New Hampshire Energy Efficiency Resource Standard Study

Fact Sheet & Frequently Asked Questions

The Cost and Benefits of Increased Energy Efficiency

1. 2012 CORE Programs: These programs resulted in energy efficiency savings in NH equivalent to 0.6% of 2012 electricity sales.

2. Energy Efficiency Savings Potential: Based on analysis done for this study, the total amount of energy efficiency savings from electrical and heating fuel use that is cost effective to achieve in NH equals 715.4 million kWh equivalent, which is equal to 6.6% of 2012 electricity sales. In the regulatory and utility industries, this energy is referred to as the Maximum Achievable Cost Effective (MACE) energy efficiency potential. This is a conservative estimate of MACE and is significantly lower than the 15.3% identified in the GDS 2010 NH Potentials Study.

3. How Cost Effective Energy Efficiency is Defined: Using what is referred to as the Total Resource Cost (TRC) test overseen by the NH PUC, these energy savings are deemed cost effective because they are less expensive than supply (energy efficiency $/kWh < Supply $/kWh) and have a Benefit/Cost Ratio of 1.0 or greater using the TRC test.

4. Scale of the Energy Efficiency Opportunity: The MACE energy efficiency = to 6.6% of 2012 electricity sales = "10X" (11X to be exact) more than what the CORE programs achieved for energy efficiency savings in 2012.

5. Cost to Achieve: A five-year period to achieve these savings was selected for purposes of the study (from 2013 through 2017), with the savings ramping up each of the five years. The societal cost of these savings rises from $60M/yr in 2013 to $309M/yr in 2017. The cumulative cost over the five years is estimated at $941M (by the end of 2017).

The Economic Benefits/Impacts

1. Energy Efficiency Cost = Investment Opportunity: The cost of achieving all cost-effective energy efficiency also represents an investment opportunity for NH. As noted above, the cumulative cost and therefore the size of the investment opportunity is estimated to be $941M.

2. Annual Savings & Payback Period: That cumulative investment (in 2017) would save NH $195M/Year, which is about a 4.8 year payback period. ($941/$195 = 4.8 years) This $195M is also an opportunity cost that is incurred each year that the investment in all cost-effective EE (i.e. MACE) is not made.

3. Lifetime Savings & ROI: Over the 15 year life of that investment, the cost savings from the reduced energy use accumulates to $2.9B, which is a return on investment of about 210%. [(($2.9B-$941M)/$941M) = 210%] Said another way, this equates to an IRR of over 20% over 15 years...a compelling return.

4. Job Creation: This investment would create 2,380 new jobs by 2017. For context, this represents 34% of all new jobs that were created in NH between 2010 and 2011...the most recent year from which data is available.

5. GDP (State Income) Increases: This investment would increase NH's GDP by $160M/Year. For context, this represents 7.3% of all new income that was created in NH between 2010 and 2011...the most recent year from which data is available.

6. Conclusion: Making this investment is a smart financial and energy policy decision. It improves key financial metrics that are important to the State.

The Approach Proposed for an EERS in New Hampshire

1. What were the stakeholder concerns & how did this result in the EERS design criteria?
    a. The concerns noted during the stakeholder outreach meetings were explicitly incorporated into the design criteria used by the study team to recommend the approach and goals for the EERS and when developing the 6 strategies for achieving the EERS. There is an almost 1 to 1 relationship between the concerns and the design criteria.

2. How was the 5 Year EERS chosen?
    a. This approach was designed with a clear base year, a 3-year ramp up period, and a target of 6.6% additional energy efficiencyE savings by 2017, representing all cost-effective energy efficiency. A subset of the 6.6% = to 1% of 2012 electric sales is proposed to come from the utility CORE program expansion. This additional 1% of savings from the future CORE programs is above and beyond the 0.6% of savings achieved in 2012 from the programs, and results in a total projected savings of 1.6% from the CORE programs by 2017. This lines up with the DOE requirement for 1% additional savings, as well as the stakeholder concerns and design criteria. It also uses the most basic, tried-and-true form of an EERS as defined by ACEEE - a requirement on regulated utilities to achieve a mandated energy savings goal.

3. How was the Long-Term Energy Benchmarking Standard chosen?
    a. At the first stakeholder meeting, benchmarking was identified as a foundational and practical requirement for effective energy efficiency policy. For example, the City of Manchester was an example of a NH community already benchmarking its buildings. Because quality information is foundational to effective policy making, program implementation and market transformation, a long-term standard that required benchmarking is recommended by the study team.

Top 6 Strategies Recommended for Achieving an EERS in New Hampshire

1. How was the Lead by Example strategy chosen?
    a. State government is already following this strategy, and there is more that it can do. As a result, this strategy is a straightforward and effective recommendation to help achieve the EERS.

2. How was the CORE Program strategy chosen?
    a. These programs have a long history of success. Analysis indicated they can be scaled up over three years to achieve an additional 1% energy savings by 2017, if additional SBC or other funding can be made available to the utilities delivering the programs. This strategy aligns well with the EERS 5-year goal.

3. How was the Behind the Meter strategy chosen?
    a. ACEEE calls out the need for "supportive regulatory policies" when scaling up investment in energy efficiency, and this strategy represents one alternative in a series of approaches to decoupling. This strategy can be a complement to traditional decoupling, as well as a significant new funding source for investments in energy efficiency.

4. How was the Building Energy Code Compliance strategy chosen?
    a. Building energy code adoption and enforcement is under the direct influence of state and local governments, and represents a significant (and so far untapped) energy savings opportunity. Furthermore, the NH Compliance Roadmap identified state-level policy and financial support as a key component for compliance success.

5. How was the Track, Report, Benchmark, & Promote Energy efficiency Savings strategy chosen?
    a. One of the most foundational prerequisites for the formation of a competitive market is "perfect information." This strategy simply calls out the need for ongoing funding for information gathering and analysis activities (EM&V) to support the other strategies in the report. An important component of these EM&V activities is to ensure identification of the proper performance metrics – including both savings metrics and market progress indicator metrics.

6. How was the Accelerate and Scale-Up Competitive Private Market Activity strategy chosen?
    a. As noted in the report, "one of the goals of energy efficiency policymaking is to achieve a transition to a competitive marketplace..." Throughout the project, the study team focused on providing a set of complimentary strategies that would result in more private, unsubsidized investment in energy efficiency. This strategy, and the analysis that supports it, shows how much remaining energy efficiency investment potential (i.e. MACE) is available to the private market after the other five strategies have been implemented.

Electric and Gas Bill Impacts

1. How were the bill impacts calculated?
    a. As described in the report and the appendix, the bill impacts on electric and natural gas customers were calculated assuming a 3-year ramp up in CORE program funding from 2014-2017. Three perspectives were then assessed: program participants, non-participants, and average customer impacts.

Funding Mechanisms and Choices

1. How were the funding mechanisms chosen?
    a. Because the six strategies are designed to move from publically funded and subsidized investment to competitive, private market investments in energy efficiency, the funding section is also organized around this principle. Although the State cannot force private investment in energy efficiency, it does have a variety of existing, untapped, and potential funding mechanisms that it can choose from that support a transition from public and subsidized investments to competitive, private market investments.