

1.0 EXECUTIVE SUMMARY

Every aspect of today’s society is dependent on energy. As a result, New Hampshire’s social and economic prosperity depends, to a large extent, on how it manages its energy generation, distribution, and consumption. Managing energy and demand effectively can maximize the benefits energy provides, while improving quality of life and boosting the local economy. A major component of intelligent energy management is to reduce energy consumption and demand, wherever practical.

New Hampshire is now entering a new phase in its energy management strategy. On August 2, 2016¹ the New Hampshire Public Utilities Commission (“Commission”) approved an Energy Efficiency Resource Standard (“EERS”) that defines long-term energy savings targets for the state’s utilities and a framework that will allow New Hampshire to achieve those goals.

Energy efficiency is a key strategy for building a modern and sustainable energy future for New Hampshire; therefore, it is a central mission for the State’s utilities and the EERS. Energy conservation and energy efficiency are the lowest cost energy resources available—every unit of energy saved through the NHSaves® programs is less expensive than the cost of generating a unit of energy. These investments will continue to save customers² money, avoid emissions, and reduce the need to generate additional power.

The NH Utilities are proud of the sustained trust that regulators, legislators, and customers have placed in the companies to deliver energy efficiency solutions to residents and businesses in the state. Through the coordinated and integrated planning of the NHSaves programs, the NH Utilities support capturing the significant energy saving opportunities found in new and existing homes, businesses, and institutions.

The NHSaves brand facilitates consistency in the delivery of programs across the State, while enhancing the long-term relationships each utility company has developed with its customers. Under the new EERS framework, the NH Utilities will build upon our understanding of customer expectations, deepen existing relationships with stakeholders, expand efficiency programs, and capture increased energy savings.

¹ New Hampshire Public Utilities Commission (2016, August 8), Order No. 25,932, “Energy Efficiency Resource Standard – Order Approving Settlement Agreement”. Retrieved from <http://www.puc.state.nh.us/Regulatory/Orders/2016orders/25932e.pdf>

² Hereinafter, the word “customer” will be understood to mean both customers and New Hampshire Electric Cooperative members.



2018 - 2020 Program Vision

The NH Utilities have a common vision for the future of the NHSaves programs, which will enable the state to achieve the new EERS energy efficiency goals for 2018-2020. Our vision includes scaling up to deliver increased savings while stimulating market transformation, enhancing the customer experience, continually engaging stakeholders to increase customer participation and energy savings, expanding product and service provider infrastructure, and stimulating customer and other private investment. These actions will result in sustained, orderly energy efficiency market development and provide significant economic benefits throughout New Hampshire.

2018 - 2020 Program Goals

The NH Utilities have years of experience operating successful energy efficiency programs in the state, and we have the knowledge, infrastructure, and relationships in place to meet the EERS program goals. Under the EERS, energy efficiency savings goals are increasing. Between 2018 and 2020, the NH Utilities will achieve cumulative energy savings of 3.1 percent of the Electric Utilities' 2014 kWh delivery sales and 2.25 percent of the Natural Gas Utilities' MMBtu delivery sales. The data in Table 1.1 provides a comparison to the previous 3-year period.

Table 1.1: Comparison to Previous 3-year Period

ELECTRIC PROGRAMS	2015-2017	2018-2020
Cumulative Lifetime MWh Savings	2,271,515	4,038,590
Cumulative Annual MWh Savings	175,168	334,273
Cumulative Annual Savings as a % of 2014 Delivery Sales	1.62	3.1%
Cumulative Program Funding	\$83,357,515	\$154,142,047
Program Cost per Lifetime kWh Savings	\$0.037	\$0.038
NATURAL GAS PROGRAMS	2015-2017	2018-2020
Cumulative Lifetime MMBtu Savings	6,908,142	7,509,343
Cumulative Annual MMBtu Savings	447,585	525,575
Cumulative Annual Savings as a % of 2014 Delivery Sales	1.92	2.3%
Cumulative Program Funding	\$22,464,480	\$31,396,650
Program Cost per Lifetime MMBTU Savings	\$3.25	\$4.18

When compared to the previous three years of 2015, 2016, and 2017, the statewide NHSaves programs goals for the NH Utilities for 2018, 2019, and 2020 will increase by approximately 160,000 MWh and 78,000 MMBtu.

NHSaves Accomplishments

Since inception the NHSaves Programs have:



Saved 13 billion lifetime kWhs

Saved 27.7 million natural gas lifetime MMBtus

Saved customers \$2.2 billion over the life of the measures

The NHSaves programs are designed to meet the energy efficiency needs of the diverse customers in the state by offering a suite of solutions. Through business partnerships with the private sector and well-designed rebates and incentives, the NHSaves programs provide highly successful, award-winning efficiency programs for the State's residents, businesses, and municipalities.

Since 2002, the NH Utilities have partnered with our customers, energy service providers and other stakeholders to deliver significant energy savings, reduce peak usage, supply an inexpensive source of energy, and provide myriad other benefits to residents and businesses. And stakeholders can have confidence in our results, which are verified through a robust evaluation process.

Benefits Resulting from the 2018-2020 Plan

Energy Savings

The 2018-2020 Plan will result in customer installation of energy efficiency measures that will save more than 4 billion electric kilowatt-hours and 7.5 million natural gas MMBtus over the lifetime of the measures installed. In addition, the program will save 5.4 million MMBtu from other fuels such as oil and propane.

Peak Usage Reduction

Energy efficiency programs reduce energy usage across the distribution system, which lowers energy costs for all customers. This is especially notable on "peak" usage days in the summer and winter when additional, and more expensive, power sources are brought on line to meet demand. Peak demand reduction from the 2018-2020 Plan increases from 10 MW in 2018 to a total peak demand reduction of more than 39 MW in 2020.

Customer Cost Savings

The energy saved through the 2018-2020 Plan will result in customer cost savings of approximately \$867 million over the lifetime of the measures. This breaks down to approximately \$586 million in savings from reduction in use of electricity, \$161 million in savings from reduction in use of natural gas and \$120 million in savings from reduction in use of other fossil fuels. These savings are about 4.7 times the cost of the programs.

Economic Impact

When customers spend less on energy they are able to use those funds for other priorities, such as reinvesting in the local economy. In addition, the investment in energy efficiency measures and services supports jobs. The 2018-2020 Plan will support 2,096 full time equivalents (FTEs) or 4.4 million work hours.

Lower Cost Energy Source

The NHSaves programs provide value to all customers, participants as well as nonparticipants, because energy efficiency, when considered as a resource, provides inexpensive and clean electricity and natural gas. According to the Energy Information Administration (EIA), energy efficiency can be procured at about one-half the cost of generating electricity from traditional and alternative fuel sources³.

Environmental Benefits

Energy efficiency efforts help offset energy consumption, which in turn helps mitigate the negative impacts of greenhouse gas emissions, as power plants burn fewer fossil fuels to meet lower demand. The 2018-2020 Plan will lead to a reduction of more than 2.8 million tons of greenhouse gas emissions, the equivalent of taking 606,000 passenger vehicles off the road for one year.

Quality Assurance

The savings and value of the NHSaves programs are reviewed and affirmed under high standards of accountability. Annual financial audits of the NH Utilities by the Commission, annual third-party certification of savings results to the Independent System Operator of New England (ISO-NE), and quarterly reporting to the Commission on actual program results, ensure accountability and transparency. Quality assurance inspections by utility staff and third-party experts ensure energy efficiency measures are installed and operating as expected. Furthermore, program process and impact evaluations are conducted on a regular basis by third-party evaluators to verify energy savings and identify opportunities for improvement.

³Energy Information Administration (2017, April). "Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2017." Retrieved from, http://eia.gov/forecasts/aeo/pdf/electricity_generation.pdf



NHSaves Programs Summary

Electric and natural gas 2018-2020 EERS goals will be accomplished through our residential, commercial & industrial, and municipal programs.

The residential NHSaves programs include:

- **Home Energy Assistance** provides energy-saving support to income-eligible residents.
- **Home Performance with ENERGY STAR®** provides comprehensive energy efficiency improvements for existing homes.
- **ENERGY STAR Homes** provides incentives to customers or builders who are constructing highly efficient new homes.
- **ENERGY STAR Products** provides rebates and markdowns to encourage customers to purchase energy-saving products such as lighting, appliances, and heating systems.

The commercial NHSaves programs include:

- **Large Business Energy Solutions** provides incentives to large commercial and industrial customers who are retrofitting existing facilities or equipment, constructing new facilities, adding equipment, or replacing equipment that is at the end of its useful life.
- **Small Business Energy Solutions** provides incentives for new and retrofit projects and also includes turn-key energy services to small commercial customers who lack the time, resources, or expertise to implement energy saving solutions on their own.
- **Municipal Energy Efficiency Program** provides incentives to municipal customers who are constructing new facilities or retrofitting existing facilities.

The NHSaves programs also have utility specific offerings, which include:

- **Home Energy Reports** compare energy performance among homes and encourage conservation and greater efficiency.
- **Energy Rewards RFP** encourages customers to submit comprehensive projects as part of a competitive bid process.
- **Customer Engagement Platform** utilizes self-service tools to help customers learn more about energy efficiency and develop a customized energy savings plan.

The NH Utilities are excited to lead New Hampshire's efforts in energy efficiency for the future by continuing to partner with our customers and stakeholders to design and deliver beneficial and cost-effective energy solutions. We will continue to improve these programs and develop new opportunities to maximize program participation and realize deeper cost effective energy efficiency throughout New Hampshire. These programs will support economic growth in the state while also improving the quality of life for all of our citizens.