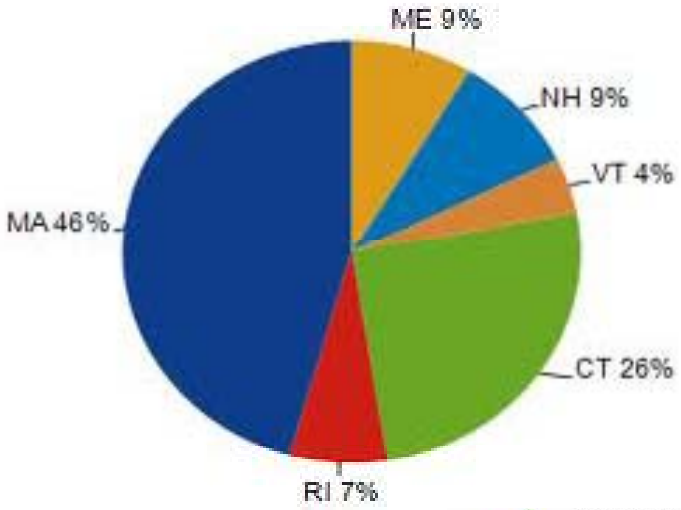
New England Electricity Restructuring Roundtable

Where is the smallest state capital city?

…And which state in New England has the smallest electric load share?



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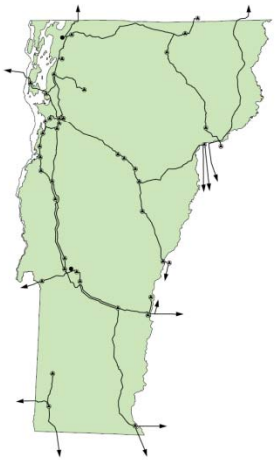
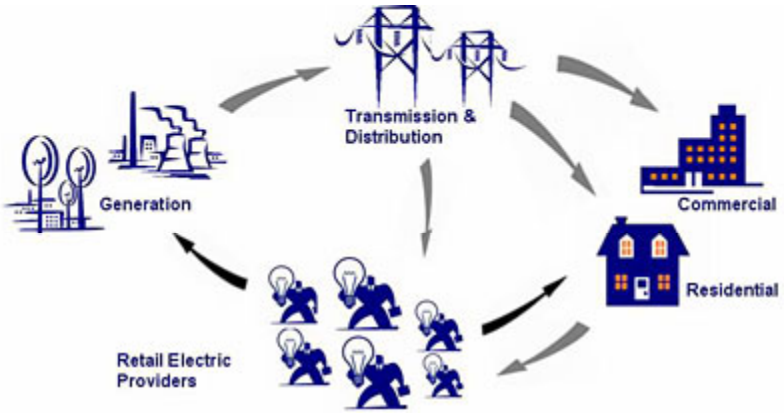
…Which NE state has interconnections to both NYISO and Quebec?



…An incumbent TO owned by our distribution utilities?



…And did not engage in electric restructuring?

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Credit: Putney School, VT

Vermont!

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Like Other States, Vermont Follows A Least Cost Approach

30 V.S.A. Section 218c – Least Cost is:

"…meeting the public's need for energy services, after safety concerns are addressed, at the lowest present value life cycle cost, including environmental and economic costs, through a strategy combining investments and expenditures on energy supply, transmission and distribution capacity, transmission and distribution efficiency, and comprehensive energy efficiency programs."

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Vermont Law & Board Order Require A Planning Approach

VELCO must help plan for nontransmission alternatives:

- 30 V.S.A. Section 218c

(d)(1) [VELCO] shall prepare and file with the department of public service and the public service board a transmission system plan that looks forward for a period of at least 10 years. . . . The objective of the plan shall be to identify the potential need for transmission system improvements as early as possible, in order to allow sufficient time to plan and implement more cost-effective nontransmission alternatives to meet reliability needs, wherever feasible.

- Board Order after contentious Northwest Reliability Project in Vermont also required VELCO 20 year planning process and created an oversight committee called the Vermont System Planning Committee

The Board and Department must press for NTAs:

- 30 V.S.A. Section 218c

(5) On the basis of information contained in a transmission system plan, . . . the public service board and the department of public service shall use their powers under this title to encourage and facilitate the resolution of reliability deficiencies through nontransmission alternatives, where those alternatives would better serve the public good. . . .

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This Planning Viewpoint Now Extends To Efficiency & Local Energy Development

Vermont Electric Efficiency Program through Efficiency Vermont has included "geotargeting" of efficiency since 2006, with funding set aside.

2012 Energy Act allows small-scale renewable energy standard offer program to take T&D benefits into account when there are:

> "sufficient benefits to the operation & management of the electric grid or a provider's portion thereof because of their design, characteristics, location, or any other discernible benefit."

The Act also requires utilities to provide information to developers sufficient for these planning choices and also requires the PSB to:

> "develop a screening framework or guidelines that will provide developers with adequate information regarding constrained areas in which generation having particular characteristics is reasonably likely to provide sufficient benefit…"

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Vermont Screening Has Identified Transmission Solutions That Could Be Deferred Through NTAs

Summary of Bulk System Regional Grouping & Transmission Solutions	Proposed Lead & Affected Distribution Utilities	Estimated Transmission Project Cost & (VT Share)[9]	Screened In or Out of Full NTA Analysis
Southeast Vermont • Rebuilding the Vermont portion of the Vernon to Northfield 345 kV line, as part of a larger VT/NH/MA set of upgrades.	*Lead*: GMP[10] *Affected*: All VT	$6M ($.24K)	Out
Connecticut River Valley • Construction of a second 115 kV line between Coolidge and Ascutney.	*Lead*: GMP Affected: All VT	$93M ($3.7M)	Out
Central Vermont • Construction of a second 345 kV line between Coolidge and West Rutland. •	*Lead*: GMP *Affected*: All VT	$157M ($6.3M)	In
Northwest Vermont • Rebuilding the West Rutland to Middlebury 115 kV line • Rebuilding the New Haven to Williston 115 kV line • Rebuilding the Williston to Tafts Corner 115 kV line	*Lead*: GMP *Affected*: All VT	$221M ($8.8M)	In

Current focus of full NTA analysis in VSPC process

Need date is beyond 10-year horizon

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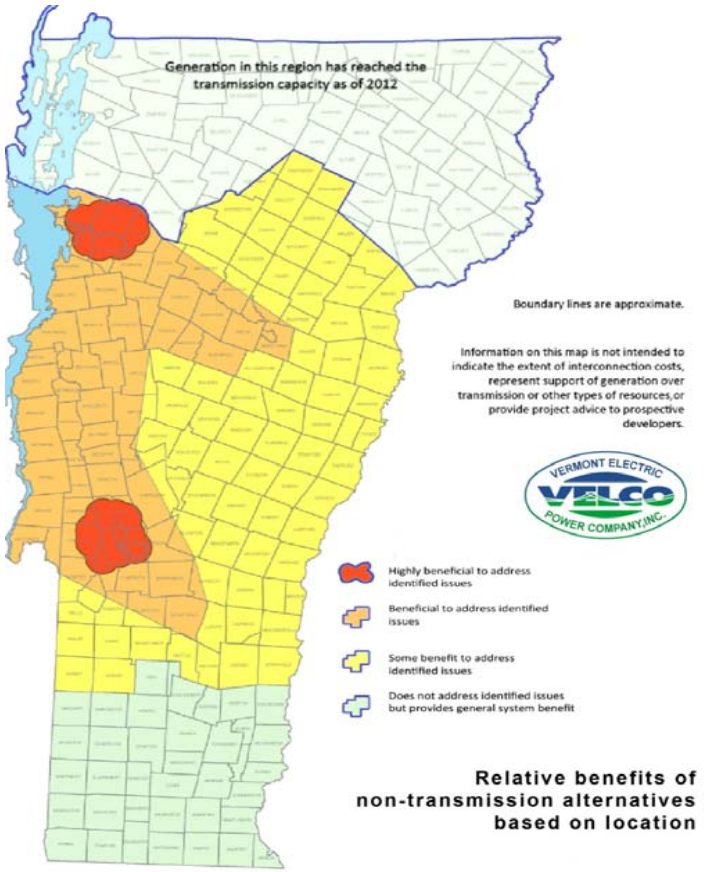
Vermont Continues To Plan Strategically In This Dynamic Environment



- Using directional transmission constraints map for developer and consumer info
- Supporting VELCO involvement in screening and planning
- Interested in continuing to allow ISO NE to develop its NTA/MRA framework given identified potential need, policy support, and Vermont's size/risk.
- Vermont recognizes this is a dynamic environment…the map changes and planning must adjust.

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How Did We Get Here?
…consumer advocate reminders

- **Significant need for investment in last decade = significant increase in RNS**

- **Cost overruns = concern regarding estimates and certainty**

- **Siting difficulties = concern from communities and constituents, lengthy permitting**

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Challenges Ahead

Making changes in the ISO NE process & in the FCM will be hard.

- Intermittent resources and variability in generation characteristics
- Diverse set of solutions responding as a resource – efficiency, DR, possible behind the meter DG, all with effects on load
- Convergence of new technologies, including telecommunications overlay with electric grid and advanced meters, changing load shape and forecasts

All of these things & more contribute to planning complexity, uncertainty, & risk.

Using the Forward Capacity Market as the main solution inherently heightens some of these risks because of the current market structure timing. It will take several years to implement changes, & they will at that point risk being already behind the reality on the ground.

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Cost Allocation

We pay for reliability projects on a regional load share basis

If NTAs for reliability or MRAs in a tranched capacity market truly are equivalent to transmission or responsive to an identified need as intended, why are we not considering how to pay for these on a regional basis? This creates hard questions re: trust in equivalency, the interplay between reliability needs/payment and capacity needs/payment, zonal definitions and responsibilities, etc.

Regardless, if we are going to tackle tough issues, here is one we should take on.

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…Shouldn't We All Pay Less If Possible?

Summary of Bulk System Regional Grouping & Transmission Solutions	Proposed Lead & Affected Distribution Utilities	Estimated Transmission Project Cost & (VT Share)[9]	Screened In or Out of Full NTA Analysis
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Thank you for inviting me!

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