



Vermont's Local System Plan

October 29, 2025
TOPAC Meeting
Presenter: Frank Etori

Vermont's Local System Plan

- Required by Attachment K
 - The LSP, or Local System Plan, addresses non-PTF transmission (115 kV or greater) and subtransmission facilities (69, 46, or 34.5 kV)
 - Attachment K requires stakeholder input on LSP
 - Several companies own and operate non-PTF facilities in VT
 - Two largest utilities are
 - Green Mountain Power (GMP)
 - Vermont Electric Coop (VEC)
 - The VT LSP is posted to the VELCO Planning website (link below):
 - <https://www.velco.com/planning>
 - Vermont has both networked transmission and underlying subtransmission networks
 - Some LSP projects have RSP elements and vice versa
 - LSP considerations for those types of projects are noted here

Project Status Definitions

This presentation describes projects that are at different maturity levels

Concept	Project is under consideration as a possible solution to a need, but little or no analysis is available
Proposed	The local distribution utility or VELCO has determined that the project is an appropriate solution to a need, but a budget has not yet been approved, or the project has not yet obtained Proposed Plan Approval (PPA or I.3.9 Approval) from ISO-NE
Planned	I.3.9 Approval has been obtained or a budget has been approved
Permitting	Project is in the permitting stage
Under Construction	Project is under construction
In-Service	Project is complete

List of Vermont LSP Projects

Items in **red** are new or have been updated

Project Name	Project proponents / low voltage system	Critical Load Level	Current Status (Projected in-service date)	LSP Elements
Highgate Substation	VELCO/VEC	N/A	In-Service (2025)	115/46 kV Asset Condition
Middlebury Substation	VELCO/GMP	N/A	In-Service (2025)	115/46 kV Asset Condition

List of Vermont LSP Projects

Project Name	Project proponents / low voltage system	Critical Load Level	Current Status (Projected in-service date)	LSP Elements
St Johnsbury Substation	VELCO/GMP	N/A	Planned (2026)	115/34.5 kV Asset Condition
Tafts Corner Transformer	VELCO/GMP/VEC	N/A	Planned (2026)	2 nd 115/12.5 kV transformer
Windsor Substation	VELCO/GMP	N/A	Planned (2028)	115/46 kV Asset Condition
Global Foundries sub #86	VELCO/GF	N/A	Concept (2028)	115/13.8 kV Asset Condition
East Fairfax Substation	VELCO/GMP/VEC	N/A	Concept (2029)	115/34.5 kV Asset Condition
South Hero Substation	VELCO/VEC	N/A	Concept (2029)	115/13.2 kV Asset Condition
Cold River Substation	VELCO/GMP	N/A	Concept (2032)	115/46 kV Asset Condition

Individual Project Info

REPEATED FROM LAST YEAR



St Johnsbury substation refurbishment

- New control building
- New protection and control system
- Replace 34.5 kV oil circuit breaker
- Replace 115 kV circuit switcher with 115 kV vacuum breaker and disconnect switch
- Replace and expand the substation fence
- Replace station service
- Upgrade telecommunication, security, and monitoring systems
- Cost Estimate
 - \$19M with 20% contingency

Tafts Corner Transformer addition

- Maintain supply to 12.47 kV load during single T2 115/12.46 kV transformer outage
 - Install spare transformer
 - Install 115 kV breaker
 - Install a 115 kV voltage transformer
 - Install protection relays and controls
 - Including all required hardware, cable and wiring
- Cost Estimate
 - \$0.8M with 20% contingency
- I.3.9 application
 - https://smd.iso-ne.com/operations-services/ceii/rc/2023/04/a03_14_velco_23_t01.zip

Windsor substation refurbishment

- New control building
- New protection and control system
- Replace 46 kV oil circuit breakers
- Replace 115 kV circuit switcher
- Replace the substation fence
- Replace station service
- Install transformer secondary oil-containment system
- Upgrade telecommunication, security, and monitoring systems
- Cost Estimate
 - \$13M with 50% contingency

Contact Information

- Questions on this presentation:

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