



PJM Western Sub-Regional RTEP Committee ComEd Supplemental Upgrades

March 25, 2019

Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Need Number: COMED-2019-002

Process Stage: Need Meeting 3/25/2019

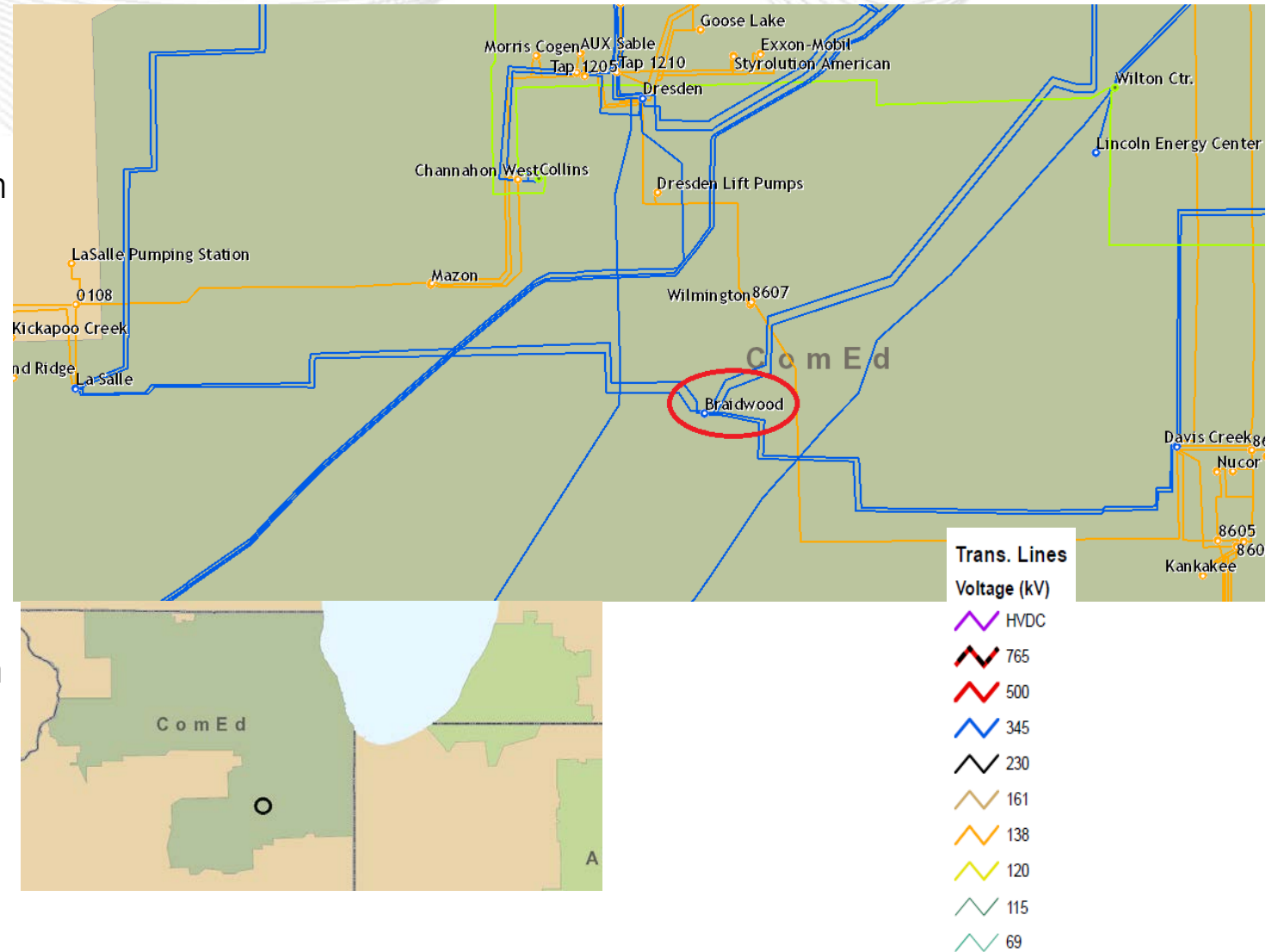
Supplemental Project Driver: Equipment Material Condition

Problem Statement:

- Station 20 Braidwood 345kV bus tie 11-14
 - Replacement parts are difficult to acquire
 - Bushings are at end of life
 - Manufactured in 1978

Specific Assumption References:

- December 5, 2018 ComEd Annual Assumptions
 - Transmission infrastructure replacement (EOL/condition/obsolescence) that are consistent with the efficient asset management decisions



Need Number: COMED-2019-003

Process Stage: Need Meeting 3/25/2019

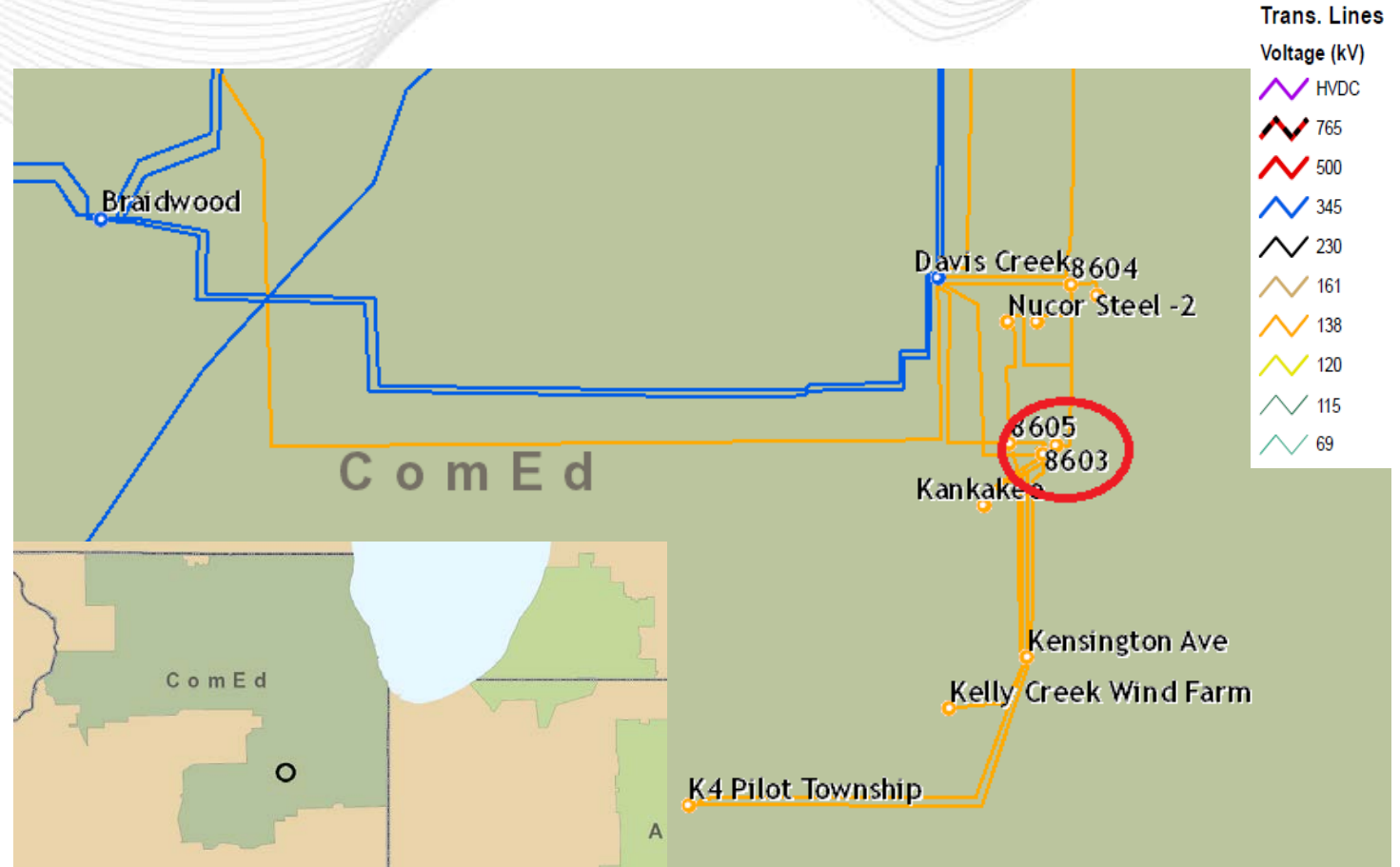
Supplemental Project Driver: Customer Service, Infrastructure Resilience

Problem Statement:

- New customer has requested new 138kV service in the Bradley area
 - 11MW in 2020, up to 45 MW by 2024

Specific Assumption References:

- December 5, 2018 ComEd Annual Assumptions
 - New transmission customer interconnection



Need Number: COMED-2019-004

Process Stage: Need Meeting 3/25/2019

Supplemental Project Driver: Customer Service

Problem Statement:

- Distribution has asked for an additional 12kV transformer connection at Devon

Specific Assumption References:

- December 5, 2018 ComEd Annual Assumptions
 - Transmission System configuration changes due to expansion of existing distribution substations



Need Number: COMED-2019-005

Process Stage: Need Meeting 3/25/2019

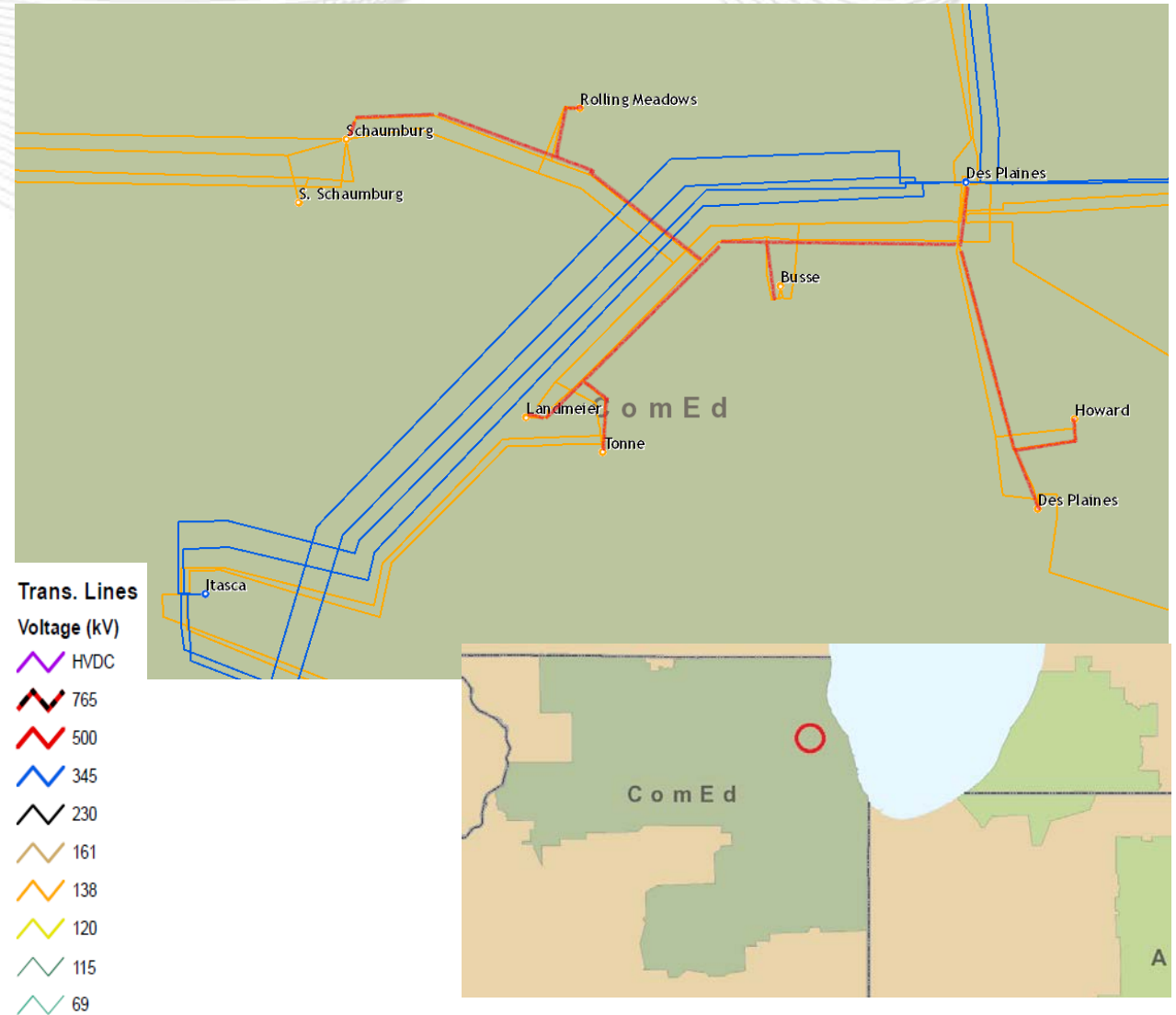
Supplemental Project Driver: Operational Flexibility and Efficiency

Specific Assumption References:

- December 5, 2018 ComEd Annual Assumptions
 - Enhancing system functionality, flexibility, or operability

Problem Statement:

- 138kV line 4605 is a three-terminal line
 - TSS 46 Des Plaines
 - TSS 198 Des Plaines
 - TDC 207 Tonne (future Elk Grove)
- Elk Grove project B2941 will cut into the line
- The current configuration is very difficult to relay properly due to unequal lengths of the three legs



Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

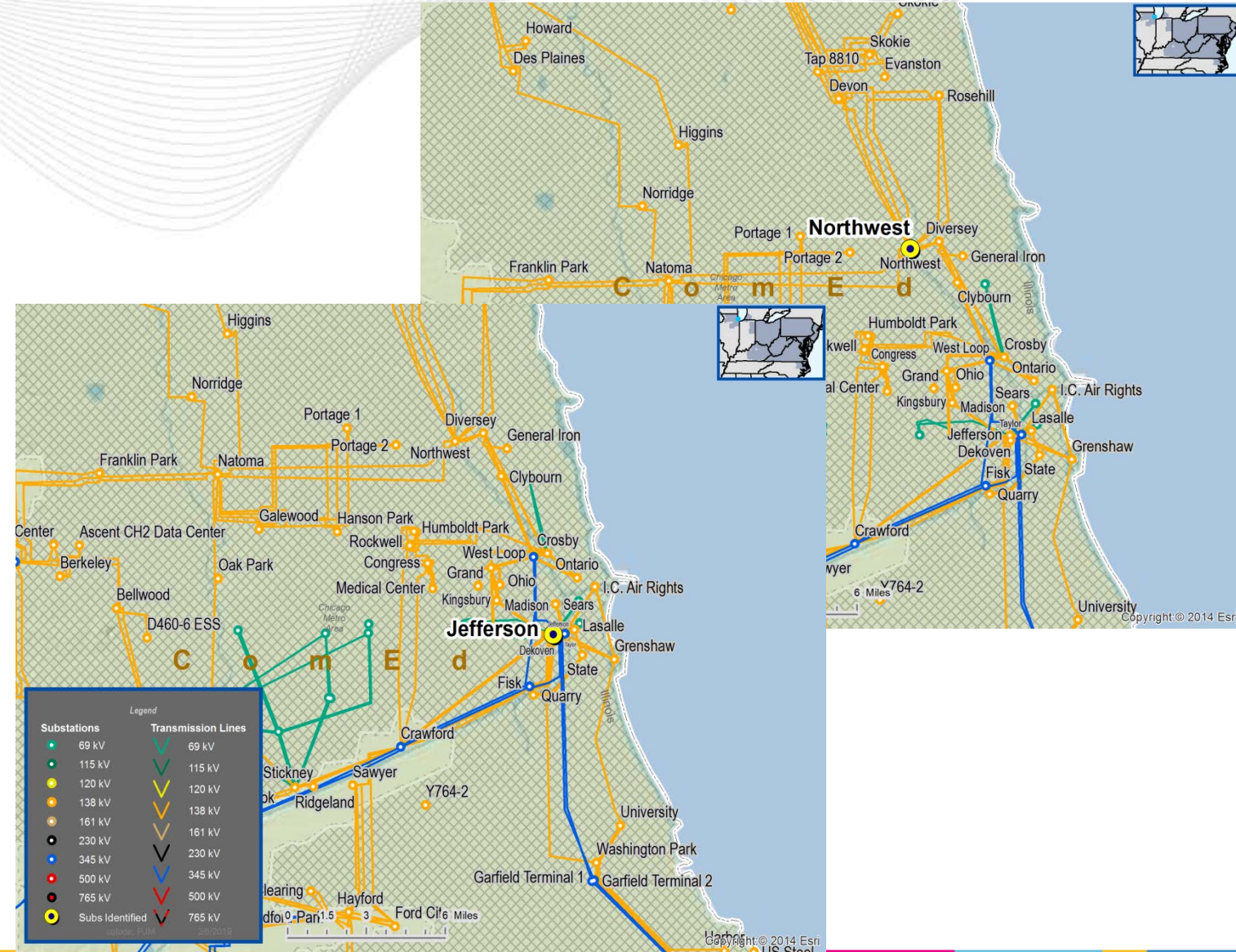


Need Number: COMED-2019-001
 Process Stage: Solutions Meeting 3/25/2019
 Process Chronology:
 Need Meeting: 2/20/2019

Supplemental Project Driver:
 • Other – Technological Pilot Project

Specific Assumption References:
 • December 5, 2018 ComEd Annual Assumptions
 • Press release announcing the agreement between AMSC and ComEd October 31, 2018

Problem Statement:
 • Support of the DHS sponsored Resilient Electric Grid (REG) initiative with a new technical pilot project involving superconducting cable.



Need Number: COMED-2019-001

Process Stage: Solutions Meeting 3/25/2019

Proposed Solution:

- Support of the DHS sponsored Resilient Electric Grid (REG) initiative with the installation and operation of a new superconducting cable that utilizes the 2nd generation High Temperature Superconducting (“HTS”) wire to provide high transfer capacity between multiple 12kV locations.
 - Successful demonstration would improve resiliency and could lead to greater interest in the new technology throughout the utility industry and a reduction in cost.
- The project will be completed in two phases to gain learnings from the 1st phase about the installation and operation of the cable system that will be incorporated into the 2nd phase of the project.
 - Phase 1 in-service 2021
 - Phase 2 in-service 2026 (contingent on successful completion of Phase 1)

Alternative Considered:

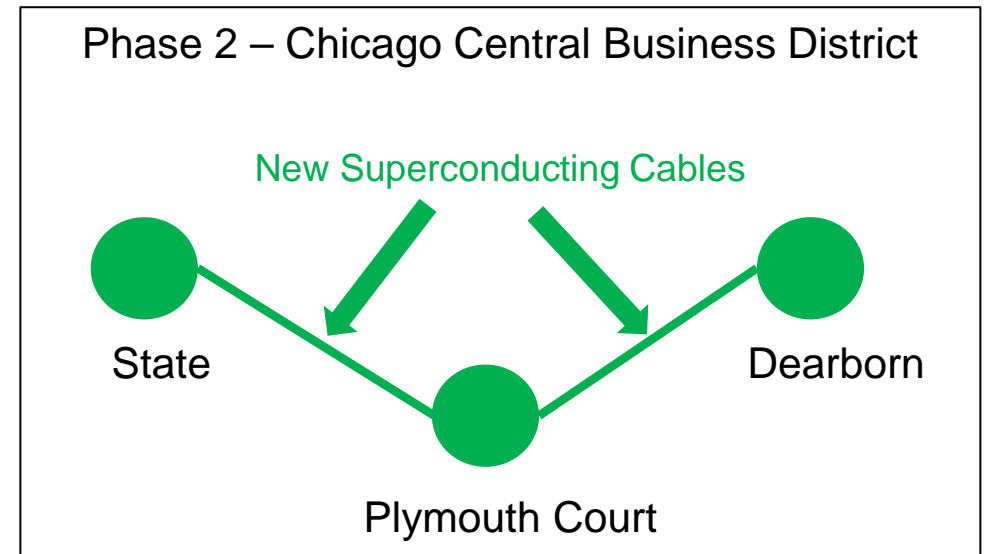
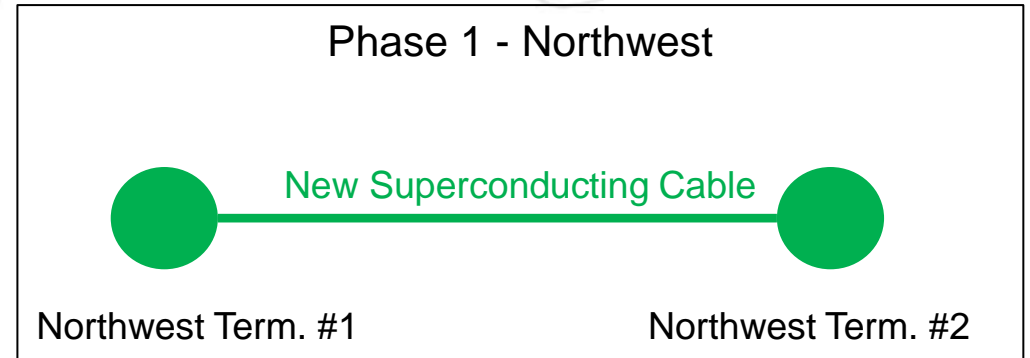
- None, as a Technological Pilot Project the alternative would be to not do the project.

Estimated Project Cost:

- \$67M ComEd cost for Phase 1 & Phase 2
- Additional contributions by DHS and AMSC

Projected In-Service Date:

- Phase 1 in-service 2021
- Phase 2 in-service 2026 (contingent on successful completion of Phase 1)





Appendix



High level M-3 Meeting Schedule

Assumptions

Activity	Timing
Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
Stakeholder comments	10 days after Assumptions Meeting

Needs

Activity	Timing
TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
Stakeholder comments	10 days after Needs Meeting

Solutions

Activity	Timing
TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
Stakeholder comments	10 days after Solutions Meeting

Submission of Supplemental Projects & Local Plan

Activity	Timing
Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
Post selected solution(s)	Following completion of DNH analysis
Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

3/14/2019 – V1 – Original version posted to pjm.com

3/19/2019 – V2

- Slide #3, Change COMED-2019-0002 to COMED-2019-002
- Slides #4, Change COMED-2019-0003 to COMED-2019-003
- Slides #5, Change COMED-2019-0004 to COMED-2019-004
- Slides #6, Change COMED-2019-0005 to COMED-2019-005
- Slides #8, 9, Change CE-2019-0001 to COMED-2019-001