



CLIMATE CHANGE ACTION: Reducing Greenhouse Gas Emissions in the Town of Greenburgh

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Town of Greenburgh: From Energy Conservation to Climate Protection

- ✿ Energy Star® code for new residential construction: Fall 2002 (Pace Energy Project)
- ✿ Energy Conservation Coordinator appointed: Winter 2003
- ✿ Energy Smart Community: Spring 2003
- ✿ U.S. Mayors' Climate Protection Agreement: Spring 2006
- ✿ ICLEI membership: Fall 2006

REDUCING EMISSIONS

✿ COMMUNITY

✿ GOVERNMENT

REDUCING EMISSIONS: Community

Focusing on
energy use in:

- ✿ New Construction
- ✿ Existing Buildings
- ✿ Transportation



REDUCING EMISSIONS: Community

- ✿ New Residential Construction: Building Code
 - ✿ Chapter 100, BUILDING, FIRE AND PLUMBING
 - § 100-14 Energy Star requirements.

[Added 8-21-2002 by L.L. No. 3-2002]

“No building permit shall issue for any new one- or two-family dwelling or multifamily dwelling of three stories or less unless the applicant certifies that the dwelling will meet the requirements for a New York ENERGY STAR[®]-labeled home.”

§ 100-4 Definitions.

- ✿ “NEW YORK ENERGY STAR[®]-LABELED HOME -- Any new one- or two-family dwelling or multifamily dwelling of three stories or less, as defined in § 285-5, including townhouses, built to achieve a home energy rating of 86 or higher on a scale created under the home energy rating system established pursuant to the National Home Energy Rating Technical Guidelines issued by the National Association of State Energy Officials and dated September 19, 1999, and which meets the following two additional requirements: [Added 8-21-2002 by L.L. No. 3-2002]
- ✿ A. Includes a total of 300 kilowatt hours per dwelling unit of estimated annual savings from ENERGY STAR[®]-labeled lighting and appliances; and
- ✿ B. Includes the capability to deliver automatically controlled mechanical ventilation of at least 15 cubic feet per minute per dwelling unit plus an additional 15 cubic feet per minute per bedroom.”

ENERGY STAR® Labeled Home

- ✿ Independent Home Energy Raters help ENERGY STAR builder partners choose the most appropriate energy-saving features.
- ✿ Raters conduct onsite testing and inspections to verify that the homes qualify as ENERGY STAR.



(A Netherlands town requires solar...)

Photo courtesy of Steven J. Strong





REDUCING EMISSIONS: Community

✿ New Commercial Construction

- ✿ Informational procedure required for Planning Board applicants

 - ✿ Opportunities, NYSERDA programs/incentives

- ✿ No code...*yet!*

 - ✿ Plan to recommend code requirement and/or incentives

REDUCING EMISSIONS: Community

- ✿ Existing Buildings: outreach on energy efficiency, conservation, renewable energy, & climate change action
 - ✿ Residential
 - ✿ 1-4 family homes
 - ✿ Multifamily buildings
 - ✿ Business
 - ✿ Churches
 - ✿ Schools

EXISTING BUILDINGS: Programs & Information

- ✿ NYSERDA (NYS Energy Research & Development Authority) programs & incentives

- ✿ www.getenergysmart.org

- ✿ www.nyserda.org

- ✿ www.powernaturally.org

- ✿ Local utility info
- ✿ Department of Energy
- ✿ Green building organizations

REDUCING EMISSIONS: Community

- ✿ Outreach promoting other emission-reducing & “green” actions
 - ✿ Buying green power
 - ✿ Water conservation
 - ✿ Transportation
 - ✿ Saving gasoline, alternative fuels, commuter choice, ride sharing, etc.
 - ✿ Buying local



Methods of Outreach

- ✿ Literature displays
- ✿ Lobby solar display
- ✿ Web page
- ✿ E-mail notices to public & groups, e.g. architects
- ✿ Cable access TV
“The Energy Show”
- ✿ Promote local examples



Methods of Outreach



- ✿ Energy fairs
- ✿ Event tables & CFL bulb sales
- ✿ Presentations to community groups
- ✿ Conferences & seminars for business
- ✿ Partner with associations

Methods of Outreach



✿ Schools

- ✿ Coordinate projects/events with teachers
- ✿ Notify teachers & administrators about training opportunities etc.

REDUCING EMISSIONS: GOVERNMENT

- ✿ Buildings
- ✿ Transportation
- ✿ Recycling
- ✿ Procurement/purchasing
- ✿ Buying Green Power

GOVERNMENT: BUILDINGS

- ✿ New construction & renovation
 - ✿ New library addition plans green, geothermal
- ✿ Existing buildings
 - ✿ Energy efficiency audits & retrofits
 - ✿ Town Hall
 - ✿ Solar energy



Town Hall 2006 Retrofit

- ✿ NYPA's High Efficiency Lighting Program
 - ✿ Energy-efficient lighting and ballasts
 - ✿ Occupancy sensors
- ✿ Annual savings (approx.)
 - ✿ \$26,600
 - ✿ 310,000 kWh
- ✿ Also reduces demand charge



Solar Energy: Town Hall PV System

- ✿ Installed April 2006
- ✿ NYSERDA grant:
PON 843
- ✿ Demonstration size:
5.6kW
- ✿ About 6,840 kWh
electricity per year
- ✿ Will reduce CO₂
emissions by about
7,460 lbs/yr



Town Hall Lobby Solar Energy Display: PV data & educational info



GOVERNMENT: TRANSPORTATION



FLEET

- ✿ A few alternative fuel vehicles
 - ✿ GEM cars (electric)
 - ✿ CNG truck
- ✿ Challenges
- ✿ Policies
 - ✿ Idling reduction
- ✿ Exploring biodiesel

GOVERNMENT: TRANSPORTATION

COMMUTER CHOICE FOR EMPLOYEES

- ✿ Planned transportation demand management program for employees with MetroPool
- ✿ MetroPool encourages the use of transportation alternatives such as carpooling, vanpooling, riding the bus or train, bicycling, walking, compressed work weeks and telecommuting



GOVERNMENT

RECYCLING

- ✿ Working to improve existing office recycling program
- ✿ County & NYS DEC resources

PURCHASING

- ✿ Recommending new environmentally preferable procurement policy

GOVERNMENT: BUYING GREEN POWER

- ✿ Town Council awaiting explicit legal permission to “pay more” for wind power
- ✿ Other NY municipalities (e.g. Irvington, Croton)
- ✿ Potential action: NYS legislation

NEXT STEPS

- ✿ Implement ICLEI tools:
 - ✿ Software for emissions measurement & planning
 - ✿ Action steps
- ✿ Carbon footprint

A FEW THOUGHTS

- ✿ Common goal/standards/terms that can be shared by community & govt. to align behaviors (cf. WWII)
- ✿ Need paradigm shift in thinking & quantum leap in speed
- ✿ Management issue: integrate green principles into every dept. (vs. “silo”)
 - ✿ Inspiration: City of Chicago
 - ✿ Performance management; *Good to Great*

RESOURCES

- ✿ US Mayors' Climate Protection Agreement: resources for local governments
www.seattle.gov/climate/govResources.htm
 - ✿ E.g. *Climate Action Handbook* (also from ICLEI)
- ✿ ICLEI/Local Governments for Sustainability
www.iclei.org
 - ✿ E.g. *Community Outreach Tool*
- ✿ EPA Climate Change site
www.epa.gov/climatechange
 - ✿ Local Governments--actions & resources

RESOURCES

- ✿ *Americans and Climate Change: Closing the Gap Between Science and Action* by Daniel R. Abbasi
(www.yale.edu/environment/publications)
- ✿ 2030 Challenge www.architecture2030.org
- ✿ NYSERDA www.nyserda.org
- ✿ NYPA www.nypa.gov



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