

The VELCO logo is displayed in a bold, white, sans-serif font. It is positioned in the upper left corner of the slide, set against a background image of a Vermont landscape with rolling hills and power lines.

VERMONT'S TRANSMISSION RELIABILITY RESOURCE

# Vermont System Planning Committee & VELCO

Presented by VELCO  
to the Generation Siting Commission

*January 11, 2013*

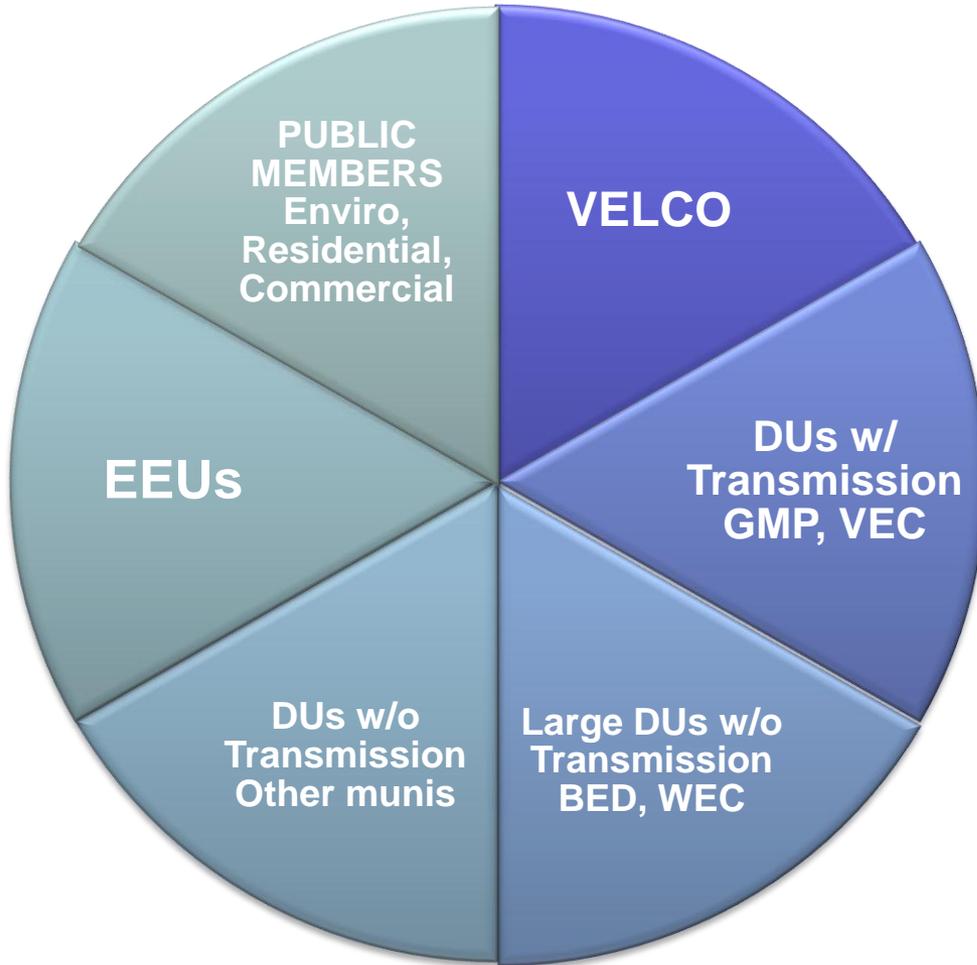
## Presentation overview

- VSPC purpose, origin, structure
- Benefit and/or detriment of generation to transmission system reliability
- Types of transmission projects
- Outline of VSPC/VELCO public outreach steps  
(more detailed discussion to follow at Commission's 1/15/13 session)

# Mandate and purpose of the VSPC

- Act 61 of 2005 Legislature (30 V.S.A. § 218c) requires VELCO to:
  - Prepare a 10-year transmission plan at least every three years beginning July 1, 2006.
  - “Identify 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.”
- Act 61 also charged all utilities and regulators charged to “[a]dvocate for regional cost support for the least cost solution with equal consideration and treatment of all available resources, including transmission, strategic distributed generation, targeted energy efficiency, and demand response resources on a total cost basis.” *Session law, not codified*
- Process was developed through a negotiated settlement in Docket 7081 approved by the PSB in 2007.
  - Objective: Full, fair and timely consideration of cost-effective non-transmission alternatives.
  - Signatories: VELCO, most utilities, Department of Public Service, Associated Industries of Vermont.
  - Public Service Board made the process binding on all Vermont utilities.
  - Requires 20-year long-range transmission plan (Vermont Long-Range Transmission Plan).

# Vermont System Planning Committee structure



## Key concepts:

**Broadly inclusive stakeholder process**

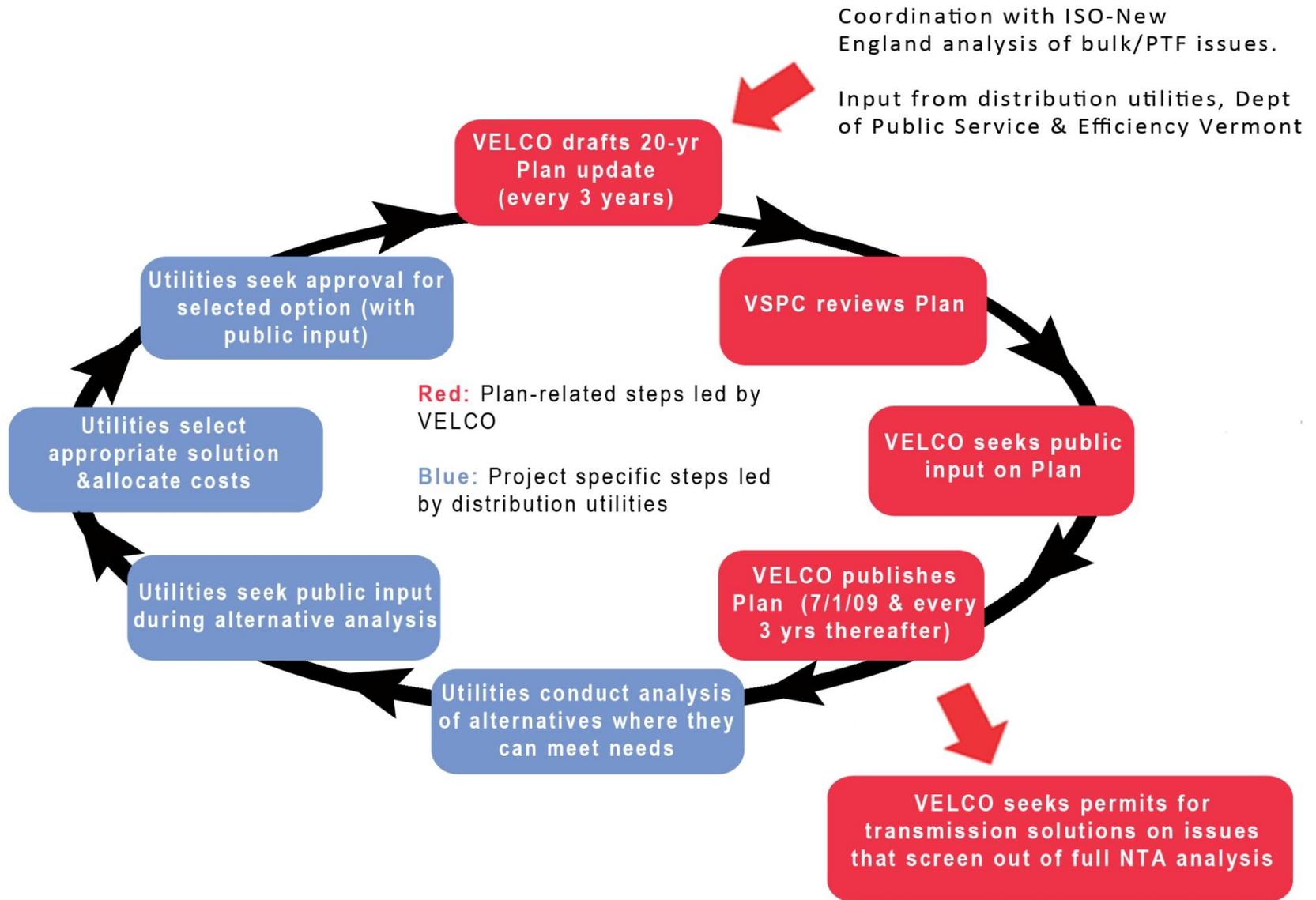
**Six sectors with equally weighted votes**

**Advisory and binding votes**

**Transparency**

**Public engagement**

# Vermont planning process

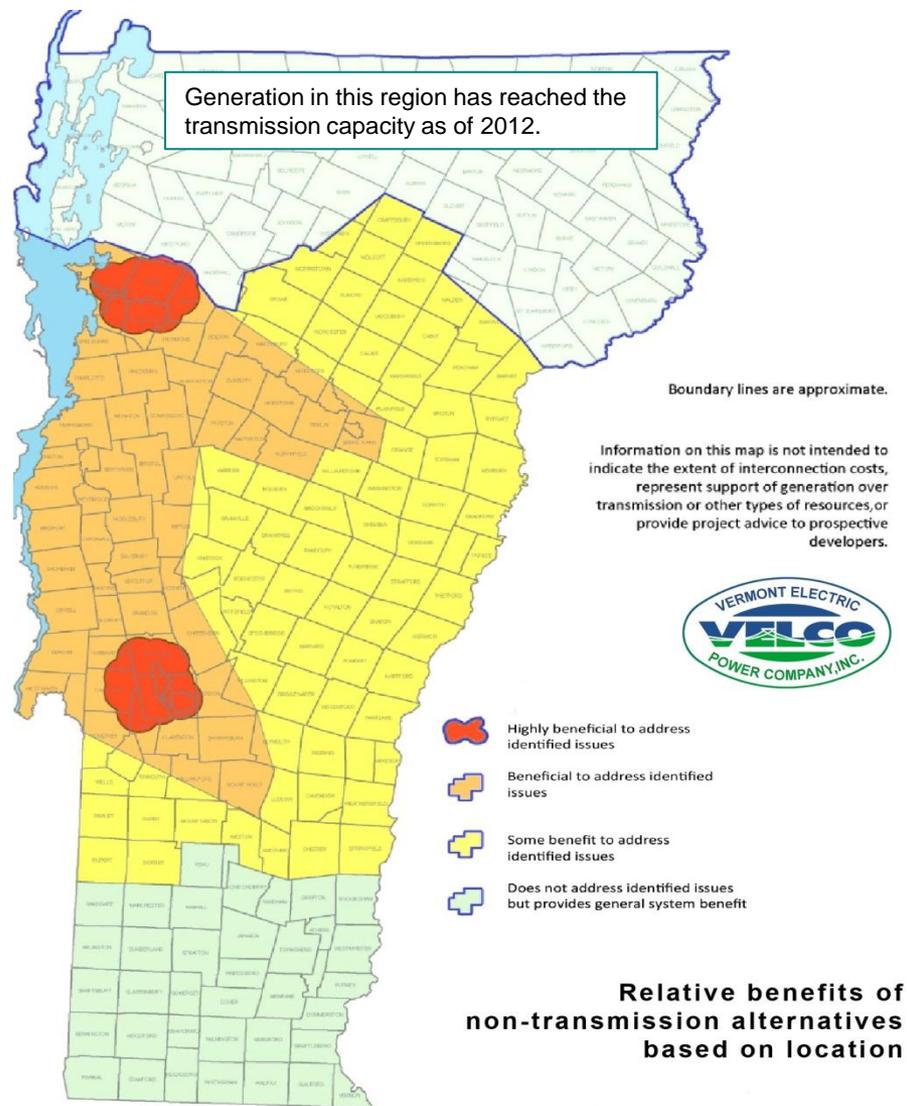


# Renewable generation as a reliability resource... it's complicated

- Calculation of generation benefit isn't binary.
  - A generator can benefit one area while hurting another.
  - System benefit is a gradient, not a cliff.
  - Too much intermittent generation can introduce local system concerns.
    - Power quality
    - Voltage regulation
- Reliability contribution depends on location, size and technology.
  - Utilize the right type of generator for the relevant peak (time of day, season, duration).
    - ISO-NE is assuming 10% for hydro, 5% for wind during summer peak.
    - Solar will likely be on the order of 50% for summer peak, still under study.
    - Biomass, farm methane, and other non-intermittent renewables likely closer to 100% with due regard to planned and forced outage rates.

# 2012 Plan shows where generation can help meet reliability needs... with caveats

- 2012 Plan includes a map *roughly* depicting the relative benefit to the transmission grid of new generation or load reductions by location.
- Zones of benefit are based on ISO-NE VT/NH NTA analysis.
- Benefits are being much more precisely analyzed by “NTA study group.”



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# Transmission project types

RELIABILITY	ECONOMIC	MERCHANT
<ul style="list-style-type: none"><li>• Required to meet mandatory reliability criteria</li><li>• ISO-NE has primary planning authority</li><li>• Costs socialized throughout NE region</li><li>• Reviewed by VSPC</li><li>• All VELCO work to date</li></ul>	<ul style="list-style-type: none"><li>• Defined by Attachment K of ISO-NE tariff</li><li>• Needed to bring generation to areas of demand</li><li>• Project participant funded</li><li>• Potentially supported by ratepayers (never pursued to date)</li></ul>	<ul style="list-style-type: none"><li>• Needed to connect power from a specific generator to the transmission system</li><li>• Developer pays</li></ul>

# VSPC/VELCO public outreach overview

Permitting Process typically 10—36 months, depending on project scope

Planning	Pre-Permitting	45-Day Notice	Section 248
<ul style="list-style-type: none"> <li>• ISO-NE updates 10-yr Regional System Plan annually with stakeholder input</li> <li>• VELCO drafts 20-yr VT Long-Range Transmission Plan update every three years</li> <li>• VSPC reviews &amp; comments</li> <li>• VELCO revises &amp; solicits public input on draft plan</li> <li>• VELCO submits final plan to PSB &amp; shares with stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• ISO-NE forum approvals secured</li> <li>• VELCO Board approval secured</li> <li>• Internal scoping of project to determine impacts &amp; affected parties</li> <li>• Advance outreach with affected local &amp; regional officials &amp; key stakeholders</li> <li>• Input used to refine the project where necessary prior to “45-day notice”</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-filing package sent to affected parties</li> <li>• Project presentations to local and regional officials, landowners and interested parties as needed</li> <li>• Comments considered &amp; filing revised where necessary</li> </ul>	<ul style="list-style-type: none"> <li>• CPG application filed with PSB</li> <li>• Project outreach &amp; information continues as needed throughout CPG process</li> <li>• Coordination with PSD on 30 VSA §218c requirement to meet with all affected towns’ select boards</li> <li>• CPG approval narrows public engagement to localized impacts of project work</li> </ul>

CPG: Certificate of Public Good under 30 V.S.A. § 248