

rather to present its findings for broader discussion within the Town, so that other solar planning efforts can go forward with full information about the alternatives.

The Committee met twice per month from March through September. After brainstorming a comprehensive list of site prioritization and evaluation criteria – physical site characteristics, human and environmental interaction characteristics, and municipal or infrastructure considerations – the Committee established an initial ranking for each Town-owned, non-conservation parcel of five (5) acres or more. In May, the Committee conducted site visits to many of the sites and made revisions to some of the rankings accordingly. In order to simplify the scoring methodology for the parcels, the Committee distilled the detailed list of evaluation criteria into a 5-point scale (A through E) and reassigned each parcel under this system. The A and B rankings identify the most viable parcels for hosting a utility-scale solar array, worthy of further discussion and debate by the Town.

In July, the Committee circulated a draft of its findings, and in September it hosted a “solar open house” at the Harvey Wheeler Community Center during which members of the public were invited to comment. An estimated 70 people attended and provided feedback; all feedback was incorporated into the final report.



*Citizens provide feedback to Solar Siting Committee at September public information meeting at Harvey Wheeler*

The Committee noted that, for various reasons, all of the sites are likely to be controversial. Most of the sites are forested; some have other uses currently or are the subject of other planning efforts in Town; others have stakeholders who prefer that those sites remain as they are. The Committee also found that the suitable municipally-owned parcels are insufficient to meet the Concord Municipal Light Board’s goal of generating 25 MW of power within the Town’s boundaries. The

Committee recommended, in addition to pursuing solar generation on the A and B ranked parcels, that the Town consider purchasing or leasing additional land and that the Planning Board prepare a Solar Bylaw to regulate setbacks, landscaping, lighting and signage for utility-scale solar arrays.

The Committee documented their work, findings and recommendations in a report to the Board of Selectmen dated October 2011. The report is available on the Town’s website: <http://www.concordma.gov>

## COMPREHENSIVE SUSTAINABLE ENERGY COMMITTEE



*William Carlezon Gayle Chatlosh, Charlie Parker, Dan Gainsboro, Peter Nobile, Chair; Jill Appel, Anthony Butler, Gordon Brockway, . not pictured: Nick Pappas*

The Comprehensive Sustainable Energy Committee continues to advance efforts to conserve energy in Town buildings, to understand the Town’s overall energy use patterns both within the government and the community, and to coordinate with Town departments and environmental groups to initiate broad-reaching efforts to reduce energy consumption, promote energy conservation and support renewable energy technology.

### *Sawyer Trust Fund Projects*

Pursuant to its responsibility to advise the Town on energy efficiency projects afforded through the Sawyer Trust Fund, the Committee worked directly with the Town’s Facilities Managers to help facilitate the application process and the implementation of many different projects in 2011. Working with the Facilities Managers, the Committee developed and reviewed sixteen Sawyer Trust Fund applications; all of which were approved, for a total distribution of \$520,341. One noteworthy project includes the design and installation of the

largest Sawyer Trust Fund expenditure to-date: a new HVAC system for Hunt Recreation, which includes a Stretch Code compliant air conditioning system, energy-efficient ventilation and heating solutions, and a web-based, centralized energy management system. For this system, the Town retained an HVAC design/engineering company to develop an energy efficient and compliant set of plans and specifications.

While many projects are in process or have been recently completed, several have been delivering energy savings for over a year with reportable results. The West Concord Fire Station was weatherized and its heating system was upgraded. These improvements resulted in a reduction in natural gas consumption of more than 40%. At the Friends of the Performing Arts Center (FOPAC) building, the insulation and new boiler have resulted in improvements in the 30-40% range. Additionally, the

Town is beginning to see savings in electricity consumption from LED lights that have been installed on the exterior of many of Concord's public buildings.

*Other Actions*

The Committee drafted a Concord Energy Master Plan which provides a detailed baseline of Concord's energy consumption and CO2 profile for each segment (Municipal, Residential, and Commercial). The plan identifies strategies and plans for each segment and will be updated regularly. Additionally, the Committee drafted a Residential Heating Systems Whitepaper. This document describes various heating systems options in terms of best practices, energy consumption, and CO2 effects. The Committee also worked with the CMLP to implement the Mass Energy Insight software for measuring and tracking energy consumption in each of Concord's municipal buildings.

SAWYER TRUST FUND ALLOCATIONS - 2011

BUILDING/ Proposed Work	Project Specs	Approved Funds
<u>DEPARTMENT OF PLANNING &amp; LAND MANAGEMENT</u>		
Weatherization Phase 2 – Build	building envelope efficiency measures	\$26,500
1 <sup>st</sup> Floor meeting room upgrades	LED light, insulation, door	\$3,941
<u>CONCORD PUBLIC WORKS</u>		
Weatherization Phase 2 - Build	building envelope efficiency measures	\$26,500
<u>HUNT RECREATION CENTER</u>		
Weatherization Phase 3 – Design	infrared study & bid specs	\$4,285
Weatherization Phase 3 – Build	building envelope efficiency measures	\$4,000
HVAC Design & Commissioning	functionality test, design, report, end-to-end view of HVAC needs	\$27,000
HVAC System & Installation	two 96% efficient modulating boilers, Stretch Code compliant chillers & air handlers, thermostatic controls, EMS	\$357,000
<u>PUBLIC SAFETY BUILDING</u>		
Lighting Upgrade Pilot (ctd)	4 exterior LEDs, 15 interior LEDs	\$2,675
1 <sup>st</sup> Floor – lighting & sensors	estimated 30% improvement	\$3,000
1 <sup>st</sup> Floor – insulation & plumbing	closed-cell foam insulation, water-saving plumbing fixtures	\$16,040
1 <sup>st</sup> Floor – design services for AC	SEER = 17.2	\$25,000
<u>HARVEY WHEELER COMMUNITY CENTER</u>		
Lighting Upgrade Phase 4 (LED Pilot)	3 LED lamps in parking lot	\$3,000
Boiler Upgrade -- Design & Specs	internal boiler circulator pump (70-80% less energy used),	\$3,500
Construction	variable frequency drives, review by factory technician for compliance	\$20,000
<u>BEEDE SWIM AND FITNESS CENTER</u>		
Solar Rooftop Structural Analysis	review of wind speed, exposure, snow load, ballasting weight, tilt, etc.	\$3,500
Feasibility Study – Solar Electric Parking Canopy	design options, schematics, computer model, budget estimates	\$2,900
TOTAL		\$520,341

### *Coordination with other Committees*

In an effort to increase outreach to other conservation-minded and energy related groups in Town, Committee members regularly attend meetings of the Concord Municipal Light Board, Concord CAN and League of

Women Voters, among others. Committee members also serve on the Solar Siting Committee, the Concord Municipal Light Board, the Public Works Commission, and the Sustainability Subcommittee of the High School Building Committee.

# CONCORD PUBLIC WORKS

## PUBLIC WORKS COMMISSION



*James A. Smith, Cynthia W. Wood, Philip Swain, Chair; Nick Pappas, Arthur Fulman, Vice-Chair*

The Public Works Commission acts as the Town's road, water and sewer commissioners, and advises the Public Works Director in the Department's efforts to maintain and protect the Town's public works, utility and solid waste/recycling services. The Commission also advises the Town Manager, Planning Board and other Town officials and boards on matters that concern town water and sewer service, drainage and roads. The Commission is also responsible for setting policy and rate schedules for water, sewer and solid waste services; for acting as an appeals board for right of way permits and water and sewer bills; and for approving minimum standards for the final layout of Town roads.

The Public Works Commission also provides a forum for review of water, sewer and solid waste rates, the annual roads and sidewalk program, public street layout, and water and sewer extensions.

The ongoing activities of the Commission can be found throughout the year on the web at [www.concordma.gov](http://www.concordma.gov)

Highlights of the Commission's activities for 2011 included (in chronological order):

- A review of the Hanscom Air Force Base water and sewer privatization RFP.
- A review of the Design and Construction Standards and Details and Storm Water Regulations, followed by a public hearing, and a vote to approve those standards and regulations.
- The annual public hearing and Commission approval to review and revise curbside collection and disposal rates.
- Following an administrative denial and appeal of a request for two sewer connections on a single parcel for 1491 Main Street, a sewer waiver request was approved.
- A public hearing and subsequent sewer extension for 324 Bedford Street – the Caesar Robbins House was approved.
- An after-the-fact public hearing for the removal of public shade trees on Lexington Road for the Minuteman National Historic Park was held, and a Shade Tree Replanting Agreement between Minuteman National Historic Park and the Town of Concord was approved.
- A Roads Program briefing, followed by a formal public hearing discussing the 2011 Roads Program, was held.
- A discussion of various Town Meeting articles occurred; and Commissioner Smith presented the FY 2012 Roads Program Bonding Article at Town Meeting.
- The Water and Sewer Rate public hearing was held, and the 2011 rate schedule was approved.
- Following an administrative denial and appeal of a request for two connections to the Town's sewer system for 506 Old Bedford Road, a sewer waiver request was approved.
- A State of Water Supply Conservation was declared on July 22, 2011 and terminated on September 14, 2011.
- Paul Mahoney was appointed as the Public Works Commission representative on the Wastewater Planning Task Force.
- Two public meetings were held to receive input and discuss details of the Junction Park rehabilitation, and the plans to proceed with the Junction Park rehabilitation were approved.
- A comprehensive Water/Wastewater Strategic Planning discussion occurred over a period of two meetings.