

MEETING SUMMARY

Local Governments for Sustainability (ICLEI) North American Congress July 11-15, 2006, Chicago

Reported by: Robert Stein, AICP
Land Use Bureau Chief, Stamford Office of Operations

Introduction

The largest sources of human-generated greenhouse gas emissions come from cities, primarily via vehicular transport and energy use. Consequently, the direct impact cities can have on advancing climate protection is substantial. If effectively harnessed and supported, city-led actions can positively shift the current path of global warming.

Regionally, energy costs are rapidly increasing, which impact the pocketbooks of business, government and residents. Most recently the power grid is showing increasing strains. Over time, rising sea levels will impact our coast line as will the growing probability of extreme storm events. Both locally and nationally the way we live today—the resources we use (or don't use), the pollutants we emit (or don't emit), the actions we take (or don't take)—can have a profound effect on our city, planet and therefore a profound effect on future generations.

Since 1993, ICLEI, Local Governments for Sustainability, has been working with communities throughout the world on the Campaign, Cities for Climate Protection (CCP). Stamford is one of 159 cities in the United States participating in this initiative. There are 770 local governments worldwide. The CCP Program includes the following milestone methodology:

1. Conduct a baseline inventory of greenhouse emissions and emissions forecast
2. Adopt an emissions reduction goal
3. Develop a local action plan
4. Implement emission reduction measures and policies
5. Monitor and verify results

Stamford, with ICLEI's technical support, interns, quantification software, best practice examples and training workshops, has completed the first **three milestones** and is working on

implementation. Already Stamford has instituted a number of energy use reduction measures resulting in significant cost savings and reduction in greenhouse emissions. In June, 2005, Clean Air-Cool Planet awarded Stamford its municipal **Climate Champion Award** for the city's work in advancing municipal solutions to global warming.

The following will provide a review of the highlights of the July, ICLEI Conference, a list of suggested actions along with a brief glossary of key items. In a separate Appendix, I will list excerpts from the key presentations and material provided at the Conference.

CONFERENCE

The North American ICLEI Congress brought together Mayors, municipal council members and staff representing cities in the United States, Canada and Mexico. Among the topics discussed were: Climate Variability: An Update on the Science, and preparing for Local Impacts; Performance Based Approaches to Community Livability and Sustainability, Developing Effective Climate Action Plans; Effective Land Use and Transportation Decision Making; Urban Planning Tools for Creating a Cooler, Greener Community; Environmentally Preferable Procurement; and Working with the Business Community.

In addition there was a tour of Millennium Park with the largest green roof in the world and tour of "green" initiatives of the City of Chicago.



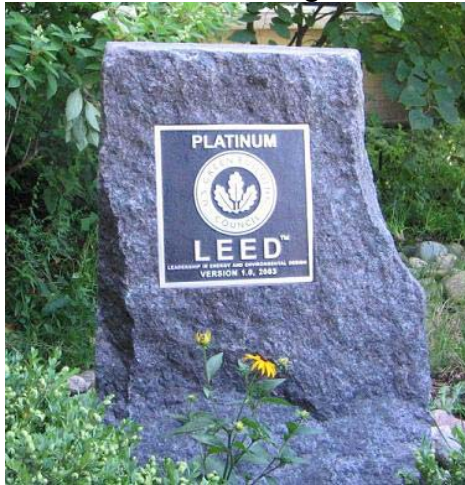
What was most impressive about the ICLEI Conference was the many municipal initiatives underway relating to global warming and green house carbon reductions. In addition to the broader goals associated with global warming, almost all of these initiatives have resulted in short term paybacks and in some cases have spurred economic development and job creation.

Chicago, the host of the Conference, has a comprehensive set of initiatives aimed at improving the health and productivity of workers, reducing operating and maintenance costs, conserving natural resources and enhancing the community. These programs include:

- Establishment of rooftop gardens including one atop City Hall, which on a hot summer day is 50 degrees cooler than on an adjoining asphalt roof.



- Construction of the Chicago Center for Green Technology in what had been an abandoned industrial building on an illegal dumpsite. The result is the first municipal certified LEED Platinum building in the country.



- Since 2002, construction of LEED rated municipal buildings including libraries, police and fire stations.
- Initiatives to construct and renovate private residences to meet green building standards. Prototypes have resulted in energy savings of from 15 to 49 percent.
- Development of the Chicago Energy Conservation Code, which establishes minimum energy conservation standards.
- Implementation of a Performance Management System to highlight implementation and ensure accountability.

Chicago has also adopted a policy that encourages and, in some cases requires, green roofs and adherence to green building standards in developments undergoing Department of Planning review. These include private, not-for-profit and public developments receiving financial or other types of public assistance from the City, as well as planned developments. For example, residential developments receiving public assistance are expected to obtain U.S. EPA ENERGY STAR certification. Big box retail projects are expected to integrate 50% green roof coverage if they achieve LEED certification or 75% green roof coverage without LEED certification.

Toronto is one of the North American leaders in developing programs to deal with global warming. Toronto has recently established a Green Roof Strategy where all municipal buildings will be evaluated for their potential as a green roof and a pilot program of financial incentives is being offered to property owners will to install a green roof. Like many cities, including Stamford, Toronto is systematically retrofitting lighting and traffic signals to reduce energy usage and CO₂ emissions. The City has a Green Fleet Transition Plan to change over the conventional fleet to hybrid and alternative fuels vehicles. Toronto is part owner of a district

energy system that provides cooling to over 130 downtown buildings and has substantially reduced both CO₂ emissions and electricity demand. Toronto also encourages local leadership and innovation by recognizing environmental excellence through the presentation of Green Toronto

Awards. The City has also approved a Toronto Green Development Standard that will incorporate elements of the LEED, Green Globes and Energy Star systems in the rating of all new municipal buildings (mandatory) and private construction (voluntary).

Portland, OR, has one of the most successful programs on global warming in the country. Since 1990:

- Per capita gasoline use has decreased by 9%.
- Household electricity use has decreased by 10%
- Per capita water use down 15%
- Amount of recycling has tripled
- Bicycle commuters have increased 500% (10,000 bikers commute every day to downtown)



Bike Commuter Station with bike/storage/repairs, café in Millennium Park, Chicago

- The City has reduced energy costs by 22% or over \$2 million annually.
- Per capita CO₂ emissions have decreased 12.5%

San Francisco has encouraged businesses to become partners with the City to reduce greenhouse emissions. Businesses taking action on climate change gain the following benefits:

- Cost savings from improved energy management
- Cost savings from operational efficiencies
- Increased revenues and new markets from providing low-carbon products and services
- Competitive positioning of businesses
- Improved shareholder relations
- Employee related benefits and increased productivity

Edmonton, Canada, has one of the premier solid waste management systems in North America. Utilizing a public-private partnership and a highly integrated waste management system, 60% of all residential wastes are diverted from landfill shipment. An integral part of this system is public education with a wide variety of outreach programs for residents and school children.

Santa Monica, CA, was one of the first U.S. cities to develop and adopt a Sustainable City Plan. The City was among the first to power all of its facilities with renewable electricity and implement an environmental purchasing and toxics reduction program. Of particular interest is the sustainable city report card and grading system that reflects the progress on the part of the entire Santa Monica community to reach the adopted Sustainable Plan goals. Areas graded

include: Resource Conservation, Environmental & Public Health, Transportation, Economic Development, and Open Space & Land Use.

Chapel Hill, NC has adopted greenhouse gas emission strategies for new developments. These include:

- Emphasis on mixed-use, transit-oriented, bicycle and pedestrian friendly development
- Implement traffic demand management practices to encourage use of transit
- Ensure that buildings are LEED certifiable
- De-emphasize auto use by establishing reduced parking requirements
- Create direct routes for walking or biking

A presentation on **Medford**, MA highlighted the formation of a Clean Energy Committee, made up of local business and community leaders to augment that city's effort to become a municipal leader in the use of clean power. The Medford Committee is active in outreach programs to reach students, residents and businesses as well as preparing feasibility studies on clean energy. The formation of citizen advisory groups was a common theme for many of the participating municipalities.

Plug-In-Partners a grassroots coalition of cities, utilities and national policy organizations explained a nationwide campaign to urge automakers to accelerate development of plug-in hybrid vehicles. Plug-in-vehicles can reach 80+ miles to the gallon with today's technology. The campaign initiated in Austin, calls for citizen petition drives and encourages governments and businesses to issue "soft" orders or expressions of interest in purchasing plug-ins (PHEVs).

Michael Northrop of the Rockefeller Brothers fund was the keynote speaker at the Conference. In his open remarks he quoted Mayor Rocky Anderson of Salt Lake City, who said, "Humankind is in the midst of a crisis. That crisis presents us with unprecedented challenges. It also presents us with tremendous opportunities." Mr. Northrop provided experiences of greenhouse gas reducers: Dupont has reduced emissions 72% since 1990; Bayer has reduced emissions 63% while production increased 22% since 1990; IBM has reduced emissions 38% while saving \$791 million. He cited similar reductions and savings in the public sector throughout the world. The myth that energy efficiency and reducing emissions will cause economic harm is no longer defensible. In conclusion, Mr. Northrop stated that cities have and can continue to take the lead in climate control.

RECOMMENDED ACTIONS

Ongoing Commitment: There are several steps that Stamford should take to institutionalize the City's commitment to climate protection:

- Stamford should formally join ICLEI. Up until now, Stamford has enjoyed the support of ICLEI—technical, networking, conferences. To continue these important benefits, Stamford should become an ICLEI member.
- Stamford should complete Tasks 4 and 5 of the *Local Action Plan* (milestone 3 of the CCP). Task 4 is to ensure the effective implementation of the measures defined in the Local Action Plan (key areas include administration and staffing, financing and budgeting, developing a timetable, and public involvement). Task 5 is the development of procedures for monitoring the Plan's implementation and measuring results.
- A municipal climate/energy task force should be created to oversee implementation and monitoring of the Local Action Plan. This should be made up of key City and Board of Education staff.

Green High Performance Buildings: The Board of Representatives should adopt an ordinance mandating that all new construction and substantial rehabilitation of municipal buildings achieve LEED Silver ratings or the equivalent. This will insure that high standards for energy efficiency, water conservation, indoor air quality and use of materials are met.

Building Retrofit: Continue municipal retrofit program to reduce greenhouse gas emissions and energy costs. Encourage the private sector to do likewise following the City's model. Note, many of the large commercial and residential buildings are over twenty-five years old with inefficient heating/cooling/lighting systems. SACIA's Fairfield County Energy Conservation Pilot should be expanded to include the energy benchmarking and retrofitting of all major commercial buildings that fall below EPA's EnergyStar standards.

Master Plan: The Planning Board should adopt a new section on climate control and energy efficiency. Strategies should include: encouraging energy efficiency in new construction and building retrofits, including use of LEED and EnergyStar standards, green roofs and distributive and co-generation of energy.

Subdivision Regulations: The Planning Board should up-date Section 4.3--Energy Conservation. Included should be minimum standards for energy efficiency.

Smart Growth Development: The City should continue the "Smart Growth" strategies, enunciated in the Master Plan, that seek to direct growth to existing centers and transportation nodes where vehicle miles traveled and traffic impacts can be reduced.

Green infrastructure: Stamford should continue to add permanent open space, parks, and greenbelts. The City should also encourage the planting of trees, enhanced streetscapes and green roofs.

Green Energy: The City should expand municipal purchase of "green power" or low-impact renewal energy. Other users of energy should be encouraged to do likewise. The Connecticut Clean Energy Fund provides financial subsidies to commercial property owners and homeowners for the installation of a renewal energy supply.

Bike/Pedestrian-friendly infrastructure: The City should give priority to the continued expansion and development of linear trails. Develop a master plan for bike lanes/trails to enhance recreational and commuting options.

Implement an Anti-Idling Program: The City should encourage an anti-idling campaign to reduce the levels of unnecessary vehicle idling in the community as a means to reduce fuel consumption and greenhouse gas emissions. An anti-idling program for municipal vehicles and school buses should be initiated.

Green Fleets Program: Where appropriate utilize biodiesel for municipal vehicles. Alternate fuels will result in emission reductions and less reliance on oil imports. Purchase most cost-effective and lowest emission vehicles feasible. Stamford should also consider joining the “Plug-in Partners National Initiative.” This includes placing a “soft” fleet order (or expression of interest in purchasing plug-ins) as a way of encouraging auto makers to produce these energy efficient vehicles.

Green Procurement: City should use EnergyStar standards in procurement specifications. Where feasible recycled products (e.g. paper) should be purchased. Limit waste in day-to-day operations (e.g. two-sided copying).

WPCA Sludge Drying Project: Construction of this municipal project, which is in design, will convert waste to energy and reduce both the cost and amount of waste for disposal to distant land fill sites.

Recycling: The City should expand recycling of residential, commercial and yard waste. This initiative should include a renewed public education campaign on the benefits of recycling and composting.

Community Education Programs: Public and outreach programs are an integral part of any *Campaign for Climate Protection*. Much of Stamford’s greenhouse gas emissions come from everyday activities, so solutions depend on the participation of all who live and work in Stamford. A citizen’s advisory committee should be established to provide input from the community perspective and suggest new measures to reduce emissions. The City should encourage community leadership in the reduction of emissions through the presentation of annual Climate Change awards.

Business Partnership: Employers are in a unique position to influence emissions reductions—in their operations, with their workers, customers and suppliers. The City should take the lead in creating a Stamford Climate Partnership among large employers to help achieve community-wide goals.

Glossary of Terms

Biodiesel: A domestic renewal fuel for diesel engines derived from natural oils.

Climate Change (global warming): Changes in climate normally caused by natural influences but now heavily influenced by human activities, especially the emission of greenhouse gases that retain heat radiated from the earth.

Co-generation: The simultaneous generation and use of both electric power and heat.

CPP: Cities for Climate Protection Campaign, sponsored by ICLEI, which as a participant, (Stamford along with over 500 cities) the local government has pledged to reduce greenhouse gas emissions by completing five Milestones: conducting a baseline emissions inventory and forecast; setting emissions reduction target; developing an action plan to meet the target; implementing actions in the plan; and monitoring emissions reduction progress.

Distributive Energy Generation: Refers to the generation of energy near the location where that energy is used. Distributive generation includes energy generated by photovoltaic cells, wind turbines, natural gas generators and fuel cells.

ENERGY STAR: A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy with the goal of saving money and protecting the environment through energy efficient products and practices. It identifies new homes and more than 40 types of products that are energy efficient. In 2005, ENERGY STAR rated products and programs resulted in savings of \$12 billion in utility bills.

Greenhouse Gas: A gas that absorbs heat from the earth radiation and contributes to the global climate change when present in the atmosphere. The principal greenhouse gas is carbon dioxide and other greenhouse gases include water vapor, methane, nitrous oxide, halocarbons and ozone. Between 1990 and 2004 Carbon Dioxide emissions increased by 19.8% in the U. S, (EPA)

Green Procurement: Purchasing policies that consider environmental impacts of the product or service being purchased, in addition to price, reliability and other conventional criteria.

Green Roofs: A green roof system is an extension of the existing roof which involves a high quality water proofing and root repellent system, a drainage system, filter cloth, a lightweight growing medium and plants. *Intensive* green roofs require a minimum of one foot of growing medium. Trees and shrubs are usually planted adding 80-150 pounds per square foot of load to the building. *Extensive* green roofs require only 1-5 inches of growing medium, adding 12-50 pounds of load per square foot. Grasses and low lying shrubs are generally planted. Green roofs can provide a wide range of public and private benefits including reductions in cooling and heating costs and the effects of heat islands.

Heat Island: The term "heat island" refers to urban air and surface temperatures that are higher than nearby rural areas. Many U.S. cities and suburbs have air temperatures up to 10°F (5.6°C) warmer than the surrounding natural land cover. Heat islands form as cities replace natural land cover with pavement, buildings and other infrastructure. Increased urban heat can affect public health, the environment and the amount of energy used for summertime cooling.

ICLEI (Local Governments for Sustainability): A non-profit organization working with over 500 municipal governments throughout the world in researching, and quantifying greenhouse gas emissions and promoting greenhouse gas reductions. ICLEI provides technical and policy assistance as well as an extensive peer network to move local governments forward in their climate protection goals.

LEED: Leadership in Energy and Environmental Design

The LEED Green Building Rating System® is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings.

LEED was created to:

- * define "green building" by establishing a common standard of measurement
- * promote integrated, whole-building design practices
- * recognize environmental leadership in the building industry
- * stimulate green competition
- * raise consumer awareness of green building benefits
- * transform the building market

LEED provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources.

Local Action Plan: Milestone 3 of the Cities for Climate Control Campaign (CCP), this is the Plan that describes the actions a local government will take to reduce its greenhouse gas emissions.

Plug-In Hybrid Electric Vehicles (PHEVs): PHEVs use the same technology as current hybrids, but have a more powerful battery that can be recharged in a standard outlet. With a range of 20 to 60 miles on the battery charge alone, the result is an 80+ mile-per-gallon vehicle.