals are received in timely fashion.

4.a On-going Transmission Facility Items

a. Operational Plan

ComEd plans to operate the new substation and associated equipment from its current transmission control center in suburban Chicago. ComEd currently owns and operates 5,581 miles of transmission in northern Illinois from this control center.

b. Maintenance Plan

ComEd will maintain the new substation in accordance with its standard maintenance practices. ComEd maintains spare equipment for emergencies including motor operated switches, circuit breakers, relays, and other equipment

5.a Assumptions

- Assumes all regulatory approvals are received in a timely and reasonable fashion
- Assumes completion of American Electric Power (AEP) of upgrades for 345kV lines, Dequine to Eugene (b2777) and Dequine to Meadow Lake (b2668 and b2776), by 06/01/2021

Section D Analytical Assessment and Appendix A-D have been redacted to protect Proprietary and CEII Information