

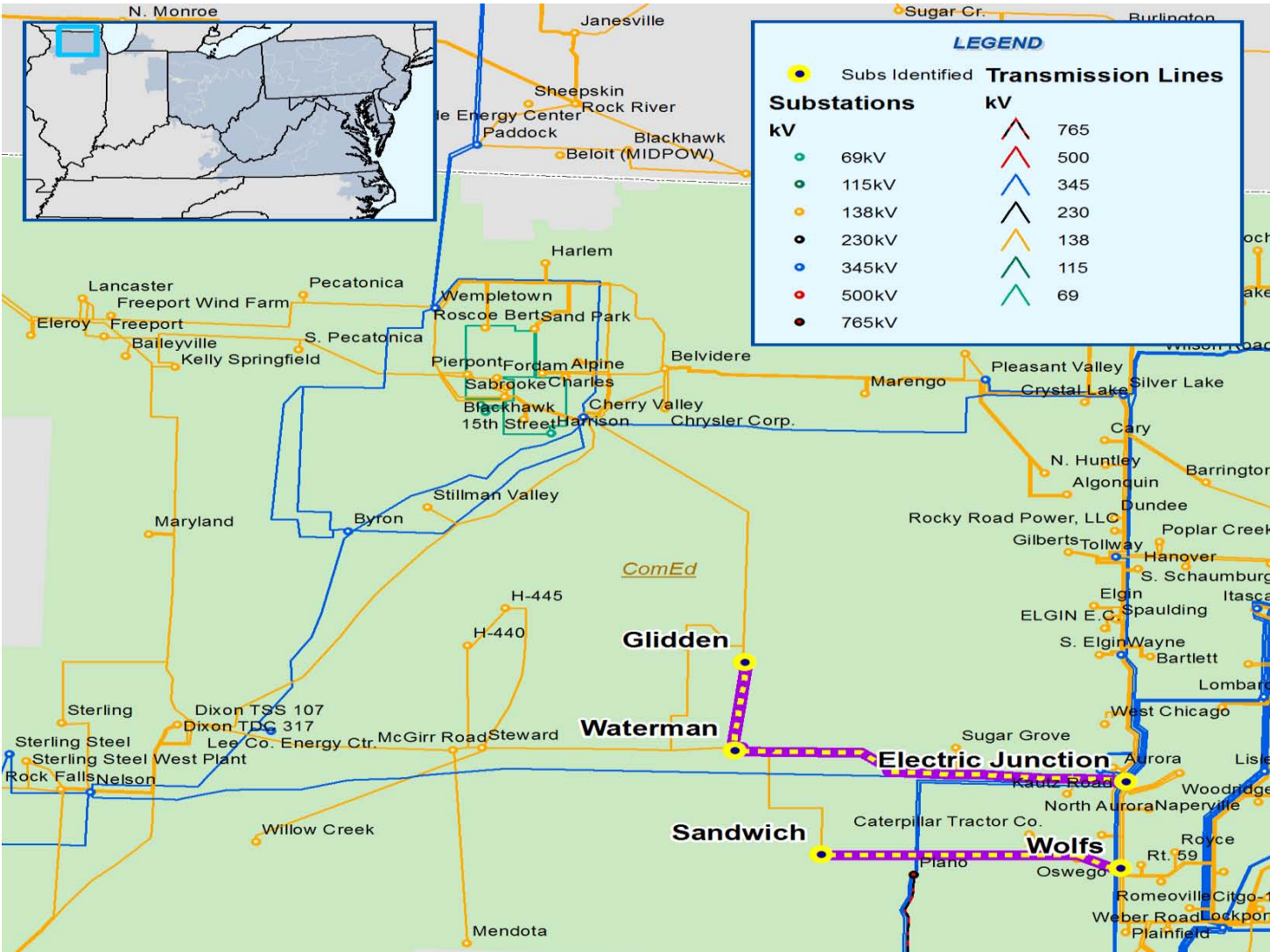


An Exelon Company

# **Modification of the Electric Junction- Waterman-Glidden (L11106) Special Protection System (SPS)**

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# Electric Junction-Waterman-Glidden 138kV line (L11106)



## Electric Junction-Waterman-Glidden 138kV line (L11106)

- ✓ Background – The primary source of L11106 are two 345/138kV autotransformers at TSS 111 Electric Junction. When 11106 CB is open at Electric Junction, load is fed from Nelson (~75 miles) and Cherry Valley (~65 miles) substations.
- ✓ Purpose - To prevent low voltage on 138 kV line 11106.
- ✓ Triggering Event - Existing 11106 SPS initiates transfer trip on line 11106 for a 138kV bus 2 fault (NERC Category C) at TSS 111 Electric Junction. The modification is to incorporate open line 11106 circuit breaker at TSS 111 Electric Junction into the existing SPS.
- ✓ Add redundancy - Installing a secondary SPS which following a 138kV bus 2 fault or open L11106 CB at Electric Junction would open C/S 0605 at TSS 56 North Aurora and transfer trip North Aurora load to eliminate the low voltage violation along the right-of-way.
- ✓ Consequence of Failure to Operate - Fully redundant system, no consequence for failure of single SPS component.
- ✓ Consequence of Misoperation - Studies show that there are no thermal or voltage violations with the single contingency loss of line 11106.
- ✓ RFC Approval – SPS approved by RFC on November 18, 2010.