

## VSPC Geographic Targeting Subcommittee

Sept 10, 2025

WEC's Long Range Plan includes the need to rebuild two aging substations, Mount Knox and Jackson Corners. WEC is currently preparing documents for Rural Utilities Service approval, after which it will seek Public Utility Commission approval.

### Jackson Corners

This wooden structured substation was built in 1968, has a 1991 transformer and is showing significant deterioration. WEC intends to rebuild this substation based on asset age and condition and in order to provide feeder backup capacity.

The transformer needs to be replaced due to age and condition. The upgrade in transformer size from 3.75 kVA to 7.5 mVA is necessary for feeder backup and to a lesser extent to prepare for future load growth. However, the differential in cost (\$112,000) between the cost of the transformer sizes is well below the \$250,000 threshold (roughly \$450,000 inflation adjusted) even if it were all attributable to load growth, which it is not.


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Figure 14: #8 Jackson Corners Substation – Wood Structure – 1968

## Mount Knox

This substation was built in 1971 and has 1975 and 2000 transformers. It is also a wooden structure and also shows significant deterioration. WEC intends to rebuild this substation based on asset age and condition and in order to provide feeder backup capacity to serve WEC territory.

The 1,250 kVA transformers need to be replaced based on age and condition. WEC intends to replace the three existing transformers with a single transformer. As at Jackson Corners the cost differential between a single 3.5 mVA transformer and a 7.5 mVA transformer is \$112,000.

Mount Knox also needs an upgrade from bus regulators to circuit regulators in order to serve as feeder backup. WEC intends to upgrade from 150 A regulators to 219 A regulators both to provide feeder backup and to a lesser extent to accommodate potential future load growth. However, as the cost differential between 150 A regulators and 219 A regulators is small (less than \$10,000 per regulator), even if the transformer upgrade and the regulator upgrade were attributable to load growth, which they are not, it would still be less than \$250,000 in cost differential and far below the \$450,000 inflation adjusted threshold.

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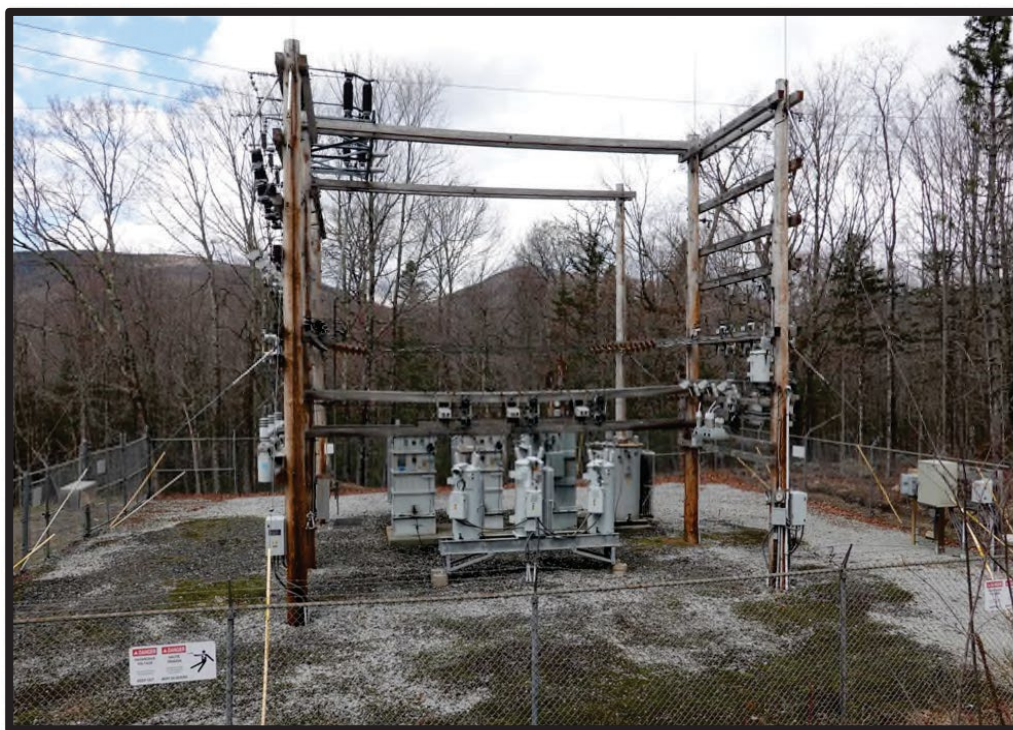


Figure 10: #3 Mount Knox Substation – Wood Structure – 1971