

REPORT OF THE SUSTAINABLE ENERGY COMMITTEE

Town Meeting established the Sustainable Energy Committee (SEC) in 2010, to lead efforts to accomplish the goal adopted at the 2009 Annual Town Meeting to reduce Town-wide greenhouse gas (GHG) emissions 10 percent below 2007 levels by 2013, to monitor and report progress toward that goal, and to propose further goals for emissions reductions to Town Meeting. After meeting the 2013 goal of 10 percent GHG emissions reduction, the 2014 Annual Town Meeting adopted the SEC proposal to establish a new goal to reduce Town-wide emissions 25 percent below 2007 by 2020.

The SEC has seven appointed members, with staggered terms of three years. The Board of Selectmen (BOS), Municipal Light Plant (MLP), and School Committee each appoint one board member, officer, official, or paid employee. The BOS appoints the remaining four members from among residents or others with relevant interests and expertise. Traditionally, Babson and Wellesley College have held one of the at-large seats on a rotating basis.

MEASUREMENT OF 2017 EMISSIONS AND TRENDS

Each year the SEC measures the Town’s “carbon footprint” and tracks the change against earlier years. This carbon footprint measurement is an estimated number calculated from a variety of inputs, some actual and some estimated. It is based on actual municipal and college data, actual electric and natural gas use by households and businesses, and estimates for heating oil consumption, fuel efficiency in the transportation sector and the conversion factors that translate energy use into GHG emissions. The methodology is guided by the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions established in October 2012 and calculated using ICLEI – Local Governments for Sustainability software.

Preliminary Greenhouse Gas Emissions (CO ₂ e) in metric tons						
	Share of Total 2017 Emissions	2017 Emissions	2016 Emissions	2016 - 2017 Percent Change	2007 Emissions	2007 - 2017 Percent Change
Electricity/Natural Gas/Fuel Oil						
Residential	30.7%	110,525	105,879	4.4%	132,862	-16.8%
Commercial	12.7%	45,524	47,406	-4.0%	57,922	-21.4%
Colleges	10.6%	38,281	38,970	-1.8%	45,886	-16.6%
Municipal	2.1%	7,481	6,994	7.0%	9,287	-19.5%
Building Subtotal	56.1%	201,811	199,248	1.3%	245,957	-17.9%
Waste	0.5%	1,637	1,853	-11.7%	2,027	-19.2%
Gas/Diesel	43.4%	156,164	155,053	0.7%	160,468	-2.7%
Total Emissions	100.0%	359,613	356,154	1.0%	408,452	-12.0%

Wellesley’s 2017 greenhouse gas emissions increased 1% above 2016 levels, but remained 1.5% lower than 2015 values. The disappointing 1.3% increase in building emissions in 2017 compared with 2016 is primarily driven by a 3.3% increase in natural gas use. This increase results from colder winter months in 2017 compared to 2016 (an 11% increase in the number of heating degree days in 2017) and a 2% increase in the number of natural gas customers.

A new, higher traffic count on Linden Street raised the traffic volume estimate and is the primary factor explaining the 0.7% increase in gas/diesel emissions. The small, waste sector saw a 11.7% decrease in emissions between 2016 and 2017, following two years of increasing emissions (up 3.7% in 2015 and 5.5% in 2016). The tonnage of total solid waste fell approximately 12% between 2016 and 2017, reflecting a 14% decrease in residential solid waste and a 45% increase in commercial solid waste.

The table is labeled “preliminary” because it is based on a 2016 emission conversion factor for electricity. The results in the table are pending a reply from the Environmental Protection Agency to our questions about a reported change in the 2017 conversion factor for electricity. The factor is recalculated annually to reflect the change in the mix of power generation supplying the New England grid as coal plants are converted to natural gas and renewable energy increases. When the EPA confirms or revises the published factor for 2017, the table, above, will be recalculated. Total electricity use declined 1.6% in 2017.

Overall, the reduction in emissions since 2007 is not sufficient to achieve the Town’s 2020 goal unless the pace accelerates.

COMMITTEE ACTIVITIES IN 2017 AND 2018

In addition to tracking and analyzing the GHG emissions as described above, the SEC led and contributed to a number of 2017 initiatives aimed at reducing the Town’s carbon footprint. These initiatives are detailed below.

Green Communities

On December 28, the Massachusetts Department of Energy Resources (DOER) designated the Town of Wellesley a Green Community. This designation comes with an initial grant totaling \$137,250 and makes the Town eligible for future, annual grants to fund energy efficiency and renewable energy projects. The SEC worked for over a year with the BOS, the Planning Department, the Planning Board, the Municipal Light Plant, the Facilities Management Department, the Department of Public Works (DPW), and with other Town departments, boards and committees to meet the five requirements to become a Green Community. To meet two of the requirements, the BOS and School Committee approved a Fuel Efficient Vehicle Policy and an Energy Reduction Plan (ERP). The Vehicle Policy requires that when the municipality replaces certain vehicles, the municipality must purchase fuel efficient models where these models are commercially available and practicable. The ERP details how the municipality can reduce its energy use by 20% below 2015 levels by 2020. The SEC now uses MassEnergyInsight software to track Wellesley’s municipal energy use. To fulfill a third criterion, Town Meeting approved an amendment to the Zoning Map and the Zoning Bylaws of the Town of Wellesley by adding a large-scale solar overlay district to one parcel of land at the Route 9/Route128 cloverleaf, owned and controlled by the Massachusetts Department of Transportation. Wellesley already met the remaining two criteria for Green Communities: adoption of the Stretch Building Code and an expedited permitting process for the above-mentioned solar system.

Becoming a Green Community will help Wellesley advance its sustainability and GHG gas emissions goals. Future Green Communities grants from the state will fund energy conservation projects that will lower the Town’s energy costs and GHG gas emissions. Wellesley recently submitted its first grant application which included an exterior light-emitting diode (LED) project at

the DPW and an audit of the Town's water and wastewater treatment equipment and operations. Projects eligible for future grants include heating, ventilation and air conditioning upgrades, lighting improvements, variable frequency drives, solar panels, electric vehicles and electric vehicle charging stations, education programs, consultant services, and more to support renewable energy and energy efficiency for the Town.

Green Collaborative

The SEC works with boards and staff members throughout the Town of Wellesley and with Wellesley Public Schools. SEC's programs also involve significant participation by other groups with common interests. To connect numerous, environmentally-interested groups across Town, the SEC facilitates "Wellesley's Green Collaborative." The Collaborative consists of nearly 30 entities including grass roots climate action groups, houses of faith, land conservation activists, civic organizations, and garden clubs. The Collaborative meets several times per year to discuss sustainability issues relevant to Wellesley and to hear from a variety of speakers.

WasteWise Wellesley

The SEC, as part of the, 3R (Reduce, Reuse, Recycle) Working Group (DPW, Natural Resources Commission (NRC) and SEC) launched WasteWise Wellesley, a Town-wide program designed to identify and capitalize on win-win opportunities associated with sustainable materials management. The U.S. Environmental Protection Agency (EPA) estimates that the provision of goods and food in the United States contributes approximately 42% of the country's carbon footprint. WasteWise Wellesley initiatives involve collaborations with Wellesley Public Schools (WPS), WPS Food Services, FMD, DPW, NRC, Health Department, Green Schools, Sustainable Wellesley, United States Environmental Protection Agency (EPA), and the Massachusetts Department of Environmental Protection, and include:

- A cafeteria recycling and food waste diversion program at Bates, Fiske, and Sprague Elementary Schools. Bates is diverting between 32% and 40% of previously landfill-bound waste to more productive endpoints and has the potential to divert more than 90%.
- A residential food waste drop-off pilot program is collecting over 1 ton of food waste per week. This waste is used to generate methane with one ton of waste equal to 300 KWh. The pilot is currently expanding to include 600 households (up from 300).
- Recovery of unused-cooked food from Wellesley Middle School, Wellesley High School, and local colleges with distribution to local food pantries, providing over 20,000 meals per year. This project will soon expand to the elementary schools and was profiled in the *Boston Globe*, *Wellesley Townsman*, and *Wellesley-Weston Magazine*.
- A March 13, 2018 visit to Wellesley by the CEO of Whitsons Corporation so that he can meet with school and Food Services administrators and observe the recycling and food recovery programs in place and hopefully extend them to Whitsons' other 125 institutional customers..
- Distribution of a survey to Wellesley residents to gauge their interest in residential compost pick-up by a private vendor.
- Establishment of a Repair Café in Wellesley, and collaboration with the Rotary Club.

Sustainable Development Guidelines

The SEC initiated discussions with the Permanent Building Committee (PBC) and FMD regarding creation of Sustainable Development Guidelines for Wellesley. The SEC, PBC, and FMD toured Wellesley High School's sustainable features and took stock of lessons learned through the operation and maintenance of the new high school. The SEC carried out a review of relevant literature, provided advice to the School Committee on sustainability-related topics and supported outreach efforts with interested community members. At School Committee's request, the SEC developed an HHU Position Paper which contained specific recommendations for the Feasibility Study phase. The School Building Committee incorporated the SEC's recommendations into the Feasibility Study's Scope of Work. The SEC continues to follow the HHU process closely and plans to stay involved as the Town works with the Massachusetts School Building Authority.

At the NRC's request, the SEC provided advice to the DPW about sustainability as it relates to the Hunnewell Field Project. The SEC provided input on the Request for Proposals (RFP) for the team room and bathrooms near the aqueduct and the SEC will help to screen the firms that respond to the RFP.

SEC members met with Wellesley Free Library administrators and trustees to discuss sustainability-related facets of building operation and future renovations.

Transportation Working Group

The SEC launched a Transportation Working Group with participants from the SEC, Green Schools, and the Wellesley community. This Working Group aims to identify opportunities to improve methodologies for estimating transportation-related GHG gas emissions and potential initiatives to reduce these emissions. While Wellesley has seen a steady reduction in building-related GHG emissions, emissions from the transportation sector have remained relatively flat since 2007. The Working Group is in the process of gathering information, and has met with members of the Planning Department and BOS, Representative Alice Peisch, sustainability administrators at Wellesley and Babson Colleges, School Committee members, Wellesley Public School administrators, and a former MetroWest Regional Transit Authority employee who managed the Route 8 Bus.

Unified Plan

SEC members participated in the Unified Plan Steering Committee and provided comments on the Unified Plan drafts.

Promoting Home Energy Audits for Seniors

The SEC initiated a project with the Council on Aging to increase participation in the home energy assessments offered by the MLP and National Grid. Home Energy Saving Seminars at the Tolles-Parsons Center of the Council on Aging are planned for March 8 and April 5.

Additional Projects, Website and Staffing

The SEC Chair began serving on an MLP Working Group to oversee a study of how the MLP can reduce the GHG gas emissions of our town's electricity.

The SEC was one of several co-sponsors of a Gas Leaks Forum. The Forum raised awareness about the more than 200 gas leaks in Wellesley, and their implications for safety, human health, the environment, and wasted resources.

The SEC helped to establish a partnership between the SEC, MLP, Power to Choose, and the Wellesley Education Foundation/Wellesley STEM Expo. The goal of this partnership was to raise awareness about Wellesley's voluntary renewable energy program and to promote understanding of sustainability and renewable energy among Wellesley students and their parents. The Expo hosted exhibits on recycling, food recovery and renewable energy. The Expo also promoted the Sustainability Challenge, a contest designed to get kids learning and thinking creatively about renewable energy.

The Town of Wellesley has received the 2017 EPA Green Power Community designation. This designation is awarded based on the purchase of 5% of the Town's annual electricity consumption (for all Town departments and streetlights) from renewable energy and on the amount of electricity purchased from the Town-wide voluntary renewable energy program.

The SEC began to develop its website and will continue to expand the use of this website to promote sustainable energy, disseminate information and materials and strengthen the Committee's public outreach, generally.

The SEC has one half-time (19 hour/week) staff person: the Sustainable Energy Administrator. To support the SEC's burgeoning portfolio of projects, the SEC is seeking to increase the SEC Administrator's position to 25 hours/week and add a second, 10 hour/week SEC Assistant to its staff.

SUSTAINABLE ENERGY COMMITTEE

Laura Olton, Chair
Scott Bender

Ellen Korpi, Vice Chair
Katharine Gibson

Thomas Ulfelder
Michael D'Ortenzio

Steven Gusmini

