



TEAC - Western Committee ComEd Supplemental Projects

April 30, 2024

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-2024-010

Process Stage: Solution Meeting 4/30/2024

Previously Presented: Need Meeting 4/2/2024

Project Driver:

Operational Flexibility and Efficiency

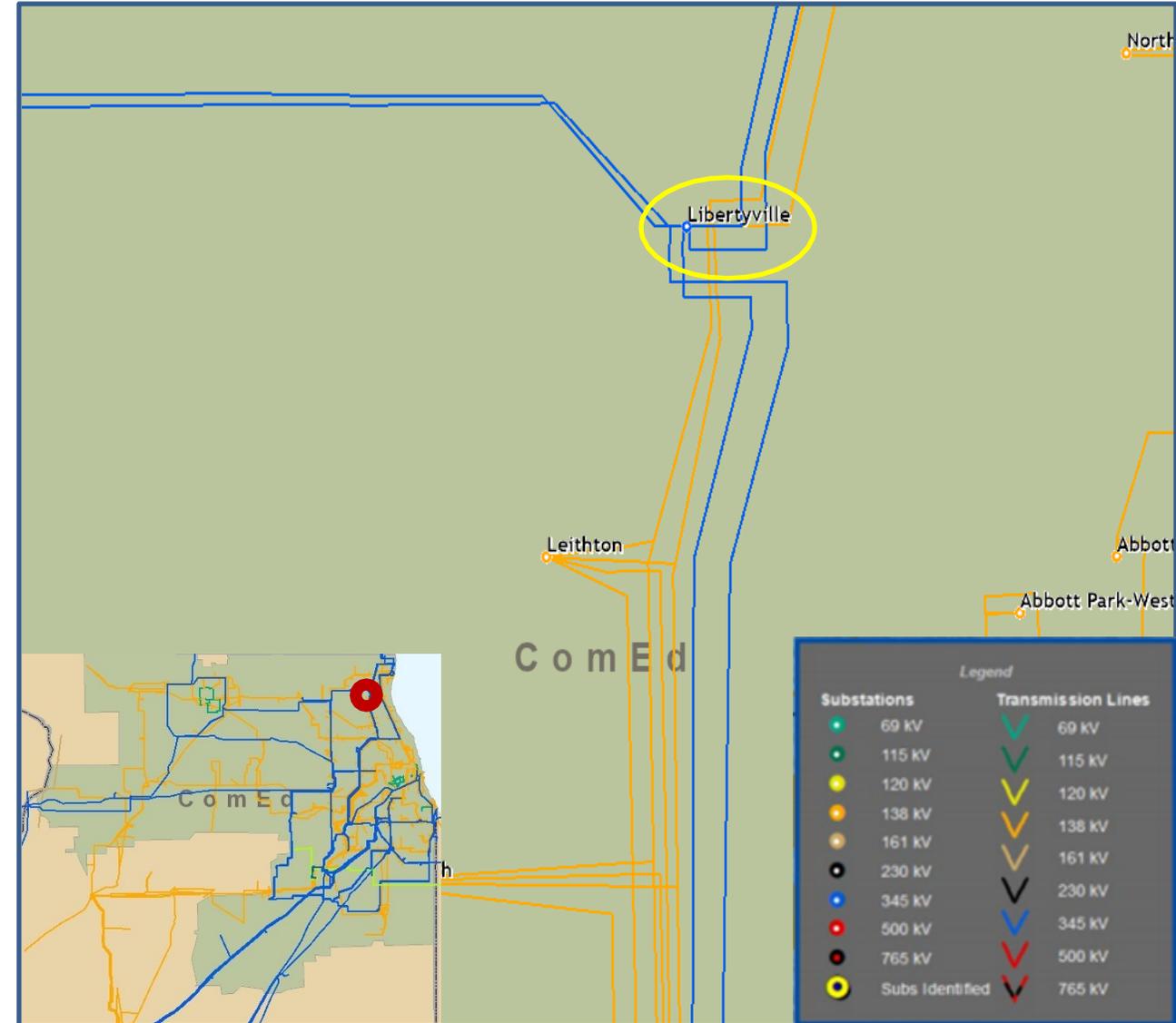
Equipment Material Condition, Performance and Risk

Specific Assumption Reference:

- Enhancing system functionality, flexibility, visibility, or operability
- Transmission infrastructure replacements (EOL/condition/obsolescence) that are consistent with efficient asset management decisions

Problem Statement:

- Libertyville 345 kV bus is currently a straight bus with two oil CBs and three SF6 CBs connecting six lines and two 345/138 kV transformers. Multiple transmission facilities are disconnected for various single, failed CB, bus, or tower contingencies.
- The transformers do not have high side CBs
- The two 345 kV oil CBs are 55 years old. They are in deteriorating condition and have a lack of replacement parts.



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Process Stage: Solution Meeting 4/30/2024

Proposed Solution:

- Replace the 345 kV oil BT 1-2 and BT 2-3 CBs with new SF6 CBs
 - Old Rating 2000 A, 40 kA
 - New Rating 3000 A, 63 kA
- Install 5 new 345 kV BT CBs and extend bus to create a double ring bus configuration
- Install 2 new 345 kV CBs on the high side of the 345/138 kV transformers

Facility	Summer Normal	Summer Emergency	Winter Normal	Winter Emergency
	(MVA)	(MVA)	(MVA)	(MVA)
Existing				
Libertyville-Zion Station 345 kV	1201	1201	1476	1497
Libertyville-Prospect Hgts. 345 kV	1201	1201	1476	1497
Proposed				
Libertyville-Zion Station 345 kV	1201	1201	1497	1497
Libertyville-Prospect Hgts. 345 kV	1201	1201	1497	1497

Estimated transmission cost: \$35M

Alternatives Considered:

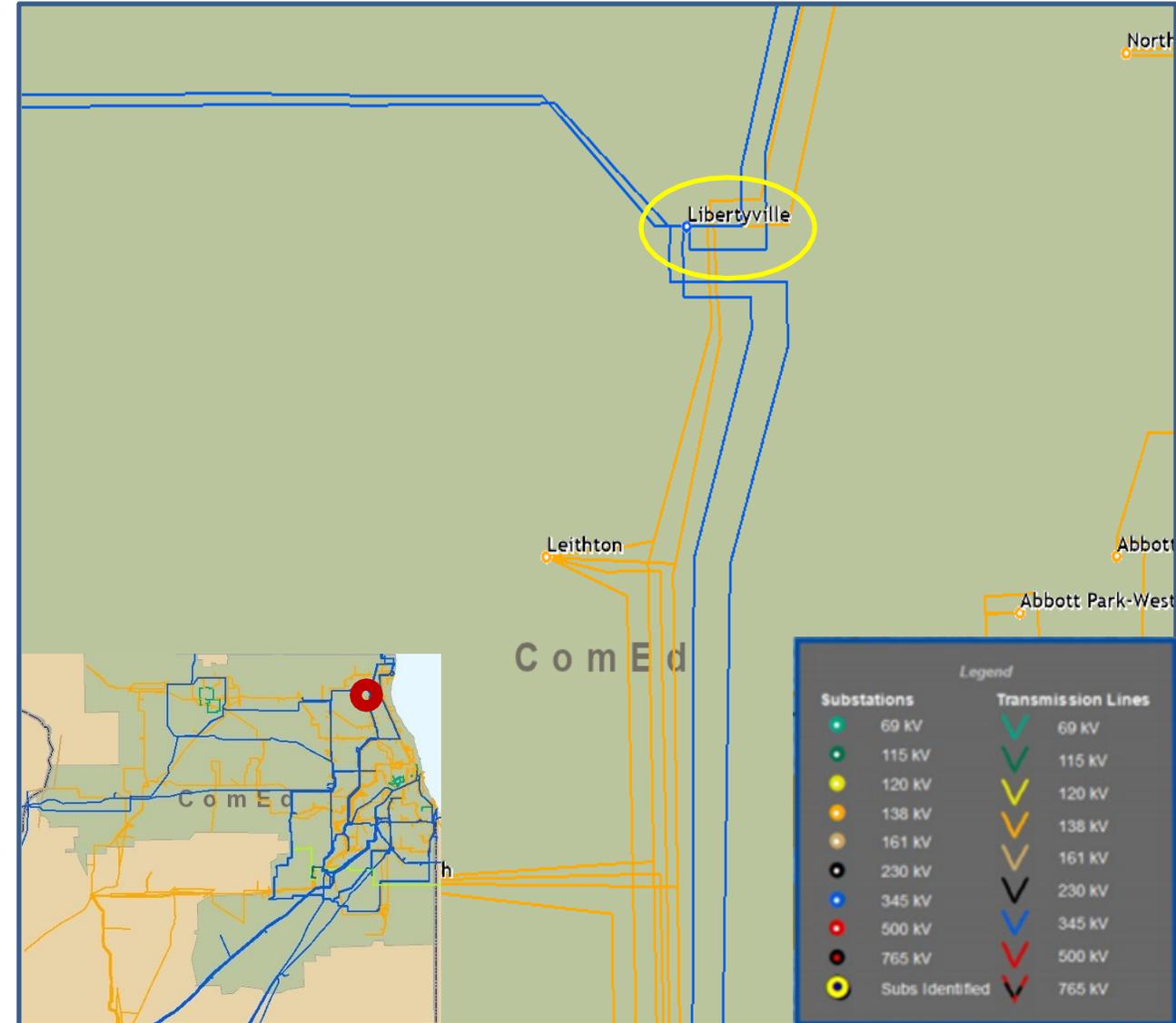
Replace 345 kV oil BT CBs with new SF6 CBs

- This alternative was not pursued since it does not address the straight bus configuration at Libertyville.

Projected In-Service: 12/31/27

Project Status: Conceptual

Model: 2028 RTEP



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

3/22/2024 – V1 – Original version posted to pjm.com