

Town of Washington, New Hampshire

Master Plan 2015

8. ENERGY

OVERVIEW OF CURRENT SITUATION:

All energy resources except wood, solar and wind are imported into town. There is one gas station at the General Store in Washington Center for automotive and recreational vehicle use. The Town has its own fuel facility. All other petroleum products, including heating fuels, are purchased from companies in other towns. Several dams that once produced mechanical energy have fallen into disuse. Potential hydroelectric sites have not been formally identified. There has been some discussion of town woodlots in the past, but only a minimal amount of tree harvesting on town land has been completed. The Forestry Committee is planning a cut on a town forest property in the near future. There are several solar electricity installations in town but none involving the use of wind.

The Washington Energy Committee was formed in 2007, following a favorable vote at Town Meeting. The Committee was one of many formed around the state at that time through the advocacy of Clean Air-Cool Planet. Its mission is to promote energy conservation, energy efficiency and explore other ways to reduce carbon emissions among the Town's residents, businesses and in municipal affairs.

Since its inception, the Energy Committee has engaged in educational activities and programs designed to encourage people to pay attention to their energy needs and consumption habits. Several "Button Up" workshops have been held to provide citizens with the tools and information to conduct home weatherization projects.

The Committee has also worked with Town boards, officials and staff to quantify energy use, identify opportunities to reduce municipal energy consumption and incorporate energy efficiency and upgrades into the Capital Improvement Plan.

Following an energy audit, early initiatives included installing energy-efficient lighting in several town buildings, removing four streetlights and converting the rest to energy efficient bulbs.

Washington Baseline Inventory Report

This report is a summary of greenhouse gas emissions and energy use for the Town of Washington, NH for the calendar year 2008. The focus of this report is the municipal operations of the town, with special emphasis on Town-owned buildings.

Different types of energy use were considered in municipal building, vehicle and streetlight operations such as electricity/heating fuel use for buildings and gasoline/diesel fuel for vehicles. This report also factors in the cost of purchasing this energy in cases where records were available.

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In collaboration with Town staff, an intern from UNH and staff at Clean Air-Cool Planet and Energy Committee members collected energy use data and entered it into Portfolio Manager, a software program created by the Environmental Protection Agency (EPA).

This created an energy use baseline to assess and prioritize energy saving initiatives.

Energy Audits

Following a successful application, the Town was selected to participate in the NH Municipal Energy Assistance Program, (MEAP). Professional “Decision Grade” Energy Audits were conducted on a number of municipal buildings.

January 2010 – Town Hall/Meetinghouse

May 2010 – Old School House (Police Station)

August 2011 – Camp Morgan Lodge, Center Fire/Rescue and the Shedd Free Library

Dec 2011 –Elementary School

Significant opportunities for improvement were identified in these audits. Many of the Town buildings are old and few energy efficiency initiatives had been implemented previously. Estimates of a potential for 30% to 50% reduction in total energy consumption were reported.

Many of the findings from these reports were incorporated into the Planning Board’s Capital Improvement Plan’s Interim Report in September of 2012.

Solar Array

The solar array at the Transfer Station was funded by a Federal Energy Efficiency and Conservation Block Grant, through the NH Office of Energy and Planning (OEP). The application was approved in March 2010 and construction began later that year on a ground-mounted, 18kW Photovoltaic (PV) system. It is tied to the electricity grid and began to produce electricity in May 2011. It provides 100% of the electrical needs of the Town Garage. As of December 2014 it had generated a total of 61,126 kWh.



The Town Garage further improved its energy efficiency by installing a wood pellet heating system in 2013.

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SUMMARY OF COMMUNITY INPUT:

Through the **Community Survey**, the following input was received relative to Energy:

The Town should promote:

Energy conservation initiatives	75% agree
Educational programs about environmental issues	69% agree
Alternative energy production (solar panels, wind towers) on a personal scale	68% agree
Alternative energy production (solar panels, wind towers) on a commercial scale	47% agree, 37% disagree

The **Community Workshop**

The workshop question about how Washington should look in the future mentions that the Town buildings and community should be energy efficient and take advantage of passive energy opportunities. Although there was not a focus group dedicated to Energy issues, there were ideas and discussions about Energy within several groups. The following strengths/weaknesses/opportunities relative to Energy were generated in the breakout groups:

STRENGTHS: Energy efficiency at town garage allows money for roads.

WEAKNESSES: Town not responding to energy needs defined in town.

OPPORTUNITIES: Renewable energy sources being encouraged; Less restriction on installing alternative energy; All buildings will be energy efficient; Passive energy options for individuals will be available for homes and businesses.

The **Community Workshop** priorities included the following Energy priority, which was voted as the number 5 priority:

- Appropriate infrastructure & energy efficiency.

At the **2014 Town Meeting**, the Energy Committee provided the public with statistics of energy use in Town Buildings for 2013. They also invited participation in an attitudinal survey.

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2014 TOWN MEETING QUESTIONNAIRE RESULTS:

- Q1. *Do you think the Energy Committee should be consulted by the Select Board and other Town departments before major capital improvements are made in order to make sure energy efficiency and savings options are fully considered?*

YES 18 NO 0

- Q2. *Would you be willing to have the town invest a little more money upfront in order to save long-term on energy expenditures?*

YES 16 NO 2

One comment – “Should have data and alternatives for possible savings.”

- Q3. *What other tasks do you think the Energy Committee should be involved with?*

Arrange for low or no-cost energy home audits to include use of an infrared sensing device/camera.

Provide affordable ways to save energy/money for Washington households and information on cost of solar, wind, wood pellet energy and pay back rates.

Evaluate all town buildings for efficiency.

Getting a warrant article to require the Selectmen to inspect construction for compliance with energy conservation and insulation requirements.

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GOALS AND RECOMMENDATIONS:

Goal A: Reduce energy consumption in municipal buildings.

Recommendations:

1. Monitor energy use using Energy Star™ Portfolio Manager.
2. Continue to facilitate energy audits from the utilities' providers.
3. Adopt NH energy code in new buildings.

Goal B: Promote energy conservation to the Town's general public including homeowners and businesses.

Recommendations:

1. Inform citizens of new technology developments and grant opportunities.
2. Provide home energy efficiency assessments.
3. Develop a weatherization support program.

Goal C: Promote the purchase and effective use of energy efficient equipment by the Town.

Recommendations:

1. Facilitate Town operating procedures and training.
2. Implement a Town-wide no idling policy.

Goal D: Encourage Washington's future energy independence.

Recommendations:

1. Increase engagement with the Washington Elementary School to encourage energy conservation.
2. Identify opportunities to create, store and distribute energy locally.
3. Investigate a Micro Hydro or Community Solar project.