VEIC Study Review Synthesis
Chapter 7 - Sustainable Energy Programs Review and Assessment
July 9, 2012

Summary of Chapter 7

Chapter 7 provides a comprehensive review and assessment of the state's policies on renewable energy resources. There are 74 individual recommendations on a wide variety of renewable energy policy topics including funding and incentives, infrastructure development, project permitting and siting, and technology specific findings. Many of the recommendations are dependent on the development of an overarching energy policy framework, while some are too general to be actionable without further refinement. In addition, the recommendations offer a wide variety of potential courses of actions not all of which may be necessary or appropriate at this time.

Chapter Teams Findings

The Study Team began its assessment by reviewing the complete list of recommendations in the context of the overall Study Team assessment tool, seeking to identify the most significant areas of potential action and to highlight those offering the best opportunity for high positive impacts in the near to medium term. In this process, the Team classified many recommendations, specifically those pertaining to permitting, infrastructure, taxation and technology specific recommendation as lesser priorities for detailed consideration at this time. There continue to be some barriers to renewable development in these areas, which should be considered in greater detail by program administrators and stakeholders in the context of continued renewable resource development efforts.

The two key areas for immediate consideration by the EESE Board are the establishment of an overarching renewable resource policy framework and the nature and level of stimuli the state should maintain to foster renewable resources development. The Study Team recommends that the state establish a general policy statement in support of renewable resource development. Among the range of potential stimuli are the Renewable Portfolio Standard (RPS), Net Metering, Rebates, Procurements, tax policy and utility investments. While there are varying opinions on some of the detailed issues associated with these incentives, the Study Team agrees that the RPS program is the highest priority and should receive continued and consistent support as it provides the basis for sustainable funding support, through a market mechanism, for an appropriate level of renewable resource development while also providing a potential funding source, through Alternative Compliance Payments, for a renewable rebate program.

Top Priorities for Early Action

1. The Study Team recommends that the legislature confirm that it is state policy to support and promote indigenous New Hampshire energy resources consistent with the economic and environmental benefits to the state's citizens and businesses (Citation: VEIC Study Section 7.2 page 7-3.). Such a general statement of policy would provide essential guidance to legislative, executive and administrative agencies as they address policies and programs affecting renewable resources, and should allow renewable goals and targets to be developed and to evolve through time. The general policy statement should also clarify the responsibilities of the various state government agencies in renewable resource

development, designate an agency to develop and monitor the appropriate goals and targets and assign the necessary resources.

2. The Study Team acknowledges that the recent legislative process has supported, through the passage of SB218, the continued role of the RPS in state energy policy. While this action provides some adjustments to the RPS framework, there are several issues identified in the VEIC Study (Section 7.4 pages 7-5 to 7-10) and in the Commission RPS Review Report[1] that have not yet been addressed and should get priority attention by the legislature:

- As a regional market initiative, the RPS is presently limited in the direct support it can provide for in-state renewable projects. While the state is constrained by Federal Law, there may be additional opportunities for tailored features, such as the provisions on thermal energy, small hydro and net metered facilities contained in SB218, that support local projects in a constitutionally acceptable manner (Citation: VEIC Recommendation 7.3, page 7-9.). Such opportunities should be explored and adopted by the legislature to the extent feasible. Implementation of the relevant provisions of SB218 supporting local development should also be a high priority for the Commission.
- As noted in the Commission RPS Review Report, the existing RPS Statute does not explicitly address the period beyond 2025. Renewable projects are by nature long terms investments that may require financing for periods as long as 15-20 years. The lack of clarity regarding the RPS program in the period subsequent to 2025 is a serious potential barrier to renewable development.
- The level of ACP rates should continue to be reviewed and adjusted periodically. These rates are critical both to the level of market support for Renewable Energy Credit purchases and the level of funding providing through ACP payments for in-state renewable rebates. This task should be delegated to the Commission and will require an appropriate level of technical expertise and stakeholder input.

Areas for Further Consideration in the Medium and Long Term

1. The VEIC Study recommended that net metering opportunities, including community-scale / group net metering, be expanded (Recommendations 7.4.2 and 7.4.3.) While the Study Team agrees that net metering is a positive and appropriate incentive for small scale "behind-the-meter" renewable projects as currently designed, it does not have a consensus view on the VEIC proposals for expanding this program. The complexities and challenges to expanding net metering, as well as the potential additional benefits which such initiatives may offer, should be afforded additional consideration. In addition, there are possible alternatives to net metering such as feed-in tariffs that are worth detailed review and consideration. The Study Team notes that there is at this time no specific entity in New Hampshire with the responsibility and the resources needed to follow-up on this recommendation and suggests that the EESE Board prioritize this issue for discussion at a future meeting.

2. The VEIC Study recommended that the state consider encouraging distribution utilities to conduct competitive solicitations for long term contracts for RECs from facilities with which they are interconnected (Recommendation 7.3.3). The Study Team notes that this recommendation may be at odds with the state's customer choice policies as it introduces a

[1] 2011 Renewable Energy Portfolio Standard Review: Report of the New Hampshire Public Utilities Commission, November 1, 2011.

long term financial obligation applicable to shorter term energy service obligations (short term in the sense that customers may choose alternatives). Also, similar provisions have been challenged successfully in other states on Federal pre-emption grounds. However, the benefits to renewable development of long term contracts for RECs are significant as such contracts are a critical support for long term commercial financing of such projects, and the options for developing and implementing such a program should be explored. The Study Team notes that there is at this time no specific entity in New Hampshire with the responsibility and the resources needed to follow-up on this recommendation and suggests that the EESE Board prioritize this issue for discussion at a future meeting.

3. The VEIC Study recommended additional support for utility investments in distributed energy projects (Recommendations 7.7 to 7.7.4). The Study Team affirms that a mechanism exists under RSA 374-G to provide utilities with the recovery in rates of distributed energy investments, but further notes that the barriers to broader implementation under this statute, including administrative procedures, the details of cost recovery provisions, potential ratepayer impacts and benefits and the attribution of value in determining costs and benefits, require further study. The Study Team suggests that this recommendation should be addressed by the Commission.

4. As noted above, the VEIC Study contains a number of detailed recommendations on a variety of matters that can influence renewable resource development including permitting, infrastructure, taxation and technology specific issues. The Study Team agrees that there continue to be some barriers to renewable development in these areas, and that these matters should be considered in greater detail in the context of continued renewable resource development efforts. In this context, the overall policy statement in support of renewable resource developments would provide useful guidance in assigning responsibilities and in balancing potentially conflicting objectives.

Background (excerpted from VEIC Study)

The following material includes key excerpts from the VEIC Study. The page references are noted. In addition, a summary of the key provisions of SB218 is included at the end of this section.

Excerpts from VEIC Study:

(page 7-1) New Hampshire generates 84% of its electricity from energy sources imported from other regions of the U.S. and the world, with nuclear fuels providing 43% of the electricity, natural gas producing 23%, and coal producing 18%. In addition, the state relies on oil and other fossil fuels for most space heating. Having no in-state sources for these fuels, New Hampshire has for decades recognized the value of its abundant, in-state renewable energy resources. Currently, biomass and hydropower combined represent nearly 16% of current electricity generation, with solar, wind, and methane providing less than 1%. Tapping into these local and sustainable fuel sources provides a hedge against fuel supply vulnerability and keeps dollars from energy production in the local economy. Renewable energy is less prevalent as a component of the energy consumption of end-use sectors, with contributions of only 1.5% for commercial, 4.5% of residential, and 7.9% of industrial consumption. With ample supplies of wood and existing hydropower resources, along with substantial potential from wind, solar, methane, geothermal, and ocean-based energy sources, New Hampshire's continued development of its sustainable energy

potential, hand-in-hand with strong energy efficiency initiatives, makes good economic sense.

(page 7-2) While essential, setting achievable though challenging goals is not enough alone to drive growth in these markets - particularly in a sector whose value is not entirely defined by short-term economic returns. There are a number of market failures or barriers that limit full realization of the opportunities inherent in increased deployment of sustainable energy technologies. These include:

- Energy pricing variability, uncertainty, and lack of transparency;
- High up-front costs of investment;
- High transaction costs;
- Competing disincentives;
- Lack of information on economic potential, technology, and industry and development partners;
- Risk aversion on the part of customers and project developers related to future benefits;
- Lack of access to the financial capital necessary to make investments;
- Lack of access to a robust installer market in the early stages of market development; and
- Risk aversion on the part of developers and contractors relative to secure demand for services.

(page 7-2) Addressing these barriers, so that markets are developed to achieve long-term economic potential along with their substantial non-monetary benefits, will require public financial investment. Sustainable policy and market development strategies are best achieved by public support of achievable goals and strong commitment to investments in this sector. To reap the economic, environmental, and security benefits of clean energy development, an effective and coordinated portfolio of goals, policy and regulatory structures, and market support is needed.

(page 7-5) In New Hampshire, the Electric Renewable Energy Portfolio Standard (RPS) provides the current primary mechanism for sustainable energy goals and market development. Many other states use a Renewable Portfolio Standard to spur economic investment in sustainable energy. Currently, 29 states and the District of Columbia have an RPS in place, and an additional 8 have non-binding renewable energy goals. Seventeen of these jurisdictions have specific requirements for solar investment (set-asides or multipliers). Combined, these RPS requirements now apply to ~ 56% of the total retail electric sales in the US. If achieved, these requirements together are expected to contribute to the attainment of roughly 71-88 GW of new sustainable energy capacity by 2025 and provide a substantial drive toward the increased investment that will result in lower costs and a more-fully developed sustainable energy market.

(page 7-5) In 2007, the New Hampshire Legislature enacted RSA 362-F, which established an Electric Renewable Portfolio Standard (RPS) as the cornerstone of its sustainable energy support framework.

(page 7-3) Under the RPS, Utilities invest in projects directly, purchase Renewable Energy Credits, or make compliance payments to meet their RPS requirements. Any payments collected in RPS compliance are deposited into the New Hampshire Renewable Energy Fund (REF) and used to further fund sustainable energy investment. Established as part of the

RPS rules, the REF is currently being used to fund several customer-sited sustainable energy rebate programs and competitive project solicitations.

(page 7-3) Because it receives funding solely from RPS alternative compliance payments, the REF has been hampered by a lack of certainty in its funding levels, and thus of availability of budget for the programs it administers, from its inception. Funding of the REF from alternative compliance payment collections have been variable and uncertain:

- $4.5 million in 2009;
- $1.3 million in 2010; and
- $2.6 million in 2011.

(page 7-3) Thus, there is no guaranteed and consistent budget for this fund; the programs it supports will operate on a year-by-year basis or until funding is exhausted, whichever comes first.

SB218 Summary of Key Provisions:
In June 2012, the legislature enacted this bill making substantial changes to the state's Electric Renewable Portfolio Standard (RPS) law, RSA 362-F. The key features of the bill are as follows:

- Adds renewable thermal energy to the list of technologies eligible to produce Renewable Energy Certificates (RECs).
- Enables power generators that co-fire fossil fuels with biomass to earn RECs for the biomass heat input.
- Increases the amount of Class III and Class IV RECs that electricity providers must acquire between 2014 and 2025.
- Expands Class IV to include hydroelectric facilities with a capacity of 1 Megawatt or less which lack upstream and downstream fish ladders to qualify for RECs.
- Reduces the price of Class II (solar technologies) Alternative Compliance Payments (ACPs) from $168 to $55, and reduces price of Class I, III, and IV ACPs by smaller amounts.
- Provides existing wood-fired power plants with an alternative means of compliance with Class III particulate emissions standards.
- Provides electricity providers with credits for RECs from renewable energy facilities that qualify as Class I or II facilities but are not registered by their owners to earn RECs.