Executive Summary – Addressing Energy Issues in New Hampshire and Vermont

In recent years, discussions about energy policy have become a focus in many state legislatures, as states attempt to find the right mix of energy sources for, and the best means of ensuring the adequate provision of energy to, their residents and businesses. State legislatures have grown concerned about rising prices, particularly for fossil fuels, the environmental impacts of some energy sources, and even about security issues in a post 9/11 era. In New Hampshire and Vermont, these discussions have included encouraging more efficient energy use across economic sectors, ensuring that low-income residents can purchase home-heating oil in the winter, finding ways to encourage greater availability of renewable energy on the electricity market, both from indigenous and non-indigenous sources, and considering issues affecting the future of in-state nuclear power generation. Recognizing that energy policy was a key area of focus for ongoing legislative discussions, students in the Policy Research Shop worked during the fall of 2004 to develop a knowledgebase about, and skill set among students to address, key energy issues in these two states. With the beginning of the legislative session in 2005, this knowledge proved useful, as students responded quickly to requests for information about specific energy issues. This executive summary provides a brief overview of energy in the two states and summarizes the attached reports prepared by students to address the specific research requests we received.

Policymakers in New Hampshire and Vermont have been faced with the challenge of formulating energy policy in an era characterized by fluctuating, but predominantly increasing energy consumption\(^1,2\) and rising prices,\(^3,4\) particularly of fossil fuels. While both states rely heavily on petroleum products in the transportation and home-heating sectors to meet their consumption needs, electrical generation in both states comes predominantly from nuclear sources and in Vermont from hydropower facilities.\(^5,6\) New Hampshire derives 41 percent of its electricity from nuclear power, 20 percent from coal, 18 percent from petroleum, 15 percent from hydroelectricity, 5 percent from wood and methane, and about 1 percent from natural gas.\(^7\) The Seabrook nuclear power plant comprises the majority of New Hampshire’s indigenous sources of electricity, providing over 60 percent of the total electricity generated in the state.\(^5\) Nuclear-generated power accounts for just over 50 percent of the total energy used by Vermont’s businesses and residents.\(^6\) Currently, 55 percent of the electricity that Vermont consumes is derived from nuclear, 35 percent from hydroelectric, and the remainder from wood, waste, petroleum, and wind sources, some of which comes from out-of-state facilities.\(^8\) The majority of the net electricity generation comes from Vermont Yankee, which generates the equivalent to 60 percent of the state’s total output.\(^6\) A portion of this capacity is exported to other states.

During the 2005 legislative session, students from the Policy Research Shop were asked by legislative staff in Vermont to examine a set of specific policy issues surrounding the generation of electricity in the two states. Despite the fact that all of these requests came from Vermont legislators, the three resulting reports are relevant to policy discussion in New Hampshire as well. This issue is discussed in greater detail in the supplementary materials submitted with the attached research reports. In fact, given statewide discussions about wind in New Hampshire, we asked students to prepare a report specific to considerations in New Hampshire. Students’ reports focused on the following three key issues:
• **Dry Cask Storage** – Vermont Yankee is Vermont’s only nuclear facility and produces a significant amount of the electricity consumed within the state. Although the plant’s license is set to expire in March 2012, the plant faces growing pressures to meet its storage needs in the short-term. Yankee currently utilizes wet pool storage, but at the current rate of production, the plant will run out of pool storage capacity and be forced to shut down in 2008, four years prior to its license’s expiration. This situation has compelled the Vermont Legislature to consider whether or not to approve the use of an alternative waste storage method called dry cask storage. This report weighs the advantages and risks of dry cask storage as an option in Vermont.

• **Renewable Portfolio Standards** – Many states have established standards for renewable energy production and sales in the form of a Renewable Portfolio Standard (RPS). An RPS specifies that a minimum percentage of the total energy a utility company sells must come from renewable sources such as solar power, wind power, or biomass. While there is no federal RPS, eighteen states and several municipalities throughout the country (as well as many countries) have enacted voluntary or mandatory standards. This report discusses the benefits and drawbacks associated with RPS and reviews the existing RPS, including eligible sources, for these eighteen states and several U.S. municipalities.

• **Wind Turbine Siting in Vermont and New Hampshire** – Developing the full potential of wind resources in both New Hampshire and Vermont holds great promise for helping to meet these states’ energy needs. The U.S. Department of Energy estimates that about 3 percent of the land area in New Hampshire (178,636 acres) and Vermont (177,600 acres) may be suitable for wind energy development. While much of this land is on federal and state lands, estimates for the amount of power that could be produced each year range from 5.0 million megawatt-hours (Department of Energy) to 6.0 million megawatt-hours (American Wind Energy Association) in Vermont and approximately 5.0 million megawatt-hours of power in New Hampshire. These reports discuss many of the common concerns specifically associated with the siting of wind turbines in the two states, such as noise, aesthetic, and environmental impacts, and examine policies that other states have employed to address these concerns.

### References


