Comprehensive Energy Plan

Vermont's Energy Future – 2011 Comprehensive Energy Plan

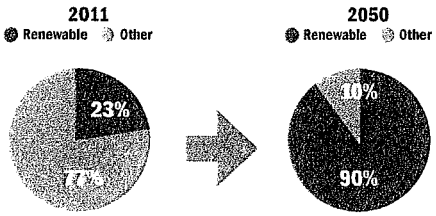
Fulfilling a first-year priority for Governor Shumlin, the Department of Public Service led a multi agency initiative to complete the state's first Comprehensive Energy Plan (CEP) since the late 1990s. The CEP is comprehensive, covering electricity, heating and process fuels, and energy in transportation and land use decisions.

A Snapshot of Our Current Energy Usage

Vermont currently obtains nearly a quarter of the energy it uses from renewable sources, due in large part to the fact that nearly half of our electricity is generated from renewable sources. Robust electric efficiency efforts in the past decade have also helped significantly– we are keeping our electric demand down and using many renewable sources to meet our need. However, we have made comparatively little progress on improving our energy usage in transportation and heating. We drive more than we did a generation ago, using fossil fuels to power our vehicles. Although biomass and solar thermal systems have made a dent in our fossil fuel heating usage, Vermont continues to be heavily reliant upon heating oil. We have not made enough progress in improving the comfort and affordability of our homes by reducing their energy usage.

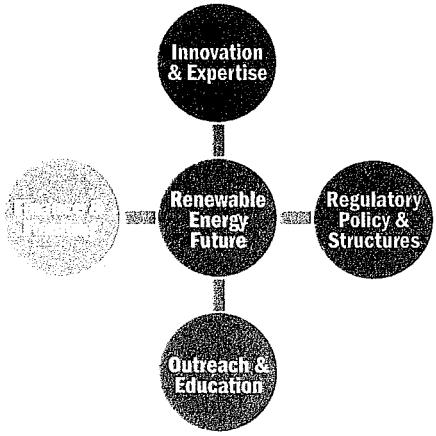
The Vision for Vermont's Energy Future

The CEP recommends that Vermont set a path to obtain **90% of our total energy from renewable sources by 2050.**



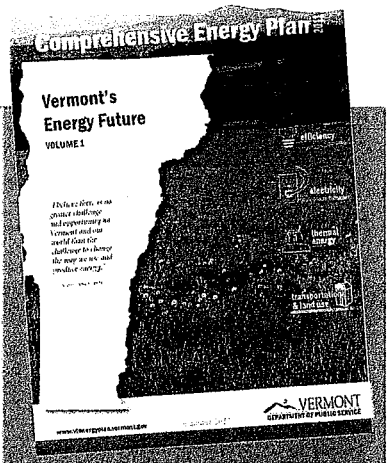
Meeting this goal will require us to virtually eliminate Vermont's reliance on fossil fuels, which we can do through enhanced efficiency and greater use of clean, renewable sources for electricity, heating and transportation. We recommend the mid-century goal while recognizing that we must pursue our goals responsibly, ensuring overall energy costs for our businesses and residents remain regionally competitive. But we must also act boldly to protect our environment and our economic security.

How Vermont Can Achieve This Goal



In order to sustainably build Vermont's energy future, we recommend concerted, systematic progress, understanding the multifaceted nature of the energy challenge. The four drivers of progress are Finance & Funding; Innovation & Expertise; Outreach & Education; and Regulatory Policies & Structures. Each of these facets must be addressed in any area of energy policy.

Plug-in Electric Vehicles (PEVs) provide an example: PEVs link high technology, personal transportation choices, and regulated electricity. They also depend on roads and bridges, currently paid for through fossil fuel taxes, as well as charging infrastructure, for which there is no standardized funding. To harness renewable electricity for transportation, robust solutions will depend on regulatory and financing innovation as much as technological innovation. Meanwhile, the pace of PEV demand will depend on consumer understanding of the advantages and practicalities of PEV travel. Progress only in one area will not yield effective results. The same analysis applies to other policy areas. The CEP therefore recommends that all four drivers are considered in any energy policy discussion to ensure success.



Why We Should Work For 90% Renewable Energy by 2050

Moving Vermont from nearly a quarter renewable energy now to nearly fossil-fuel free by 2050 will:

Foster economic security and independence by creating jobs in efficiency and local renewable energy projects; by keeping our dollars closer to home; and by cutting our dependence on dirty price-volatile fossil fuels.

Safeguard our environmental legacy by reducing our contribution to global climate change and leading by example in the fight to keep our planet safe and habitable for generations to come.

Drive in-state innovation and job creation by showing that investments in efficiency and renewable energy, which help our environment and energy independence, also help our economy.

Increase community involvement and investment by engaging Vermonters in our energy choices.

EXHIBIT
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Implementation and Next Steps

The CEP is the beginning of the conversation—not the end. We recognize that a successful plan must remain current and responsive to change, and must be implemented by Vermonters broadly, not just state government, to achieve success. Governor Shumlin's Climate Cabinet will help measure and monitor CEP progress and support public involvement for further action. Many policy recommendations are included in the CEP. Immediate priorities include:

Efficiency First—Use Less and Save Money

The CEP promotes efficiency and conservation as first priorities in all energy sectors and recommends creating a whole-buildings efficiency roadmap, including program delivery, consumer outreach, funding and finance mechanisms, and progress metrics, by the end of 2012.

Continued Progress on Renewable Electricity

Building on the progress Vermont has achieved through the SPEED program, the CEP recommends establishing an affordable and achievable Renewable Portfolio Standard that sets a goal to obtain 75% renewable electricity within 20 years. The CEP also recommends that Vermont improve its Standard Offer program to allow clean energy contracts for distributed generation using an annual allocation and market-based pricing.

Comfortable Homes, Affordably Heated

In addition to the whole-building efficiency roadmap mentioned above, the CEP recommends setting aggressive goals for energy efficiency and code compliance in new construction, while supporting greater use of bio-blended fuels and renewable energy technologies.

Transportation Transformation

To prepare for the transportation fuel and funding changes ahead, the CEP recommends establishment of an interagency task force to plan for electric and alternative fuel vehicles in Vermont and the region.

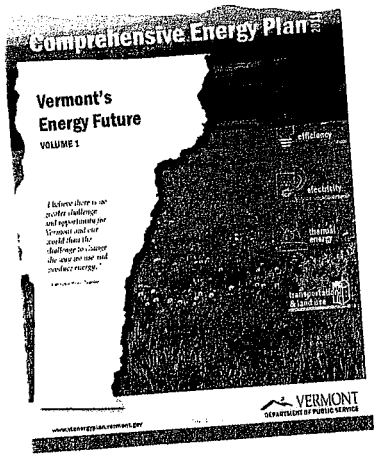
Resilient Communities, Smart Land Use Choices

In the wake of Tropical Storm Irene, the need to align local, regional, and state policies across agencies and departments to support thoughtful and resilient growth in our downtowns and villages has never been more acute. The Agency of Commerce and Community Development, with the support of the Climate Cabinet, will complete a review of the state's designation programs in 2012.

State Leading By Example

Prior to Tropical Storm Irene, the state had already set a goal of 5% reduction in energy usage across state government. Now that the state faces significant infrastructure repair and rebuilding, energy usage in our state buildings is even more central to our planning. The CEP recommends that the state sharpen its focus on efficient buildings while strategically deploying renewable energy systems.

Vermont's Energy Future: Cleaner, Brighter, Affordable, and Secure



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of effort and funding would also meet the Act 92 goal of reducing fossil fuel consumption across *all* buildings, including those in the commercial sector, by 6% annually by 2017 and 10% annually by 2025.)

It is clear that if Vermont is to adequately progress on its thermal efficiency goals, an additional source of stable public funding is necessary to facilitate private investment.

7.1.4 Challenge: Insufficient Energy Services for Low-Income Households

As we begin to develop a more comprehensive statewide thermal efficiency program, it is crucial not to forget Vermont's most vulnerable citizens. Yet to meet our building efficiency goals, it will certainly take a level of building owner investment that this population cannot provide without assistance. The state needs to determine the appropriate balance for funding low-income and non-low-income energy efficiency improvements.

As heating fuel prices continue to increase, the strain on low-income households grows. Energy costs typically make up a high percentage of low-income households' budget, because these residents tend to live in older and less efficient homes. Also, energy costs have increased at a much faster pace than the average wages for lower-income workers and retirement benefits for seniors.[139] Rising fuel prices are also a substantial risk to the affordability of the low-income multifamily housing portfolio in the state. The energy efficiency of these buildings will need to be substantially upgraded if they are to remain cost-effective and available for low-income housing.

Vermont has seen tremendous success with the state Weatherization Program; however, owing to funding constraints, it is still serving only a very small percentage of the low-income population. In the 2010–11 program year, 1,722 housing units received energy efficiency services. It is estimated that there are almost 50,000 households eligible for weatherization services in the state.[140] An additional benefit from completing weatherization in low-income households is the reduction in need for fuel assistance and often other public assistance. (See more information in Section 7.2.2.6—Vermont's Weatherization Program.)

A comprehensive thermal efficiency program should also address the considerable gap in energy efficiency services and funding available for low-income Vermonters who do not qualify for the existing Weatherization Program. We acknowledge that there is a greater demand for the existing program than it can currently serve. Nonetheless, there should be an investigation into potential opportunities such as "do-it-yourself" programs, no-interest loans, and needs-based tiered incentives for those who do not meet the eligibility requirements but are unable to afford efficiency measures.

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the Weatherization Program exclusively serves the low-income population, it must pay 100% of the costs for a retrofit, so a much smaller number of units can be completed with those funds.

[139] *"Affordable Heat: Whole-Building Efficiency Services for Vermont Families and Businesses," Regulatory Assistance Project, June 2011.*

[140] *Estimate is based on 2010 Census.*