Vermont Comprehensive Energy Plan

Initial Stakeholders Meetings:

Energy Efficiency
Elec. Grid & Utility Issues
Energy Supply Resources
Transportation

Asa Hopkins
Director
Planning &
Energy Resources
Division
Comprehensive Energy Plan

Team Effort

State Government
• Public Service Dept.
• Dept. of Bldgs & General Services
• Agency of Agriculture, Food, & Markets
• Agency of Commerce & Community Dev.
• Agency of Human Services
• Agency of Natural Resources
• Agency of Transportation

Community & Business Partners
All of you!
• Utilities
• Energy Services Companies and Consultants
• Public Interest Organizations and Community Groups
• Business Community
• Town Energy Committees
Comprehensive Energy Plan

What is it?

Title 30, Section 202b-the CEP must include:

Comprehensive Analysis and Projections
- Usage
- Supply
- Cost
- Environmental Effects

Recommendations for State Implementation
- Actions – Public and Private
- Regulation
- Legislation

Title 30, Section 202 - Electric Plan
Comprehensive Energy Plan

Why create it?

Title 30, Section 202a:

To assure, to the greatest extent practicable, that Vermont can meet its energy service needs:

- In a manner that is adequate, reliable, secure and sustainable
- Assuring affordability and encouraging the state’s economic vitality
- Using energy resources efficiently and managing demands cost effectively
- Employing environmentally sound practices

Recommendations based upon all state law on the subject: e.g., GHG reduction goals, renewable energy goals
Overarching goals of CEP

- Address all energy sectors, not just electricity
- Strive for lower GHG footprint, toward state targets
- Support in-state energy solutions & economic growth
- Keep Vermont’s costs regionally competitive
Progress since the 2011 Plan

List of examples:

- H.40 (Ren. Energy Standard & Energy Transformation)
- Standard Offer
- Updated building energy codes
- Multi-state ZEV MOU and action plan
- Smart Growth and Downtown programs
- Net metering expansion and redesign
- Building Energy Disclosure Working Groups & Reports
- VT Energy Generation Siting Commission
- Thermal Efficiency Task Force
- Total Energy Study
2015 CEP Timeline

• Stakeholder meetings – 6/24 & 6/30
• Regional public forums:
  o July 9 – Woodstock
  o July 16 – Middlebury
  o July 20 – Manchester
  o July 23 – St. Albans
• Initial comment period – through 7/24/15
• Draft CEP – September
• Public hearings, further written comments – Fall 2015
• CEP published – December
Stakeholder Meeting Objectives

• Update stakeholders about the current energy picture in VT (including state goals)

• Obtain input and recommendations from stakeholders regarding future energy options to inform the 2015 CEP

• Share the timeline and objective for updating the CEP, including public engagement
Format for today’s meeting

- Overviews from Secretary Minter, Commissioner Mackay, and the PSD
- Breakout #1: Cross-cutting questions
- Break
- Breakout #2: Topical discussions
  - Land Use
  - Alternative Modes
  - Vehicles and Fuels

... Help us set the path for Vermont’s energy future...
Meeting Working Agreement

- ✋ Start and stop on time
- ➖ Focus on the topic of discussion
- 👍 Keep comments brief to allow time for others
- ✋ One person speaks at a time
For more information on the energy plan and to submit comments go to:

www.energyplan.vt.gov
Presentation Overview

- Energy Use Reduction and Renewable Energy goals
  - Informed by Total Energy Study modeling
- Transportation in a Total Energy context
Energy Use Reduction Goal?

- The 2015 CEP could establish a goal of reducing total energy consumption by ~33% or more by 2050, from our current level.

- Accomplished through increased efficiency in energy production and use.

- For context, Vermont’s total energy consumption has declined about 7% from a peak in 2004.
Two Types of Energy Efficiency

- Expend less energy to perform the same end use services
  - Also includes switching to new fuels/technologies that are fundamentally more efficient (e.g. EVs, heat pumps)

- More efficient production
  - Avoid the lost heat that comes from combustion and conversion to electricity
TES–based Renewable % and GHG

Overall % RE

GHG relative to 2015

Total energy demand

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TES–based total primary energy

- Total Primary Energy (TBTU)
-transport nonelec FF
- transport nonelec RE
- transport elec
-building non-heat elec
-industry elec
-industry heat nonelec FF
-industry heat nonelec RE
-building heat elec
-building heat nonelec FF
-building heat nonelec RE
TES–based electric site energy

Electric site energy uses based on TES modeling

- Transportation
- Industrial
- Building heat
- Building non-heat

Site energy in TWh

- 2015
- 2025
- 2035
- 2050

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10% Renewable Transportation by 2025?

- Keep vehicle miles traveled flat at current levels (while population and the economy grow).
- Any one or a combination of:
  - Use 15% ethanol in gasoline and 5% biodiesel for heavy-duty vehicles, with 10% of all light-duty vehicle miles driven on electricity (e.g. approximately 56,500 EVs out of approximately 565,000 vehicles).
  - Use 12.5% ethanol and 8% biodiesel, with 15% of all light-duty vehicle miles driven on electricity (e.g. approximately 85,000 EVs).
  - Use 15% ethanol and 10% biodiesel, with no EVs.
  - Use 10% ethanol and 10% biodiesel, with 18.5% of all light-duty vehicle miles driven on electricity (e.g. approximately 105,000 EVs).