Electric Energy Options for Vermont

Briefing to Vermont Legislature

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William Steinhurst
Lauri Mancinelli

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Agenda for Today

- Overview of Need and Options
- GMP & CVPS View on Options
- WEC Experience
- Wind Options
- Q&A

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Electric Energy Options

Preliminary Perspective

- Vermont's need for power is driven by resource expiration, not load growth
- Vermont's options are driven mainly by available regional options, plus goal-driven choices about desired in-state development
- ENVY is not the determining factor in regional supply options for Vermont
- Numerous options exist for Vermont, both in-state and around the region

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Electric Energy Options

- Options for Vermont include
  - Market purchases (does NOT mean relying on spot market)
  - Hydro-Québec purchases
  - Planned and future wind development in New England, New York or Québec
  - Contracts with renewable projects coming on-line in New England
  - Contracts with natural gas and other traditional projects coming on-line in New England
  - Accelerated and broadened energy efficiency
  - Customer-sited generation and co-generation (CHP)
  - New or expanded renewable projects in Vermont
  - New natural gas projects in Vermont
  - Purchases from ENVY
  - A balanced portfolio selected from the above

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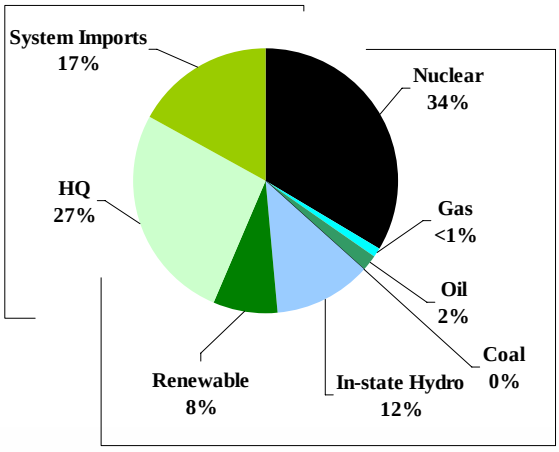
Electric Energy Options

- Building generation in Vermont is an option, not a necessity; it brings with it advantages and disadvantages depending on technology, size and location.
- Meeting all need through either new construction or new long-term contracts by 2012 is not a necessity. In fact, at this point, Vermont should consider not locking in a long-term solution for 2012 and look at moving to a mixed portfolio that does not all "turn into a pumpkin" at the same time of if any one plant or technology develops problems.
- Above subject confirmation and development of details as part of on-going research and modeling

Overview: Current Vermont electricity portfolio

VT electric energy supply 2006

44% imports



56% in-state generation

Source: Vermont Comprehensive Energy Plan 2009

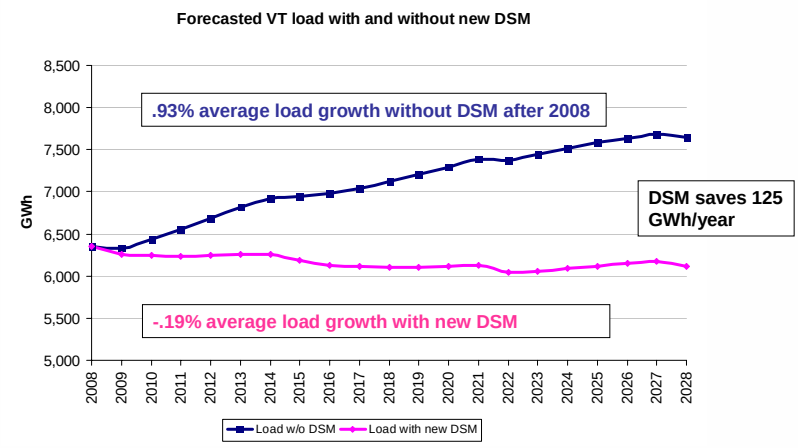
Overview: Vermont Yankee in Regional Context

ENVY is

- About 2% of total ISO-NE capacity
- About 3-1/2% of ISO-NE energy need

Overview: Vermont load growth and future electricity needs

DPS is projecting Vermont's energy growth to decline through 2028, compared to historical rates



Source: DPS Energy Forecast 2028

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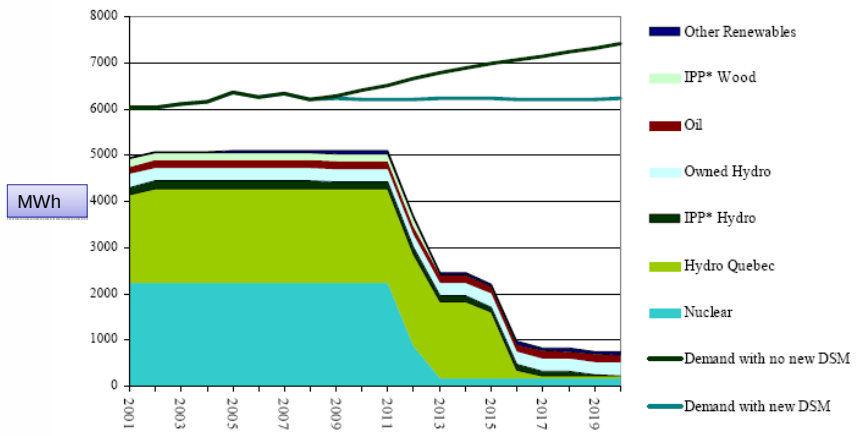
Overview: Vermont load growth and future electricity needs

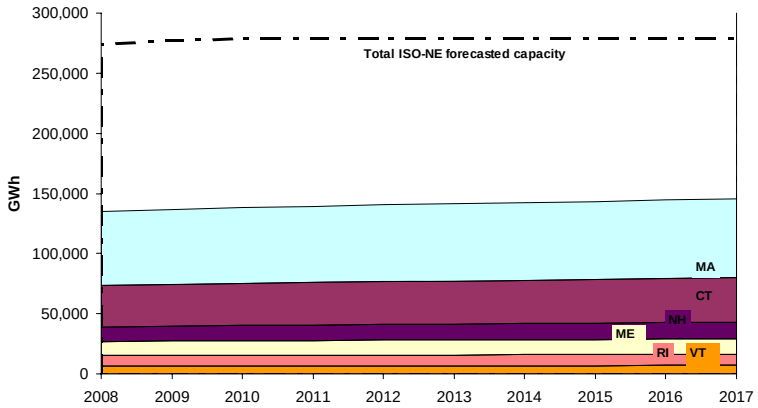
VT committed resources and forecasted demand, 2006



Source: Vermont Comprehensive Energy Plan 2009

Overview: Regional options

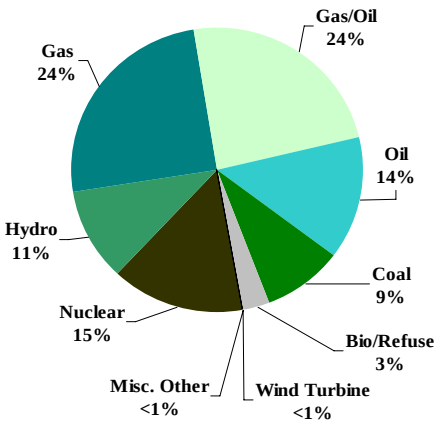
New England forecasted net energy for load



Source: ISO-NE 2008 CELT Report

Overview: Regional options

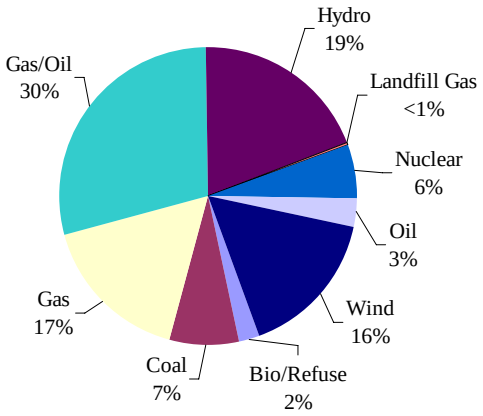
ISO-NE installed capacity by fuel, 2008



Source: ISO-NE 2008 CELT Report

Overview: Regional options

ISO-NE active new generation requests by fuel

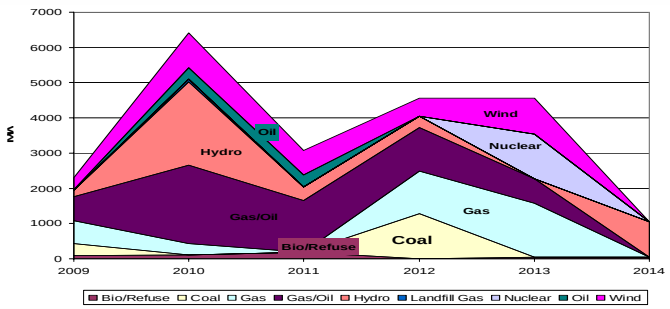


Source: ISO-NE Interconnection Queue, 1/30/09

Overview: Regional options

ISO-NE active new generation requests by fuel

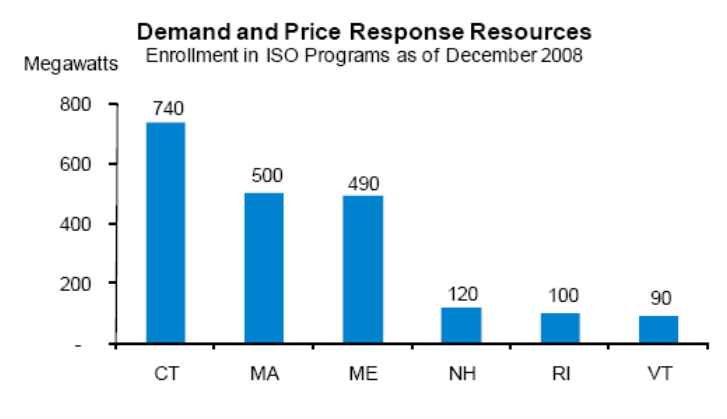
TOTAL: About 22,000 MW (summer net)



Source: ISO-NE Interconnection Queue, 1/30/09

Overview: Regional options

Demand Response Resources as of 2008 in New England



Overview: VT efficiency programs

VT efficiency programs are estimated to have reduced electric energy demand by 6% relative to the loads that would otherwise have occurred in 2000-2006 alone.

Table V-1 Vermont Annual Efficiency Savings and Expenditures [1]

	BED Costs	EEU Costs	BED MWh Savings	EEU MWh Savings
2000	$579,991	$6,326,259	3,130	23,540
2001	$822,893	$9,682,919	3,094	37,489
2002	$1,070,815	$11,970,796	4,438	40,557
2003	$926,742	$13,735,377	3,346	51,216
2004	$845,977	$14,412,620	3,500	51,863
2005	$860,104	$15,095,564	4,948	57,055
2006	$998,511	$14,004,438	6,247	52,947
Total 2000-2006	**$6,105,033**	**$85,227,974**	**28,703**	**314,667**

Source: Vermont Comprehensive Energy plan 2009