

# 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:

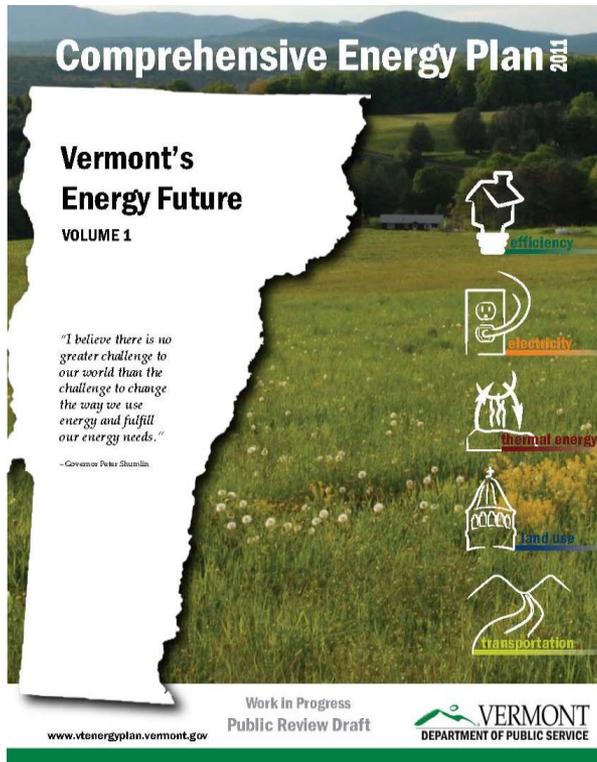
- In a manner that is **adequate, reliable, secure and sustainable**
- Assuring **affordability** and encouraging the state's **economic vitality**
- **Using** energy resources **efficiently** and managing demands cost effectively
- Employing **environmentally sound** practices

**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:**
  - **July 9 – Woodstock**
  - **July 16 – Middlebury**
  - **July 20 – Manchester**
  - **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](http://www.energyplan.vt.gov)**







# Comprehensive Energy Plan: Transportation

Stakeholder Meeting  
June 30, 2015

# Presentation Overview

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

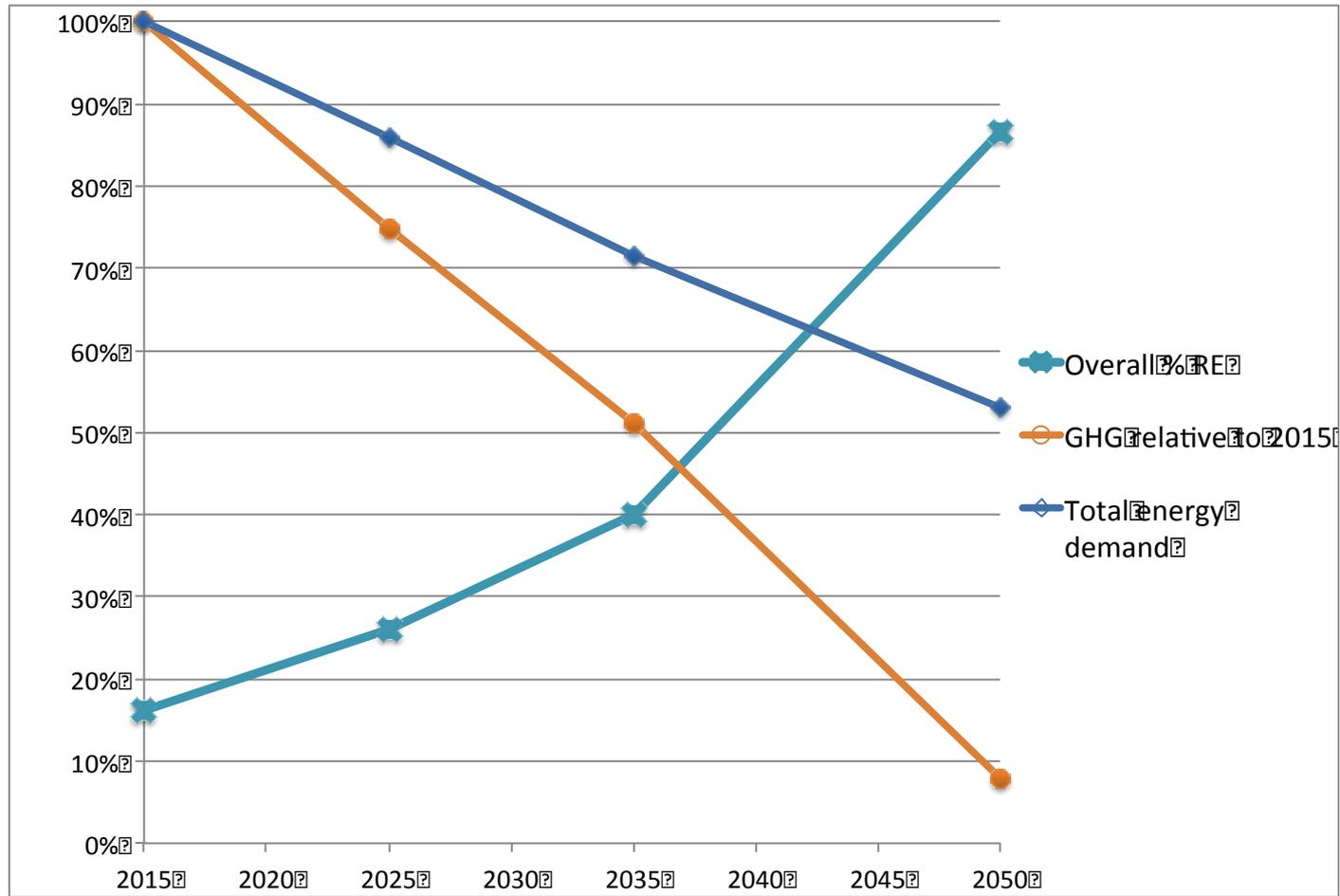
# Energy Use Reduction Goal?

- ▶ 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.

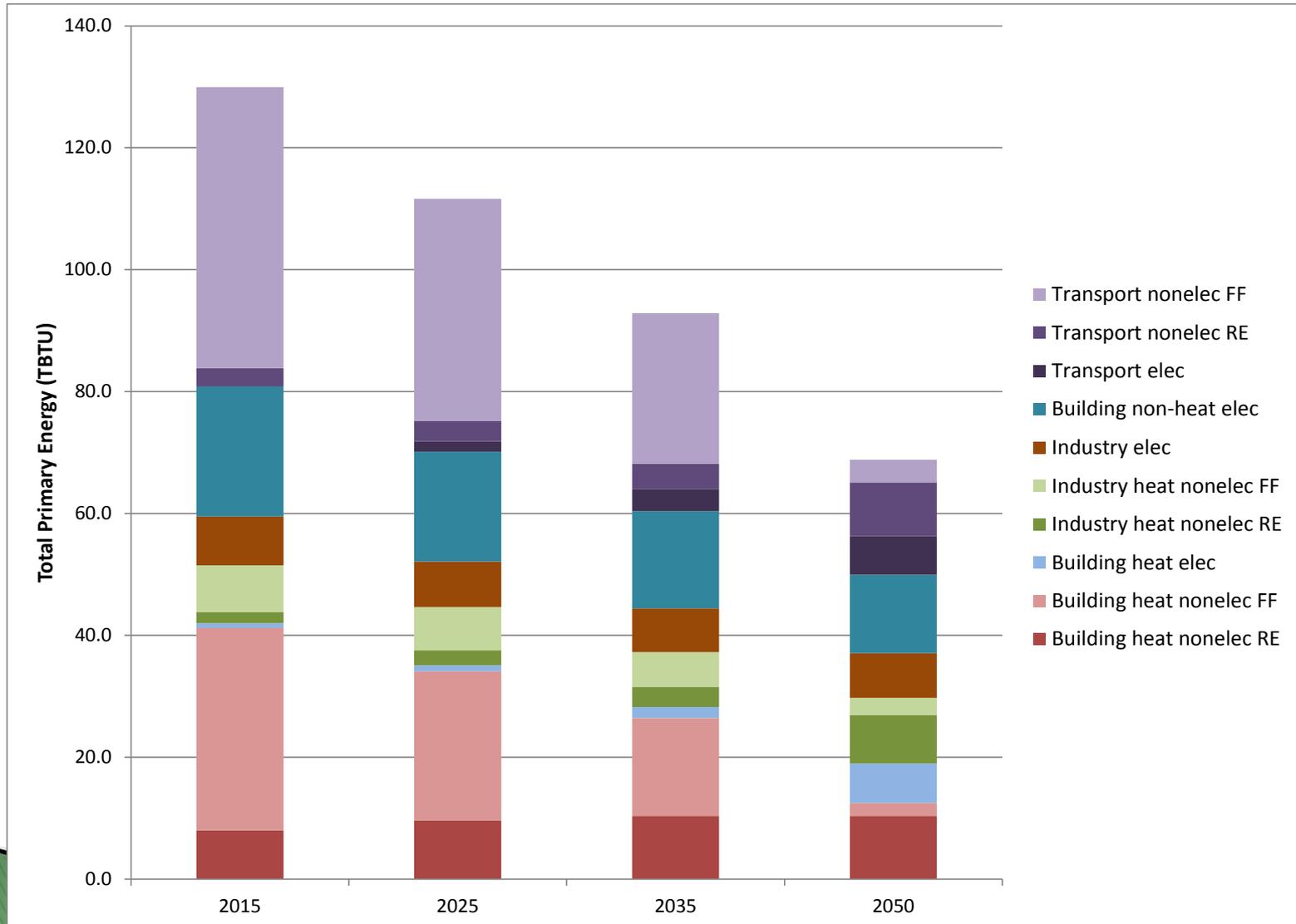
# Two Types of Energy Efficiency

- ▶ Expending 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

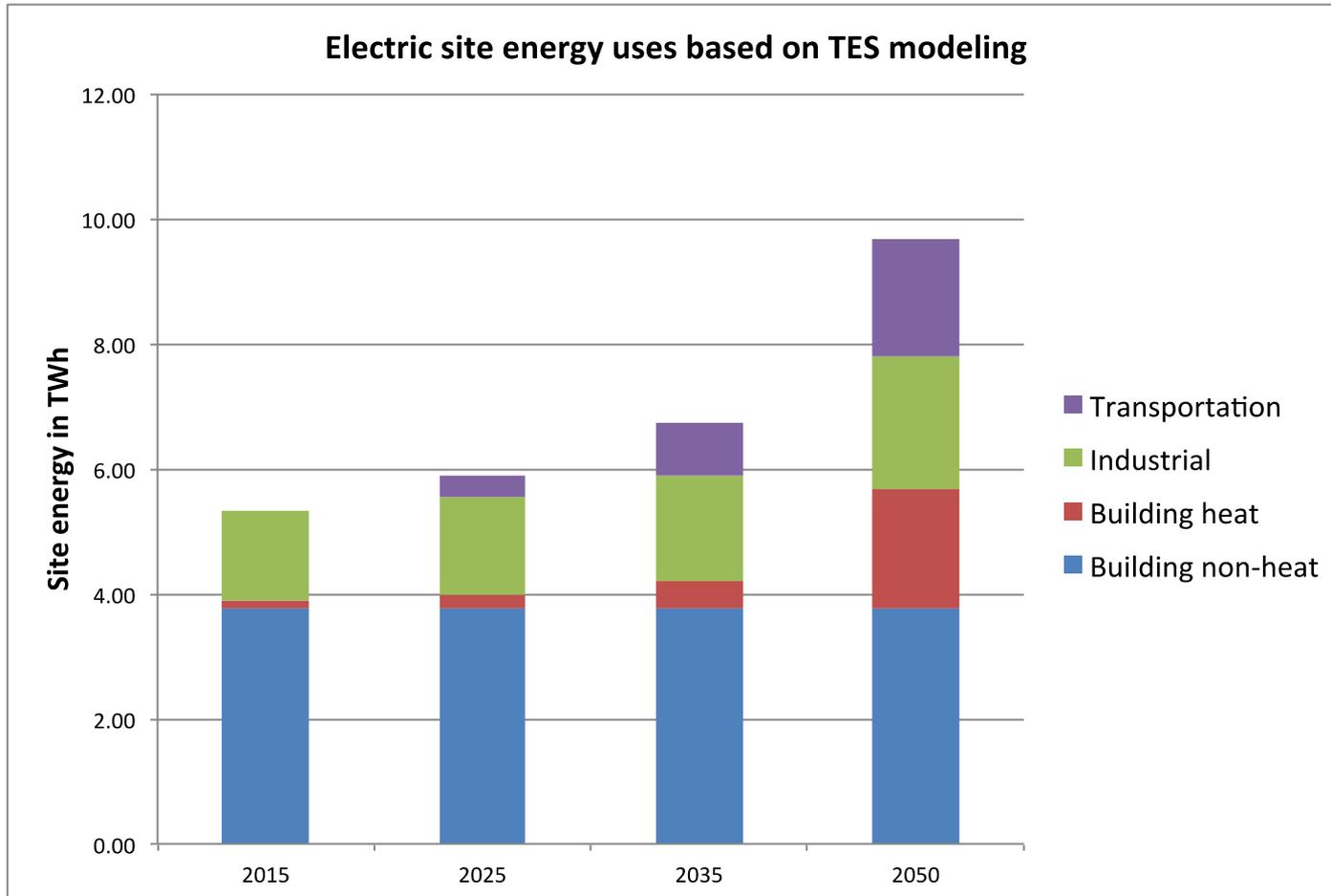
# TES-based Renewable % and GHG



# TES-based total primary energy



# TES-based electric site energy



# 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).