

# Taking Action in Connecticut to Address Climate Change: *Progress Made in 2005*



Connecticut Climate Change

[www.ctclimatechange.com](http://www.ctclimatechange.com)

February 2006





**Dear Connecticut Legislators and Citizens:**

Connecticut has made major strides in addressing climate change during 2005, and we continue to be a leader and mentor to other states and nations. We owe thanks to many of you—to the General Assembly for strong legislation, to our municipal and business leaders for translating a global challenge into local action, to community organizations for broad outreach, and to many individuals for the actions you take each day. This report, submitted in accordance with PA 04-252, highlights the progress we have made together over the past year.

The following 2005 accomplishments will result in the most significant greenhouse gas emissions reductions and have the broadest impact:

- Connecticut, in collaboration with six other states, agreed to the first greenhouse gas cap-and-trade program in the U.S. The program will stabilize and then reduce by 10 percent carbon dioxide emissions from the region's power plants.
- Connecticut committed \$1 billion for an ambitious mass transit program that will improve the quality and quantity of service for commuters.
- Connecticut adopted regulations to cut carbon dioxide emissions from cars and light trucks by 30 percent, becoming one of only 10 states to do so.
- Connecticut created a permanent fund to conserve farmland and support the purchase of Connecticut-grown foods.
- Connecticut electric consumers were offered the option to buy clean, renewable energy. More than 6,000 customers, 16 cities and towns, and one state agency have already signed on.
- Connecticut passed the Energy Independence Act, putting the state at the forefront of developing many new energy strategies, including more energy efficient on-site electricity generation (combined heat and power).
- Connecticut convened the first-ever summit on climate change for the insurance industry in the U.S. Seven of the top 10 insurers were represented at this event, which highlighted both the risks of global warming and the business opportunities.

One year ago, the Governor's Steering Committee on Climate Change (GSC) submitted to the Legislature the Connecticut Climate Change Action Plan 2005. All four legislative committees endorsed the recommendations in this plan, and as a result, the GSC has spent the year, along with many stakeholders, working to reduce greenhouse gas emissions in the state. Climate change however, is a long-term problem, and while we are taking action now, we will continue our efforts for many years to come, and we invite everyone in Connecticut to join us.

Sincerely,

**Gina McCarthy**  
Commissioner  
Dept. of Environmental Protection

**Timothy Bowles**  
Chairman  
CT Clean Energy Fund

**Anne C. George**  
Commissioner  
Dept. of Public Utility Control

**Stephen Korta**  
Commissioner  
Dept. of Transportation

**John Mengacci**  
Undersecretary  
Office of Policy & Management

**Linda Yelmin**  
Commissioner  
Dept. of Administrative Services



# What's Inside

<b>INTRODUCTION</b>	<b>3</b>
<b>ACTIONS TAKEN IN 2005</b>	<b>5</b>
<b>SECTOR PROGRESS:</b>	<b>6</b>
<b>Transportation and Land Use Sector</b>	<b>6</b>
<b>Residential, Commercial &amp; Industrial Sector</b>	<b>10</b>
<b>Electricity Sector</b>	<b>15</b>
<b>Agriculture, Forestry and Waste Sector</b>	<b>19</b>
<b>Education Sector</b>	<b>23</b>
<b>LEADING BY EXAMPLE:</b>	<b>26</b>
<b>State Government Cutting Greenhouse Gas Emissions</b>	
<b>NEXT STEPS:</b>	<b>28</b>
<b>A Call to Action</b>	

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For a full description of implementation progress on each of the 55 actions and additional success stories, visit [www.ctclimatechange.com](http://www.ctclimatechange.com)

## ACKNOWLEDGEMENTS

We are grateful to the following agencies for their support of Connecticut's actions on climate change:



**The Emily Hall Tremaine Foundation** for supporting programs in Connecticut that focus on developing and promoting climate change solutions and for helping build a network of state level support and models for action on climate change.

## THE CLIMATE GROUP

**The Climate Group**, a non-profit organization dedicated to advancing business and government leadership and competitiveness towards a low carbon economy, of which Connecticut was invited to be an active and founding member.



**The U.S. EPA, Clean Energy-Environment State Partnership Program** for providing technical assistance towards the implementation of the Connecticut Climate Change Action Plan 2005.



**2005 Legislation  
Supporting the Goals  
of the Connecticut  
Climate Change  
Action Plan**

# Introduction

“ There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities, ”

**Public Act 05-01:**  
An Act Concerning (AAC)  
Energy Independence

**Public Act 05-205:**  
AAC Plans Of Conservation  
& Development

**Public Act 05-227:**  
AAC Clean Air Strategies

**Public Act 05-228:**  
AAC Land Preservation,  
Affordable Housing  
& Historic Preservation

**Public Act 05-04:**  
AAC Authorization of  
Special Tax Obligation  
Bonds for Certain  
Transportation Purposes

**Special Act 05-06:**  
AAC A Connecticut Clean  
Car Incentive Program

**Special Act 05-07:**  
AAC Establishing a  
Connecticut Clean  
Diesel Program

**affirmed Dr. R. K. Pachauri, Chairman of the Intergovernmental Panel on Climate Change (IPCC), in his recent address to the 11th Conference of Parties.** Driven by accumulated greenhouse gases—such as carbon dioxide (CO<sub>2</sub>)—which result from the burning of fossil fuels, climate change will impact our environment, our economy and our way of life.

Connecticut is a national leader in reducing the greenhouse gas emissions that contribute to climate change. In February 2005, after a rigorous process that included stakeholders from all sectors, Connecticut adopted the Climate Change Action Plan 2005. This plan contains 55 practical recommendations for drastically reducing the state’s emissions of greenhouse gases.

In just the few short months since the plan was adopted, Connecticut has taken numerous, bold steps toward this critical goal. The Connecticut Legislature made history by enacting several laws that reduce pollutants, promote clean energy and protect public health.

State agencies took the lead by purchasing clean energy and opting for fuel-efficient vehicles. Previous legislation, PA 03-135, directed the Connecticut Department of Public Utility Control to take administrative action that has resulted in allowing electric customers to purchase clean energy via their local utility company, through the CTCleanEnergyOptions program. More than 6,000 residential and commercial ratepayers have enrolled.

Municipalities statewide joined the “20% by 2010 campaign” led by SmartPower, committing to purchasing 20 percent of their total energy from clean energy sources by the end of this decade. Several towns have gone even further and qualified as Connecticut Clean Energy Communities through a new program created by the Connecticut Clean Energy Fund. These towns have committed to 20% by 2010 and to getting at least 100 of their residences and businesses to purchase clean energy, making the towns eligible for a free solar energy system. Some cities and towns have also prepared greenhouse gas inventories, set reduction goals, undertaken energy efficiency and conservation measures, designed new school buildings to meet high energy and environmental standards, and made changes to fleets to include hybrid cars and alternative fuels.

Colleges and universities launched groundbreaking initiatives to cut emissions through clean energy purchases and the design of “green” buildings. Businesses responded decisively, as well. In energy-constrained southwestern Connecticut, members of SACIA-The Business Council of Fairfield County have analyzed more than 8 million square feet of office space to identify the most significant opportunities to improve energy efficiency and reduce energy costs. Connecticut companies are also demonstrating leadership by developing the clean energy technologies the world needs to curb pollution while meeting energy demand.

The Governor’s Steering Committee on Climate Change spearheaded development of the state’s Climate Change Action Plan 2005 and continues to lead the charge. To highlight the progress all sectors are making, the Steering Committee will soon launch a Climate Change Leadership Award Program. This program will increase awareness of actions taken in Connecticut to address climate change and recognize exemplary actions that reduce greenhouse gases.

The Steering Committee applauds all those who have contributed to Connecticut’s remarkable progress in addressing climate change: the Emily Hall Tremaine Foundation, which provided financial support, and the many state agencies, non-profit organizations and businesses that collaborated in the process.

Connecticut has made dramatic progress in transforming both attitudes and action on energy issues and climate change. Our accomplishments have been so notable that other states now look to Connecticut as a model. But despite our accomplishments, much remains to be done. The challenge is great and calls for long-term commitment. We must move beyond slowing the growth of greenhouse gas emissions to making deep and significant cuts in emissions. The work ahead requires strong leadership and resolve. Yet it brings abundant opportunities – for innovation, new technologies, new products, and new ideas. The Governor’s Steering Committee looks forward to working with people and organizations throughout Connecticut to achieve even greater success in creating a cleaner, healthier environment and a more stable climate for generations to come. ■

## *Top Accomplishments of 2005*

- **Regional agreement on the first greenhouse gas cap-and-trade program in the U.S. that will stabilize and then reduce by 10 percent carbon dioxide emissions from the region’s power plants.**
- **\$1 billion allocation for an ambitious mass transit program that will improve the quality and quantity of service for commuters.**
- **Adoption of regulations to cut carbon dioxide emissions from cars and light trucks by 30 percent.**
- **Creation of a permanent fund to conserve farmland and support the purchase of Connecticut-grown foods.**
- **Launch of the CTCleanEnergy Options program, resulting in purchase of clean energy by more than 6,000 ratepayers.**
- **Passage of the Energy Independence Act, putting the state at the forefront of developing many new energy strategies, including more energy efficient on-site electricity generation (combined heat and power).**
- **First-ever summit on climate change convened for the insurance industry in the U.S., with seven of the top 10 insurers represented.**

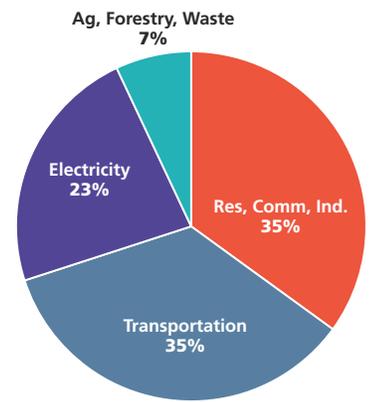


# Actions Taken in 2005:

*The Connecticut Climate Change Action Plan 2005, completed in February, recommends 55 actions to reduce greenhouse gas emissions (GHGs) in the state.*

State law PA 04-252 strengthens Connecticut’s commitment by requiring the state to meet the GHG targets set by the New England Governors/Eastern Canadian Premiers (NEG/ECP). These include reducing emissions to 1990 levels by 2010 and to 10 percent below 1990 levels by 2020. The graph depicts the current level of GHG emissions in Connecticut, reductions necessary to meet the NEG/ECP targets, and the projected reductions from actions recommended in the *Connecticut Climate Change Action Plan 2005*. Based on the analysis done for the plan, Connecticut would meet and exceed the NEG/ECP targets if all 55 actions were successfully implemented.

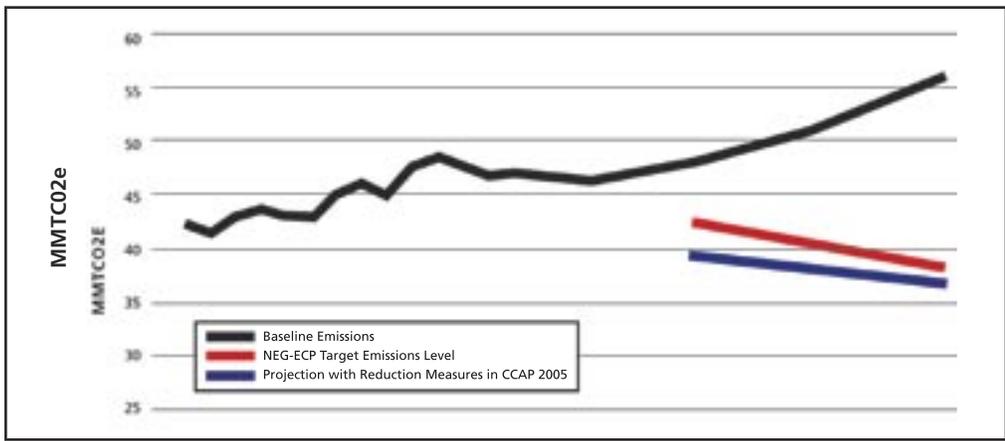
**GHG Emissions by Sector (2000)**



## SUMMARY OF PROJECTED CONNECTICUT GHG REDUCTIONS

	MMTCO <sub>2</sub> e <sup>1</sup>	
	2010	2020
<b>Future Baseline</b> (projections from fuel use, CT Climate Change Action Plan 2005)	48.14	56.15
<b>NEG/ECP Targets</b> (1990 levels in 2010, 10% below in 2020)	42.40	38.16
<b>Reductions Needed to Meet NEG/ECP Targets</b>	5.74	17.99
<b>2005 CCCAP Total Projected Reductions<sup>2</sup></b>	<b>8.66</b>	<b>19.30</b>
<b>Projected Reductions By Sector</b> (CT Climate Change Action Plan 2005)		
Transportation	0.35	3.84
Residential, Commercial, Industrial	4.02	7.30
Agriculture, Forestry, Waste	1.22	1.28
Electricity	3.07	6.89

<sup>1</sup> MMTCO<sub>2</sub>e = million metric tons of carbon dioxide equivalent    <sup>2</sup> Totals have been rounded



**SECTOR PROGRESS** *The 55 recommended actions in the Connecticut Climate Change Action Plan 2005 are grouped into five sectors: transportation and land use; residential, commercial, and industrial; electricity; agriculture, forestry, and waste; and education. Each sector made significant implementation progress during 2005 as summarized below and highlighted in the accompanying “success stories.” For a full description of implementation progress on each of the 55 actions and additional success stories, visit [www.ctclimatechange.com](http://www.ctclimatechange.com).*



## Transportation and Land Use Sector

**Transportation emissions constitute more than one-third of the total greenhouse gas emissions in Connecticut, the largest contribution of any sector.**

**With such a large contribution, this sector plays a critical role in attaining the statewide reduction goals.** Based on actions in the *Connecticut Climate Change Action Plan 2005*, reductions of greenhouse gas emissions from the transportation sector are estimated to be 0.35 million metric tons of CO<sub>2</sub> equivalent (MMTCO<sub>2</sub>e) by 2010, and 3.84 MMTCO<sub>2</sub>e by 2020. Nine recommended actions were identified in the plan and over the past year, Connecticut has made substantial progress on many of them and completed some.

**FUTURE VEHICLE EMISSIONS** – Progress was made on reducing future emissions from vehicles. Connecticut adopted the California Low Emission Vehicle standards program (LEV II), and regulations are in effect requiring new vehicles sold in the state beginning in 2008 to meet strict emissions standards (Recommended Action #1).

In December 2005, regulations were adopted to require cars and light trucks to meet tailpipe GHG standards starting in model year 2009. When fully implemented in 2016, these standards will lower GHG emissions by 30 percent (Recommended Action #4).

Legislation from the 2005 session required the DEP, in consultation with a variety of stakeholders, to develop a plan for a clean car incentive program, commonly referred to as a feebate system. The program could impose fees for high CO<sub>2</sub>-emitting vehicles at the point of purchase and provide rebates for the purchase of low-emission vehicles. The report will be submitted to the Legislature in early 2006 (Recommended Action #2). Tax incentives for hybrid vehicles were adopted during 2004, but are currently scheduled to sunset by July 1, 2008.

**DIESEL EMISSIONS** – Legislation enacted in 2005 (Special Act 05-07), required the DEP to develop a strategy to reduce diesel emissions from transit buses, school buses and construction equipment servicing certain state construction projects (Recommended Action #9). While researching information for this strategy, diesel emissions from other sources were also evaluated so that a holistic approach could be

### Transportation Actions in the Connecticut Climate Change Action Plan 2005:

1. California LEV II standards
2. GHG feebate program
3. Fleet vehicle incentives
4. Tailpipe GHG standards
5. Public education initiative for vehicles
6. Hydrogen infrastructure research
7. Transit, smart growth, VMT reductions
8. Multistate intermodal freight initiative
9. Clean diesel and black carbon

considered in the recommended actions. Other significant sources include heating oil and wood burning. The plan will be submitted to the General Assembly in early 2006.

The DEP has worked with school districts to use ultra-low sulfur diesel fuel and install retrofits to reduce particulate emissions from school buses. A clean school bus project with Norwich was completed in 2002. The New Haven school bus project will be completed in February 2006 and projects in Hartford and Bridgeport have funding and are being developed.

**FLEET CHANGES** – State government has taken steps to reduce emissions from its fleet (Recommended Action #3). The Connecticut Department of Administrative Services has purchased 125 new gasoline-electric hybrid vehicles for state employee use. This action will reduce carbon dioxide emissions by 667 tons annually. The remainder of the light duty vehicles in the fleet will be made up of alternative fuel vehicles capable of running on gasoline or E85 (ethanol) (Recommended Action #27).

**BUNDLED ACTIONS** – One of the more multifaceted recommendations in the plan is Recommended Action 7a, 7b, and 7c, which bundles several transportation strategies, including doubling transit ridership by 2020, establishing a program to promote smart growth and reducing vehicle miles traveled. The Central Connecticut Bicycle Alliance, the Capitol Region Council of Governments, the DEP, the Connecticut Department of Public Health, and the Connecticut Department of Transportation have been working together on an effort to promote biking to work. The Bike to Work program encourages workers in the greater Hartford area to leave their cars at home one day a month and commute by bicycle. Monthly breakfast events were held from April to October. In 2005, 340 individuals participated, an increase of more than 15 percent from 2004. Collectively, they biked 340,000 miles and prevented the emission of approximately 171,292 pounds of CO<sub>2</sub>.

Public Act 05-205 also supports Recommended Action # 7. This law makes many changes to the requirements and processes undertaken when preparing state, regional and local land-use plans. The state plan of conservation and development must now identify areas suitable for mixed-use development and land reuse that are compact, transit-accessible and pedestrian-oriented. The state plan must also target priority funding areas. Regional and local plans of conservation and development must identify inconsistencies with the state plan and must address six growth management principles found in the draft state plan of conservation and development. The legislation charges the Office of Policy and Management with designating “priority funding areas” across the state and, in certain instances, limits state funding to projects in these areas.

**MASS TRANSIT** – There were several accomplishments in transit measures this past year. They include completion of the New Haven-Hartford-Springfield Commuter Rail Implementation Study; continuing efforts on the design and implementation of the New Britain-Hartford Busway; the conclusion of the Hartford East Bus Rapid Transit Study; and the issuing of a request for proposal to perform design services for a new rail car maintenance facility in New Haven (see [www.ct.gov/dotinfo](http://www.ct.gov/dotinfo) to see the studies). The New Haven-Hartford-Springfield Commuter Rail Implementation Study recommends a rail service that would provide service bi-directionally, Monday through Friday. Eighteen miles of extended double track sections would be added, along with three additional stations. This service would supplement existing Amtrak service. Some of the next steps needed include developing a funding plan, completing the environmental process, preparing a preliminary design, executing operating agreements, preparing final design, acquiring property, and constructing new facilities. All of these planned projects would have a positive impact on reducing greenhouse gas emissions.



## Cleaner Cars Are on a Roll

Support for hybrid cars is strong and growing across Connecticut. Because hybrids typically get more than 40 miles to a gallon of gasoline, owners save money at the pump while they reduce greenhouse gas emissions. But now, thanks to new state legislation, residents who purchase one of these gas-slinging models enjoy another benefit: Any car purchased between Oct. 1, 2004, and Oct. 1, 2008, will be exempt from state sales and use taxes. For most people, that will mean more than \$1,200 in savings.

State government is putting its own money into hybrids, too, contracting to purchase 575 alternative fuel and hybrid vehicles for its Fleet Operations. Some of these new vehicles will get up to 60 miles to the gallon. Connecticut cities, schools and nonprofit organizations will benefit, too, because they can piggy-back on the state contract to get better prices on cars that are easier on the environment and more fuel efficient. Models to be purchased include Honda Civic, Toyota Prius, Chevy Silverado, Ford Escape and GMC Sierra. Final contracts are still being negotiated for the alternative fuel vehicles.

In New Haven, the mayor traded in his city-owned Lincoln Navigator for a Toyota Prius, and the city plans to replace its carpool fleet with hybrids. New Haven also has a very clever way of rewarding drivers of hybrid cars: Once they've obtained a special decal, they can park for free at metered spaces in downtown New Haven.

The \$1 billion transportation bill, Public Act 05-04, which passed in the June special session, provides needed funding for improvements to Connecticut's mass transit system. It provides for the purchase of self-propelled rail cars for the New Haven Rail Line and 25 transit buses. Also in the package are more than \$485 million in bonding for rail-related improvements, \$344.5 million in bonding for other transportation improvements, and \$136.9 million in bonding for general transportation purposes in fiscal year 2006.

**HIGHWAYS** – The consideration of a value pricing concept will be incorporated into both the I-84 Corridor Waterbury-Danbury Environmental Impact Statement and the I-84/Route 8 Interchange Study. This concept would incorporate fees based upon the number of occupants in a vehicle and time of day (i.e., peak hours of travel versus off-peak hours), which would encourage behavioral changes, for example, increasing the number of high-occupancy versus single-occupancy vehicles, and result in a reduction of vehicle miles traveled.

**PORT UTILIZATION** – The Bridgeport Port Authority has begun an initiative to transport containers by barge between the Ports of New Jersey and New York instead of via truck freight along the expressway. When implemented, this initiative will help alleviate highway congestion along the Interstate 95 Corridor and, in turn, reduce greenhouse gases. This activity is linked with Recommended Action #8, a multi-state intermodal freight initiative.

The successful implementation of these strategies will result in short, medium, and long-term reductions in greenhouse gas emissions. ■

## GROWTH HAPPENS – How Can We Make It Livable?

*Across Connecticut, communities are making decisions about appropriate land use development and redevelopment and one issue that should be considered is the link between land use and its affect on greenhouse gas emissions.*

Low density development, located far from transit lines, in Connecticut's suburbs, commonly known as sprawl, creates an increase in vehicle fuel consumption and vehicle miles traveled (VMTs). Rather, encouraging concentrated development – what's often called smart growth or traditional neighborhood design, can reduce VMTs and is an important component of a greenhouse gas reduction strategy.

The small, rural town of Suffield and Hartford's Parkville neighborhood have a lot in common. Both participated in "livable community" initiatives. These initiatives are designed to help communities determine how they want to grow and how to make policy choices consistent with their vision. "Smart growth" focuses on planning that includes transit-oriented development, urban infill design through vacant lot reclamation, environmentally sensitive mixed-use zoning, en-

ergy conservation, and green building design.

But how did Parkville and Suffield begin the process of planning for smart growth? Both communities participated in the Capitol Region Council of Governments (CRCOG) Picture It Better Together (PIBT) project, a community visioning process. The goal of PIBT is to listen to the public's perspective on what makes a community desirable and to provide information on development, conservation, and preservation practices to achieve what the public wants.

The Town of Suffield has been working on smart growth with CRCOG since 2000 and the visioning process has helped bring the community together to combat sprawl. Suffield has been successful in re-writing its zoning regulations and adopting these changes. These zoning changes allow for a village district, exclusive agricultural zoning, and shared parking in village centers.

CRCOG and the CT DEP have also been working with Hartford neighborhood organizations on smart growth. The project has trained over 100 Greater Hartford residents in smart growth principles, and how to read a site plan, understand zoning regulations, and design parking lots to reduce run-

off. CRCOG provided technical assistance to Parkville on incorporating smart growth-related studies done through the PIBT project into a neighborhood strategic plan.

Part of the Parkville plan focused on a quarter mile area around New Park Avenue that was once a thriving industrial district. New Park Avenue is a fast moving thoroughfare with 3 lanes in both directions, which cuts through the neighborhood. CCROG worked with the residents on a plan to put the high-speed road on a "diet" by reducing the number of traffic lanes and allowing for bicycle lanes or on-street parking, which will result in calmer traffic through the area.

### For resources on how to make your community livable, visit:

- CRCOG, Picture It Better Together Project [www.crcog.org/communitydev.htm](http://www.crcog.org/communitydev.htm)
- Center Edge Coalition, Metro Patterns Report [www.oua-adh.org/Connecticut\\_Jan29.pdf](http://www.oua-adh.org/Connecticut_Jan29.pdf)

### More Success Stories at: [www.ctclimatechange.com](http://www.ctclimatechange.com)

- A Different Kind of Gas Station
- DSS Innovations Save Time, Money and the Environment



Passengers enjoy a clean ride on a Connecticut Transit hybrid gas-electric bus.

## Connecticut's Best Workplaces for Commuters

- 2Plus Inc.**, Bloomfield
- Applied Geographics**, Manchester
- Bayer Healthcare & Pharmaceuticals**, West Haven
- Gartner Group**, Stamford
- Greater Bridgeport Transit Authority**, Bridgeport
- Hospital of Saint Raphael**, New Haven
- Housatonic Area Regional Transit**, Danbury
- Hyperion Solutions**, Stamford
- JetBlue Airways**, Darien
- Lecoq Cuisine**, Bridgeport
- MetroPool, Inc.**, Stamford
- Nestle Waters North America**, Greenwich
- Norwalk Hospital**, Norwalk
- PanAmSat Corporation**, Wilton
- People's Bank**, Bridgeport
- Pitney Bowes World Headquarters**, Stamford
- Preferred Tool & Die**, Shelton
- Proton Energy Systems**, Wallingford
- Purdue Pharma L.P.**, Stamford
- Reckson Associates**, Stamford
- The Rideshare Company**, Windsor
- Rideworks of Greater New Haven**, New Haven
- SACIA, The Business Council**, Stamford
- South Western Regional Planning Agency**, Stamford
- Time Warner Cable**, Stamford
- Yale University**, New Haven

## Connecticut Companies Clearing the Air

Traffic congestion is at an all time high in Connecticut, and many companies, especially those in Fairfield County, are realizing that it can put a strain on their employees and even harm their businesses. In an effort to give their employees an alternative to driving alone in their cars, about 25 Connecticut companies have taken steps that have earned them places among the Best Workplaces for Commuters (BWC).

BWC recognizes leading, innovative employers committed to improving their communities by reducing traffic congestion and

air pollution and improving worker health and quality of life. These progressive companies realize that by addressing commuter issues they also address larger issues, such as employee work/life balance and job satisfaction. In doing so, they ultimately enhance employee performance, recruitment and retention. Employers benefit through tax savings, reduced need for parking facilities, and meeting government trip reduction goals. Here are examples of what Connecticut companies are offering commuters:

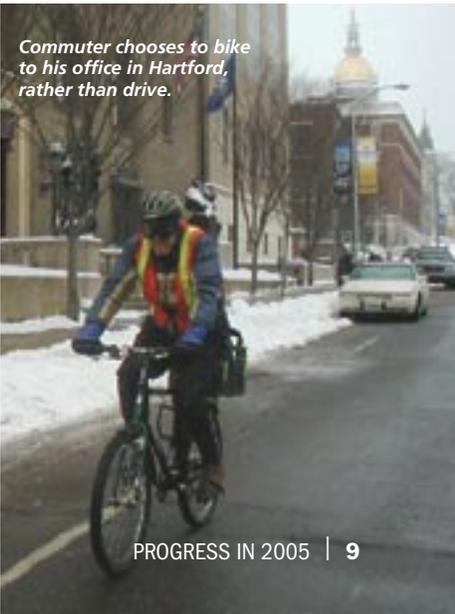
**BAYER HEALTHCARE & PHARMACEUTICALS** in West Haven provides a shuttle for employees using commuter rail. Bayer's 30 employees who commute by train are picked up and dropped off at the train station in New Haven, which is six miles away. At lunch and during the day, Bayer's shuttle helps employees run errands to nearby shops and offices.

**YALE UNIVERSITY** in New Haven has an extensive shuttle system, and an innovative home-buyer program that gives university staff \$25,000 toward the down payment on a home within walking distance of the Yale campus. More than 500 people have taken advantage of this program.

**PEOPLE'S BANK** in Bridgeport has the People's Commuter Club that rewards ride-sharers with cash incentives. Drivers receive \$1.50 each day that they car or vanpool, and passengers receive \$1 per day. People's also provides employees \$65 a month in transit subsidy.

To qualify as a Best Workplace for Commuters, employers must provide specific commuter benefits such as a monthly transit/vanpool subsidy, cash in lieu of free parking, or a telework program, carpool incentives, lockers/showers for bikers or walkers, incentives for living near work and access to an Emergency/Guaranteed Ride Home program

For more information about Best Workplaces for Commuters, visit [www.bwc.gov](http://www.bwc.gov)



Commuter chooses to bike to his office in Hartford, rather than drive.



## *Residential, Commercial, and Industrial Sector*

**Energy Information Administration data indicates that residential, commercial and industrial consumers in Connecticut account for approximately 70 percent of the state's end-use energy consumption.**

**Reductions from this sector alone are projected to be 4.02 MMTCO<sub>2</sub>e by 2010 and 7.30 MMTCO<sub>2</sub>e by 2020, the largest amount of any sector.** Energy efficiency is therefore an important factor in reducing greenhouse gas emissions in Connecticut. To this end, the *Connecticut Climate Change Action Plan 2005* identified 25 specific actions for this sector.

Several of the recommended actions within the Residential, Commercial, and Industrial sector that have been or are in the process of being implemented will result in considerable reductions in greenhouse gas emissions. Many of the activities within this sector involve cooperation and coordination among several state agencies.

**ENERGY-CONSUMING PRODUCTS** – Energy-using products and appliances are increasing electrical demand as new technologies come to market and market penetration increases. To address this, the Connecticut General Assembly in 2004 enacted efficiency standards for a group of consumer products. The Department of Public Utility Control (DPUC) has moved forward with establishing regulations for the targeted products. The regulations are awaiting review and approval by the Regulations Review Committee. The Connecticut Office of Policy and Management (OPM) is working with California and other states to address certification strategies for a variety of approved products (Recommended Action #10).

**GREEN BUILDINGS** – There has been significant progress on increasing the energy efficiency of buildings in Connecticut. The state residential and commercial building energy codes were upgraded effective September 2004 (Recommended Action #14). Several training sessions have taken place to educate building professionals on the changes. Steven Winter Associates delivered a series of educational workshops for architects on energy efficient construction over the past year through a grant from the U.S. Department of Energy (Recommended Actions #19, 20). There are now 17 buildings in the state, including schools, college dormitories, museums, and corporate buildings, that are registered with Leadership in Energy and Environmental Design (LEED), a rating system for designing and constructing “green” buildings (Recommended Actions #19, 20). Legislation was proposed in 2005 that would have required state-financed school construction projects to meet or exceed the LEED silver rating or an equivalent standard, however that bill, SB 923, was not passed. New ideas are being explored for the coming year and a report based on a study by the Connecticut Green Building Council and the



Institute for Sustainable Energy (ISE) that will be distributed to all school districts in early 2006 indicates that the 30 percent to 40 percent energy savings, minimal cost premium, and environmental benefits far outweigh any perceived barriers. The report will provide technical support for legislation that is expected to be proposed in 2006.

**STATE BUILDINGS** – Energy efficiency in state buildings is one of the governor’s priorities; she has directed all state agencies to reduce energy consumption by 10 percent in 2006. OPM has also launched an Energy Roundtable for state facilities personnel. The Roundtable is designed to address three areas: educating state personnel on energy efficiency issues, fostering peer exchange among different facilities and agencies, and facilitating energy projects at state agencies. In 2006, OPM will initiate a public information campaign focused on energy-saving actions for state employees. OPM has also contracted with ISE to benchmark 60 of these buildings (Recommended Action #24). Plans call for continuing this effort to help agencies better target efficiency.

**MUNICIPAL BUILDINGS** – Municipal buildings are also receiving significant attention. ISE has benchmarked 120 schools and a handful of municipal buildings in 13 Connecticut communities (Recommended Action #24). Rebuild America, a program developed by the U.S. Department of Energy and operated by OPM, is continuing to focus on the municipal sector to encourage energy projects. Thirty municipalities are Rebuild America partners.

In most municipalities, schools make up 75 percent to 80 percent of the total square footage of municipal buildings. For this reason, particular attention is being directed to high-performance schools. The Connecticut Green Building Council held a series of stakeholder meetings in a broad effort focused at facilitating the construction of high-performance schools and other buildings (Recommended Action #19).

**COLLEGE AND UNIVERSITY FACILITIES** – College campuses have completed several actions to show leadership and continued commitment. The DEP and ISE conducted a statewide workshop for the Green Campus Initiative that included a 12-step process for creating energy efficient and sustainable college campuses (Recommended Action #23). Representatives from 20 of the state’s college campuses attended. ISE and university administrators initiated energy and emissions inventories and long-term conservation action plans for Eastern Connecticut State University and Southern Connecticut State University. The ISE developed a “green campus” handbook that was adopted by all four state college presidents. Other efforts include the University of Connecticut’s completion of an on-site 25 megawatt natural gas fueled combined heat and power system that will replace dirtier, oil fired and less efficient generators. Yale University has made a commitment to reduce greenhouse gas emissions campus-wide and to launch a 15-year program aimed at using 100 percent clean energy for campus electricity needs.

### Residential, Commercial, Industrial Actions in the Connecticut Climate Change Action Plan 2005:

10. Appliance standards
11. Appliance swapping
12. Heat pump water heater replacement
13. Bulk purchasing of appliances
14. Upgrade building energy codes
15. Energy efficient/improvement mortgages
16. Energy Conservation Loan Program
17. Weatherization Assistance program
18. Energy Star Homes program
19. High-performance buildings (state-funded)
20. High-performance buildings (private funded)
21. Shared savings program
22. Training of building operators
23. Green campus initiative
24. Energy benchmarking
25. Pilot fuel-switching
26. Third-party load-management
27. Environmentally preferable purchasing
28. New England Demand Response Initiative
29. Voluntary programs and actions
30. Clean combined heat and power
31. Conservation & Load Management Fund
32. Create heating oil conservation fund
33. Create natural gas conservation fund
34. Reduce high-global-warming-potential gases



*The South Village Residence Hall (below left), at Eastern CT State University was designed to LEED certification standards. The High Rise Residence Hall (below right), contains the largest geothermal heating/cooling system in Connecticut and is more energy efficient than 90% of similar buildings nationwide.*

**Eastern Connecticut State University** (ECSU) is undertaking a pilot project to burn bio-diesel fuel in a boiler (80 percent diesel, 20 percent vegetable oil, also known as B20) and test emissions (Recommended Action #25). Emissions testing will be completed during the winter of 2005-06 and a report will be issued shortly thereafter. Tests performed by Lawrence Berkley Laboratory using B20 in residential boilers indicated a 30 percent reduction in most GHG emissions, with no increase in NOx emissions. If similar results are achieved with the ECSU pilot, significant GHG reductions could be achieved statewide by converting fire tube boilers commonly found in health care institutions, schools, and state and municipal facilities.

**TRAINING AND EDUCATION** – Training and education are key components of building improvement. A Building Operator Certification course is being sponsored in Connecticut by the Northeast Energy Efficiency Partnership (Recommended Action #22). A variety of other seminars and workshops have also been held, including a High Performance School workshop sponsored by Rebuild America and OPM, two workshops on energy efficiency for multi-family units sponsored by the Connecticut Energy Efficiency Fund (CEEF) and ISE, an Energy Solutions conference co-hosted by Connecticut Clean Energy Fund and CEEF, and three Gas Technology Forums sponsored by the U.S. Department of Energy and CONNSTEP. ■

# Private Industry Turning to High-Performance Buildings

When Pfizer began planning its new Clinical Research Unit in New Haven, the basis of design was for a “state-of-the-art” LEED Certified facility.

The design of the 62,500 square foot facility included a volunteer screening area, staff offices, full service kitchen, clinical laboratory and pharmacy and beds for 52 volunteers.

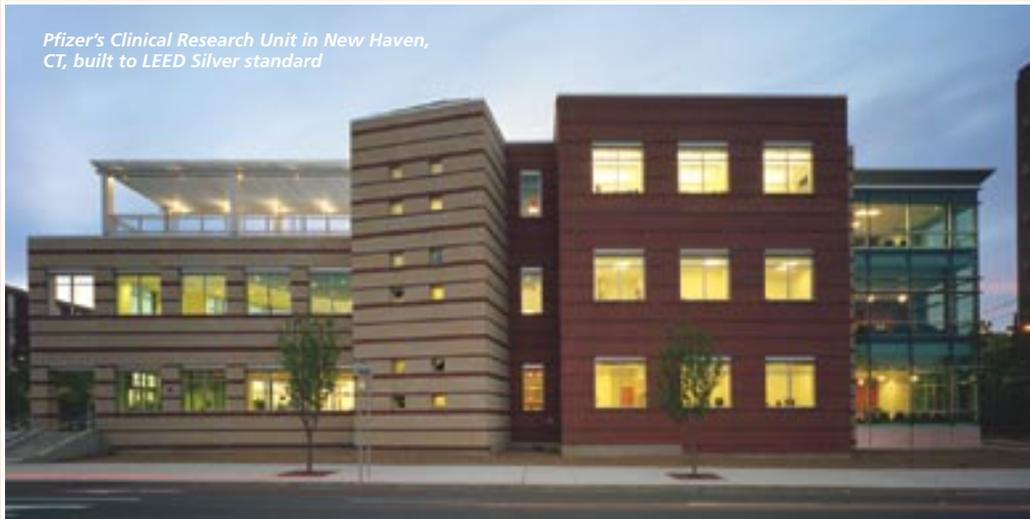
A sustainability workshop was conducted during which the Architectural, Engineering and Construction Management teams proposed a stretch goal of LEED Silver. The Pfizer team evaluated the cost to build using standard Pfizer design practices versus the cost to build using the proposed LEED Silver design and determined the differential was negligible and the Return on Investment was less than 5 years. The recommendation to proceed with the LEED Silver goal was presented to and accepted by Pfizer senior management. The design team was given authorization to implement a wide variety of “green” strategies to utilize water and energy efficiently, incorporate low volatile organic

compound emitting materials and recycled materials into the building, and make the building more earth-friendly. In addition to having access to public transportation, the facility is:

- Reducing energy consumption (based on modeling) by an estimated 45 percent;
- Saving over 40,000 gallons of water per urinal;
- Providing a highly productive work area with good indoor air quality.

Pfizer has applied for LEED Silver certification for this facility. All future Pfizer Global Research and Development construction projects will be required to complete a “Green Building” evaluation form and compile points against a scorecard. Examples of scorecards Pfizer will use include BREAM (for projects in Europe), LEED and Green Globes (for projects in the U.S.).

For more information, visit the CT Green Building Council website at [www.ctgbc.org](http://www.ctgbc.org)



## Yale Goes Green

Yale University this fall took a leadership position among colleges and universities by adopting a comprehensive, long-term climate policy focused on reducing greenhouse gas emissions.

The university's plan is in response to a challenge the New England Board of Higher Education (NEBHE) and the New England Governors and Eastern Canadian Premiers (NEG/ECP) issued to the region's colleges and universities. The organizations called on institutions of higher education to meet the goals of the NEG/ECP's Climate Change Action Plan. These goals include reducing greenhouse gas (GHG) emissions to 1990 levels by 2010, reducing them to 10 percent below 1990 levels by 2020, and reducing both total energy consumption and energy intensity (pounds of GHG per unit of power generated or consumed).

As of October 2005, 25 colleges and universities in Connecticut had signed the NEG/ECP pledge.

Yale intends to meet the goals of its 15-year strategic plan by implementing a strong energy conservation program, investing in alternative energy sources, purchasing Renewable Energy Certificates and implementing on-site clean energy projects.

The Yale plan also includes a unique way to engage students in the process. Students are encouraged to reduce energy consumption at their residential colleges. They are rewarded for meeting goals with clean energy purchases. For every 5 percent reduction at the residential colleges, Yale commits to investing in clean energy for one-third of the residential college's remaining energy needs. If a residential college can meet and maintain a 15 percent reduction goal, all of its remaining energy needs would be met with clean power. Two student groups, New Haven Action and the Student Task Force for Environmental Partnership, will help engage and educate students in this challenge to reduce energy consumption levels.

“The entire Yale community deserves praise for this visionary plan,” said Bob Wall of SmartPower. “Clean energy is not only

an essential component in the battle against global warming, but also sound, long-term economic policy for a large energy user such as a university. Together with the City of New Haven, Yale is exhibiting outstanding civic leadership in helping to create a model clean energy community.”

Additional information about Yale's 15-year GHG Reduction and Energy strategic plan can be found at <http://www.yale.edu/sustainability>



## Some of the benefits of High Performance Schools include:

- Improved student performance
- Healthier and more comfortable indoor environmental quality
- Lower operating costs & increased durability
- Reduced liability exposure
- Enhanced staff satisfaction
- Lower water use and lower sewage disposal costs
- Safer, more secure buildings
- A building that teaches ecological principles
- Lower environmental impacts



*McKinley School in Fairfield features natural daylighting, energy efficiency, and improved indoor air quality.*

### More Success Stories at: [www.ctclimatechange.com](http://www.ctclimatechange.com)

#### Residential, Commercial, Industrial:

- **"New Haven Green" Takes on a Whole New Meaning**
- **Town of Windsor Reduces Greenhouse Emissions**
- **Stamford Takes Action**
- **Communities Can "Do the Math" to Reduce School Energy Costs**
- **State Companies are Climate Leaders**
- **Energy Star Homes and Energy Efficient Mortgages: Eaton Row Homes are a National Model**

## Green Schools Get Good Grades

### Each year, hundreds of millions of dollars are spent building new schools in Connecticut.

They are the most important buildings we construct as nearly one out of five people in the state spend part of their day in a school building. Insuring that our schools are high performance, energy efficient, healthy places to learn needs to be a top priority as these buildings profoundly influence our next generation.

An ongoing initiative of the CT Green Building Council and the Institute for Sustainable Energy is to promote the transformation of schools in the state to green, high-performance buildings. Launched in February, this initiative includes a stakeholder process, an educational outreach effort, and an inventory of all public school buildings.

These benefits are compelling for both students and taxpayers. Several studies have shown that properly designed high performance schools, especially ones that aggressively use natural daylight, improve learning and test scores. Other demonstrated benefits include increased average attendance rates, increased staff satisfaction. High performance schools can also be a hands-on laboratory for ecological design and operation, helping to develop tomorrow's leaders.

Right here in Connecticut, we have seen the benefits of green schools at the McKinley School in Fairfield. The old McKinley School had been closed due to problems with mold and resulting health problems of its occupants. The old school was razed to make way for the new McKinley School that opened in Fall, 2003. The new school incorporates features such as daylighting, energy efficiency, and improved indoor air quality. According to the Principal, Dr. Dale Bernardoni, "The daylight in the building enhances the environment for children and staff, and is now a very appropriate environment for learning."

These schools also save taxpayers money. On average, operating costs are 30% lower while the school's increased durability lowers maintenance expense and future renovation costs. Decreased water use and lower sewage disposal needs not only save money, but also may prolong the life of the municipal water and sewage systems. Green schools also have superior indoor air quality and decreased toxins.

While green schools lower the school's environmental impact through thoughtful design and smart building practices, the benefits to the students and the significant payback to the taxpayers are the compelling reasons that all schools in Connecticut should be built green.



# Electricity Sector

## Substantial progress has been made on several recommended actions for the electricity generation sector in the Connecticut Climate Change Action Plan 2005.

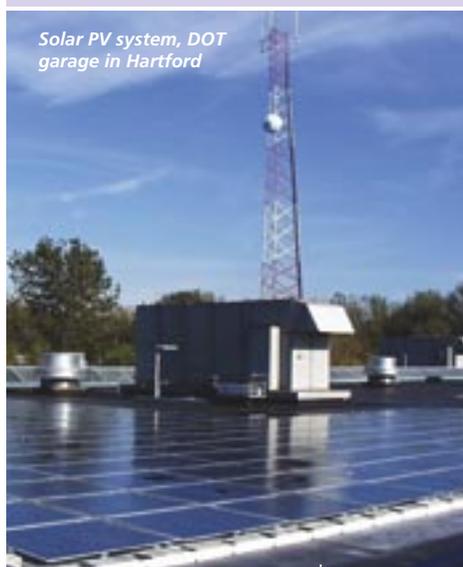
Since the sector contributes more than one-quarter of the state’s greenhouse gas emissions, the successful implementation of these actions will result in short, medium, and long-term reductions of greenhouse gas emissions. Reductions from the electricity section are projected to be 3.07 MMTCO<sub>2</sub>e by 2010, and 6.89 MMTCO<sub>2</sub>e by 2020. The Connecticut Climate Change Action Plan 2005 identifies a variety of mandatory and voluntary measures, to support implementation.

**REGIONAL AGREEMENT TO REDUCE GHG EMISSIONS** – This year, in a cooperative effort with Northeastern and Mid-Atlantic states, Connecticut participated in the Regional Greenhouse Gas Initiative (RGGI) process to develop a regional strategy to control greenhouse gas emissions (Recommended Action #53). Central to this initiative is the implementation of a multi-state cap-and-trade program with a market-based emissions trading system. The cap-and-trade program sets a cap, or a maximum limit, on emissions and allows sources to buy and sell allowances from other sources in order to meet compliance obligations in a cost-effective manner. The program will initially be designed to reduce carbon dioxide emissions from power plants in participating states, while maintaining energy affordability and reliability and accommodating, to the extent feasible, the diversity in policies and programs in individual states. In December 2005, the governors from seven states (Connecticut, New Hampshire, Maine, Vermont, New York, New Jersey, and Delaware) signed a RGGI Memorandum of Understanding (MOU) agreeing to implement the RGGI program beginning Jan. 1, 2009. For more information on RGGI, visit [www.rggi.org](http://www.rggi.org).

**STATE CLEAN ENERGY EFFORTS** – Connecticut began its efforts to become a leader in voluntary clean energy markets with a number of clean energy programs that were launched in 2005. The CTCleanEnergyOptions program (Recommended Action #49), designed through a public process overseen by the DPUC as required by P.A. 03-135 – Restructuring Act, allows customers of Connecticut Light & Power and United Illuminating to support clean energy from either Community Energy or Sterling Planet. The state of Connecticut has committed to purchase 20 percent clean energy for state operations by 2010 (Recommended Action #47). The DEP signed up to purchase 100 percent clean energy for all DEP facilities, resulting in the largest clean energy purchase to date in Connecticut.

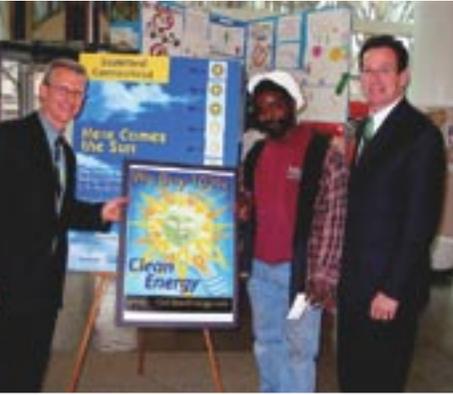
### Electricity Generation Actions in the Connecticut Climate Change Action Plan 2005:

- 45. Renewable energy strategy
- 46. Renewable portfolio standard
- 47. Government clean energy purchase
- 48. Production Tax Credit
- 49. Clean Energy Option
- 50. Renewable Energy Certificates
- 51. Restore Clean Energy Fund
- 52. Energy efficiency & CHP
- 53. Regional cap-and-trade
- 55. Emissions Inventory and Registry



Solar PV system, DOT garage in Hartford

**COMMUNITY COMMITMENTS TO CLEAN ENERGY** – The year also saw communities across the state commit to SmartPower’s 20% by 2010 Clean Energy Campaign and the Connecticut Clean Energy Fund’s Connecticut Clean Energy Communities Program. Under this program, the Fund provides no-cost, 1 kilowatt solar photovoltaic clean energy systems to communities that join the 20% by 2010 campaign, sign up a certain number of ratepayers for the CTCleanEnergyOptions program, and agree to invest 100 percent of their energy savings in additional clean energy. Sixteen towns and cities have joined the 20% by 2010 campaign and seven of them—Middletown, New Haven, Stamford, Fairfield, Hamden, Milford and West Hartford—have qualified for solar installations as Clean Energy Communities. With the increasing visibility of the program, the mayors of New Haven and West Hartford have challenged each other to see who can sign up the most residential customers for clean energy before Earth Day 2006.



*Darek Shapiro, left, citizen leader of local 20% by 2010 Campaign, Neville Denton, center, electrician who became Stamford’s 100th clean energy customer, and Daniel Malloy, right, Mayor of Stamford, celebrate Stamford’s success as a Clean Energy Community.*

**CITIZENS CHOOSE CLEAN ENERGY** – More than 6,000 Connecticut residences and businesses in CT have signed up to purchase clean energy since the Connecticut CleanEnergyOption became available in April 2005. In the first year of the CT Clean Energy Fund’s Residential Solar Photovoltaic Program, 65 households across Connecticut installed these reliable and affordable systems. The Connecticut Clean Energy Fund’s recently released On-site Distributed Generation Program will provide incentives to commercial and industrial customers to generate clean energy on-site from a variety of clean energy sources including fuel cells, solar, wind, landfill gas, biomass and small hydro facilities. Providing customers with options to support clean energy will lead to: voluntary reductions of greenhouse gas emissions; reduced energy costs resulting from a more reliable, secure and efficient energy system; and more local jobs within the emerging clean energy technology sector.

**RENEWABLE PORTFOLIO STANDARD** – Connecticut law requires that a percentage of electricity generation come from clean energy as outlined in the state’s renewable portfolio standard. Connecticut’s continued leadership in renewable portfolio standards (RPS) was reaffirmed in 2005 with the passage of P.A. 05-01, “An Act Concerning Energy Independence.” This act expands upon the state’s existing RPS by creating a mandatory Class III requirement for energy efficiency and combined heat and power (CHP), making Connecticut’s RPS a national model for clean, renewable and efficient energy utilization (see chart below). Combined heat and power has great potential to significantly reduce greenhouse gas emissions, and this legislation provides an incentive for broader CHP applications in Connecticut (Recommended Action #30).

YEAR	CLASS I	CLASS II	CLASS III	TOTAL
2004	1.0%	3.0%	-	4.0%
2005	1.5%	3.0%	-	4.5%
2006	2.0%	3.0%	-	5.0%
2007	3.5%	3.0%	1.0%	7.5%
2008	5.0%	3.0%	2.0%	10.0%
2009	6.0%	3.0%	2.0%	11.0%
2010	7.0%	3.0%	4.0%	14.0%

*Class I.* Energy derived from solar power; wind power; a fuel cell, methane gas from landfills; ocean thermal power, wave or tidal power, low emission advanced renewable energy conversion technologies, run-of-river hydropower facility provided such facility has a generating capacity of not more than five megawatts that does not cause an appreciable change in the river flow and began operation after July 1, 2003; a biomass facility, including, but not limited to, a biomass gasification plant that utilizes land clearing debris, tree stumps or other biomass that regenerates or the use of which will not result in a depletion of resources, provided such biomass is cultivated and harvested in a sustainable manner and the average emission rate for such facility is equal to or less than .075 pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter, except that energy derived from a biomass facility with a capacity of less than five hundred kilowatts that began construction before July 1.

*Class II.* Energy derived from a trash-to-energy facility; or biomass facility that began operation before July 1, 1998, provided the average emission rate for such facility is equal to or less than .2 pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter, or run-of-river hydropower facility provided such facility has a generating capacity of not more than five megawatts, does not cause an appreciable change in the river flow and began operation prior to July 1, 2003.

*Class III.* Electricity output from combined heat and power systems with an operating efficiency level of no less than fifty per cent that are part of customer-side distributed resources developed at commercial and industrial facilities in this state on or after January 1, 2006, or the electricity savings created at commercial and industrial facilities in this state from conservation and load management programs begun on or after January 1, 2006.

**LOCAL CLEAN ENERGY DEVELOPMENT** – Project 100 stimulates the development of Class I Renewable Resources in Connecticut by requiring the electric distribution companies to enter into long-term power purchase contracts for clean renewable energy. This policy will stimulate the development of new clean energy projects and increase the available supply of clean renewable energy, while having a positive impact on grid reliability, fuel diversity, rising electricity costs, economic development, and job creation for Connecticut (Recommendation #48).

Connecticut has set a firm foundation through public policies to reduce greenhouse gas emissions within the electricity sector. The focus now is to implement these policies through cross-sector collaboration, leadership, and continuous monitoring and evaluation. ■

**More Success Stories at:**  
[www.ctclimatechange.com](http://www.ctclimatechange.com)

- CT Clean Energy Options Program is Huge Success
- Fuel Cell Powers Hospital



*The Sych's Energy Star home in Westport, with solar and geothermal energy and energy efficient appliances and fixtures.*

2005, began to explore more ways to conserve energy and save energy dollars. That was when they learned about a new rebate program the Connecticut Clean Energy Fund was offering to make it more economical for homeowners to install solar PV systems.

"After talking with CCEF about the Residential Solar PV program and obtaining quotes from several installers, we decided to install a large 5.7 kilowatt PV system on our house," John Sych says. "The system maximized the CCEF rebate of \$25,000 and, depending on the month, produces 10 to 40 percent of the house's electrical needs, resulting in \$42 to \$82 per month in savings. When you add in the benefit of "Green Tag" sales of about \$40 a month, you have a total combined savings of between \$82 and \$122 per month."

John notes that the new federal energy bill makes installing such a system even more attractive. Effective Jan. 1, 2006, homeowners receive a tax deduction of up to \$2000 when they install a solar PV system.

"Thanks to the Connecticut Clean Energy Fund's Residential Solar PV Program, we are playing our small part in improving the environment," John notes.

For more information, visit the CT Clean Energy Fund website at:  
[www.ctcleanenergy.com](http://www.ctcleanenergy.com)

## WESTPORT RESIDENT Makes Clean Energy a Way of Life

**G**rowing up in Westport, Conn., in the 1960s, Mr. John Sych had a special interest in ecology. Today, he has returned to his hometown and is using clean energy to save money, reduce dependence on fossil fuels and protect the environment he respects.

John and his wife returned to Connecticut for career reasons in 2000 and immediately made plans to remodel, expand and live in the home John's grandfather had built in 1925.

The couple found an architect familiar with the U.S. Department of Energy Star program and worked with him to design an energy efficient home within their budget. They investigated a number of energy efficiency options but decided against solar photovoltaic (PV) because of the cost.

To minimize heating and air-conditioning costs, they chose an icynene foam insulation process that costs more than standard fiberglass insulation but has a higher R value and some sound-proofing qualities. At the time, CL&P had a rebate program for Energy Star homeowners installing geothermal heating and cooling units, arguably the most efficient type of heating and cooling system available. The CL&P program paid a substantial portion of the cost to install the ground loop portion of the system and made the pay-back period very attractive. John Sych also installed a number of Energy Star appliances and light fixtures to minimize electrical consumption.

John and his wife were extremely satisfied with their Energy Star house, but, in

“Connecticut has adopted an aggressive Climate Change Action Plan and we are a leader in addressing clean air and climate change issues. As part of these efforts, we have a goal of purchasing 20 percent of the state’s energy from ‘clean’ sources by 2010. Today’s announcement at DEP is a very positive first step toward achieving that goal.”

– GOVERNOR, M. JODI RELL

## DEP Becomes First State Agency to Buy Clean Energy

Nov. 2, 2005, was no ordinary day at the Connecticut Department of Environmental Protection (DEP). This was the day that DEP became the first state agency to take advantage of the CTCleanEnergyOptions program. Today, DEP is powered by 100 percent renewable energy from wind, landfill gases and small hydro-electric plants.

DEP Commissioner Gina McCarthy feels very strongly about this action. “This shows that the agency is committed to protecting the environment and public health,” McCarthy says. “The use of clean energy reduces both our reliance on fossil fuels and power plant emissions that include greenhouse gases closely linked to climate change.”

DEP currently uses approximately 7.6 million kilowatt hours of electricity each year. The department’s annual electric bill is about \$1.2 million. The switch to clean energy is expected to add an estimated \$125,000 to DEP’s energy bill. The energy will be supplied equally by the two providers in the state, Sterling Planet and Community Energy. Right now, the cost of buying electricity generated from renewables is

slightly higher than conventional power (from coal, oil, natural gas and nuclear plants). However, it is an important investment in cleaner air. Plus, some of the extra costs are offset by a number of energy conservation and efficiency actions undertaken at DEP headquarters in Hartford.

DEP’s switch to clean energy will result in reducing emissions of carbon dioxide (CO2)—the gas most closely associated with climate warming—by 3,716 tons a year. This is the annual equivalent of:

- Taking 730 cars off the road;
- Using 7,839 fewer barrels of oil;
- The total electrical needs of 670 households; or
- Growing 88,434 tree seedlings for 10 years to help remove CO2 from the atmosphere.

All CL&P and UI customers can also purchase clean energy for their homes, businesses, and towns. To date, about 6,000 customers and 16 towns in Connecticut have chosen this option.

For more information on choosing clean energy, visit [www.gocleanenergy.com](http://www.gocleanenergy.com).

Connecticut communities and the State of CT have committed to clean energy.



### Those Communities include:

- Bethany
- Stamford
- Milford
- Cheshire
- Fairfield
- Westport
- Orange
- Portland
- Middletown
- Canton
- Trumbull
- New Britain
- New Haven
- Hamden
- Mansfield
- West Hartford

Fairfield, Hamden, Middletown, Milford, New Haven, Stamford and West Hartford have signed up well over 100 customers for the CTCleanEnergyOptions program. Those towns will be receiving free solar PV systems.

## Connecticut’s Clean Energy Communities – Coming to a Town Near You!

Connecticut cities and towns are demonstrating leadership in clean energy. They’re also qualifying for no-cost clean energy systems offered through the Connecticut Clean Energy Communities Program. Under the program, the Connecticut Clean Energy Fund provides no-cost solar photovoltaic (PV) systems to communities that qualify. A community qualifies by taking three easy steps:

1. Committing to the SmartPower 20% by 2010 Clean Energy Campaign;
2. Signing up 100 customers for the CTCleanEnergyOptions program; and
3. Dedicating their energy savings to support the community commitment to clean energy.

When a town has met these three criteria, it will receive a 1 kilowatt (or 2 kilowatt for communities in southwestern Connecticut) solar PV system for every 100 customers that sign up for the CTCleanEnergyOptions program.

Some friendly competition is adding some excitement to the process. On August 16, 2005, two of the leading mayors on clean energy challenged each other to a contest. New Haven Mayor John

DeStefano and West Hartford Mayor Scott Slifka are competing to see which community can sign up more residents for the CTCleanEnergyOptions program by Earth Day, April 22, 2006. The losing mayor will be required to wear a T-shirt supporting the other town and provide a locally made product to the other community’s Town Council. New Haven will proffer pizza, while West Hartford will serve up soft drinks.

To find out more about what other towns are doing, go to [www.ctclimatechange.com](http://www.ctclimatechange.com). For information on purchasing clean energy, visit [www.gocleanenergy.com](http://www.gocleanenergy.com)



West Hartford Mayor Scott Slifka, left, Smart Power’s Brian Keane, center, and Mayor John DeStefano of New Haven, right, discuss the mayors’ clean energy challenge.



## Agriculture, Forestry, and Waste Sector

**Greenhouse gas emissions and sinks from the agriculture, forestry, and waste sector account for less than 4 percent of the state's total emissions.**

**Projected reductions from this sector are expected to be 1.22 MMTCO<sub>2</sub>e by 2010 and 1.28 MMTCO<sub>2</sub>e by 2020.** This sector covers a wide range of activities, including both emissions of greenhouse gases and “sinks” (practices that sequester or remove carbon dioxide from the atmosphere, such as planting trees and managing forest health). Over the past year, considerable progress has been made in implementing the actions in this sector, all of which are voluntary.

**PUBLIC POLICY** – The Legislature passed important legislation during the 2005 session that helps promote the overall goals of the Agriculture, Forestry and Waste Sector. Public Act 05-228, An Act Concerning Land Preservation, Affordable Housing and Historic Preservation, creates a permanent fund to conserve farmland and other lands and provides additional funding for programs to support Connecticut farmers. The new law provides increased funding to preserve open space and farmland and to encourage the sale of Connecticut-grown food to schools, restaurants, retailers, and other institutions and businesses in the state.

**FOREST AND AGRICULTURAL LAND PRESERVATION** – The state continued to preserve forest and agricultural land in 2005, enabling carbon sequestration and preventing more energy intensive development of these lands (Recommended Action # 40).

### **2005 accomplishments include:**

- Authorization to purchase development rights on seven farms, preserving over 650 acres.
- Acquisition of 133 acres through the Recreation and National Heritage Program.
- Preservation of 2,000 acres through conservation easements through the Open Space and Watershed Program.
- Protection of more than 460 acres (plus an additional 5,000 acres at the end of 2004) through the Forest Legacy Program.

**FOREST MANAGEMENT AND TREE PLANTING** – The Connecticut Statewide Forest Resource Plan, released in 2005, establishes strategies to retain forestland, foster management that increases forest ecosystem health, and promote sound forest stewardship, all of which will optimize carbon sequestration in our forests. In addition, regional research initiatives by the New England Governors/Eastern Canadian Premiers and The Nature Conservancy will provide valuable information on climate change

### **Agriculture, Forestry, and Waste Actions in the Connecticut Climate Change Action Plan 2005:**

35. Centralized manure digesters
36. Reduce non-farm fertilizer use
37. Buy local produce
38. Forest management and carbon offsets
39. Urban tree planting
40. Forest/agricultural land preservation
41. Durable wood products
42. Landfill gas-to-energy projects
43. Increase recycling, source reduction
44. Voluntary carbon offset program

impacts on forests and opportunities to maximize carbon sequestration (Recommended Action #38).

The U.S. Forest Service/DEP Urban Forestry Grant program resulted in the planting of more than 300 trees in Connecticut cities in 2005 (Recommended Action #39). However, this program, which has provided grants for more than a decade, is suffering from decreased congressional support, and there will likely be very limited federal funds in the future.



**CONNECTICUT-GROWN FOODS** – The purchase of locally grown foods not only supports our local farm economy and the continued farming of productive land, but it also decreases the greenhouse gas emissions associated with transportation of food grown far from our homes (Recommended Action #37). Programs to market Connecticut-grown foods, CT Grown and Harvest New England, continued to expand during 2005. The number of farmers' markets in the state grew to 72, with some able to accept food stamps electronically for the first time. The Farm to Schools program, which promotes the direct purchase of Connecticut-grown food products by school systems, also grew significantly. There are currently more than 50 school districts buying from more than 30 local farms. In addition, large institutions are purchasing increasing amounts of locally grown produce. During 2005, Connecticut state agencies purchased a total of 451,200 pounds (\$154,500) of fruits and vegetables from local farmers, including apples, cabbage, corn, cucumbers, eggplant, green peppers, and squashes. A number of universities also purchase and serve Connecticut-grown foods in their cafeterias.

**FERTILIZER USE AND PURCHASING** – A number of initiatives are helping to reduce fertilizer use on non-farm land, and thus nitrous oxide emissions (Recommended Action #36). The Connecticut Northeast Organic Farmers Association (CT NOFA) continues to promote organic land care practices and train land care professionals and others. There are currently 63 accredited organic land care professionals in Connecticut. DEP and CT NOFA will work with an interested municipality in 2006 to pilot alternative/organic land care practices on a school or municipal recreation field. In addition, three towns promote the Freedom Lawn program, encouraging residents to voluntarily stop using chemical and synthetic fertilizers on their lawns and gardens.

The Department of Administrative Services' Environmentally Preferable Purchasing (EPP) Program continues to promote the used/refurbished furniture contract. CT SHOPS 2005 featured two environmentally friendly offices, one consisting of wood furniture off the used/refurbished furniture contract. All new requests for proposals and those replacing expiring furniture contracts require the submittal of the manufacturer's sustainability plan. For wood-based products, the sustainability plan must include certified sustainable harvesting practices (Recommended Action #41).

*The Laurel Street Farmers' Market, one of over 70 farmers' markets in Connecticut, enjoyed its second season in 2005. The market is supported by youth from Grow Hartford, a project of the Hartford Food System that promotes a sustainable and equitable food system in Hartford by cultivating youth leadership and civic participation through agriculture.*



**RECYCLING AND WASTE MANAGEMENT** – The DEP has been developing an updated **Solid Waste Management Plan for Connecticut**. The new plan, to be finalized in early 2006, will identify opportunities to significantly reduce the amount of waste generated in the state, increase the amount of recycling and reuse, and manage the waste that must ultimately be disposed of in an efficient and environmentally protective manner. The plan will take into consideration greenhouse gas emissions from waste handling, transport, and disposal and provide strategies for meeting the state's recycling and source reduction goals (Recommended Action #43).

The Connecticut Clean Energy Fund recently completed round one of the Project 100 Request for Proposal process, a project to increase development of new clean energy projects in the state. No landfill gas-to-energy projects were submitted under round one, but it is anticipated that rounds two and three will see several proposals (Recommended Action #42). Recent legislative changes to Project 100 make the financing mechanism for long-term power purchase agreements more favorable. Landfill gas-to-energy projects can also apply for buy-down incentives through the Fund's On-site Distributed Generation Program.

Connecticut is making steady progress in reducing emissions in the Agriculture, Forestry and Waste sector, but increased support and funding will be needed to continue implementation of these voluntary actions. ■

## The ReCONNstruction Center, *Where Trash Becomes Treasure*

After years of preparation, The ReCONNstruction Center, a non-profit building materials re-use store, celebrated the grand opening of their 6,580 square-foot showroom and warehouse at 230 South Street in New Britain on October 15, 2005.

The mission of the Center is to salvage unwanted building materials that are in good condition and resell them at prices affordable to the average wage earner. The Center's activities focus specifically in urban areas, recognizing that these locations are essential to the long-term sustainability of the economy and culture.

Founded in 2002, the Center accepts donations of new and used building materials such as lumber, drywall, insulation, lighting fixtures, siding, windows, doors, bathroom and kitchen fixtures, plumbing supplies, gutters, and much more. These materials are then sold for reuse to the general public. The

donor can claim a tax deduction. John Powers, President of the Board of Directors for the Center, describes the Center as "providing an alternative to traditional disposal options that harm the environment with the added benefits of sustainability and affordability."

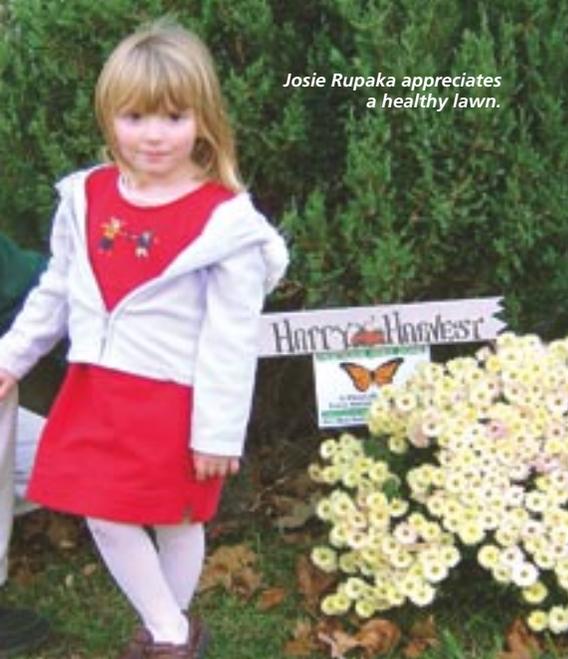
The ReCONNstruction Center estimates that it will divert 1,000 tons of material from waste disposal to reuse each year.

In addition, the Center provides a no-cost outlet for property owners and contractors to recycle unwanted building materials and offers low cost materials to homeowners and the general public.

For more information, visit The ReCONNstruction Center at <http://www.reconnstructioncenter.org>.

**The newly opened ReCONNstruction Center in New Britain sells unwanted building materials for reuse.**





Josie Rupaka appreciates a healthy lawn.

## Plainville Wants to be Pesticide Free

In June 2005, the Town Council of Plainville passed a resolution in "Support of Voluntary Non-Use of Pesticides and Synthetic Fertilizers on Lawns and Gardens by the Citizens of Plainville." The resolution cites non-point source pollution, the benefits of organic land care methods, and nitrogen oxide releases contributing to global warming as reasons for decreasing pesticide and synthetic fertilizer use.

The Town's commitment has been coupled with a public outreach campaign to citizens called "The Freedom Lawn Initiative." Freedom Lawn encourages alternative organic lawn care maintenance. Two other towns in Connecticut, Milford and Cheshire, have active Freedom Lawn programs. In the first six months, Plainville's program has resulted in participation by 42 residents, totaling 15.10 acres.

Plainville Town Manager Robert Lee remarked, "This is a grass roots effort that is taking hold in our community as more and more residents become aware of the alternatives to the traditional pesticide products. It is important to our environment and our quality of life that we make strides in this area and decrease our use of pesticides and synthetic fertilizer use."

Jason Rupaka, Plainville Conservation Commissioner and initiator of the Plainville Freedom Lawn Initiative stated, "Our town has made excellent strides in educating the Plainville community of the hazards and risks associated with cosmetic pesticide lawn applications. I will continue to work with our town leaders and am hopeful that in the near future Plainville can start an organic turf pilot program on a town parcel."

## Connecticut Farms-to-Schools Programs Help Kids Love Their Veggies

Getting locally grown produce into school cafeterias is a win-win proposition. It not only improves children's health and nutrition but also increases marketing opportunities and income for Connecticut farmers. And by decreasing "food miles" or the distance that food travels from field to plate, it helps reduce greenhouse gas emissions and promote a cleaner environment. Programs in South Windsor and Cheshire in 2005 highlight the tremendous potential of Farm-to-School in Connecticut.

South Windsor has been a leader in bringing locally grown food into its seven school cafeterias under the leadership of food service director Mary Ann Lopez.

Potatoes from David Shaffer's farm in South Windsor star in their popular baked potato bar, and locally grown fruits and vegetables are purchased directly from four different farms. Barbara Starkweather, food service manager for the high school, raves about the romaine lettuce from Groszyk Farm in Enfield, "We are really spoiled by the lettuce we were getting from the farm ... I will be ordering more lettuce than before." But South Windsor is not limiting the program to the cafeteria. Teachers are in on it too. Deb Field, South Windsor's Teacher of the Year, is leading her

biology class in a project that is composting kitchen waste at the high school, and Janet Belval's botany class is using their greenhouse to grow herbs and tomatoes for the cafeteria.

Chef Tim Cipriano has been bringing his passion for delicious, locally grown food to the children of Dodd Middle School in Cheshire using, literally, the carrot instead of the stick. Throughout the month of October, Cipriano ran a tasting program in which students were able to try different recipes incorporating locally grown food. Working with consumer science teacher Linda Biedrycki, Chef Tim prepared the recipes with Biedrycki's business class, then later in the week gave out samples in the cafeteria. This no-risk approach got kids eating such dishes as squapple crisp, an apple and butternut squash dessert, and balsamic roasted vegetables. "They don't look like something you normally eat every day," said one 8th grader of the roasted vegetables. "These are vegetables I would eat."

The South Windsor and Cheshire programs are part of a growing interest in Farm-to-School throughout the state. Currently, more than 50 school districts are buying food from more than 30 local farmers.





# Education Sector

**Education & Outreach  
Actions in Connecticut  
Climate Change Action  
Plan 2005**  
54. Public Education Initiative

**Education is a very important piece of successfully reducing greenhouse gas emissions,**

**and the Connecticut Climate Change Action Plan 2005 acknowledges the critical importance of expanding education and awareness about climate change impacts and solutions.** Recommended Action #54, Public Education Initiative, includes a set of measures to “foster a broad awareness of climate change issues and effects among Connecticut’s citizens and to engage citizens in simple actions to reduce greenhouse gas emissions.” Education efforts focused on five key target audiences: policy-makers, community leaders, future generations, community-based organizations and the general public.

**BROAD EDUCATIONAL OUTREACH** – During 2005, education and outreach initiatives were successful in engaging policy-makers and additional state agencies in action, fostering the growth of new and existing community leaders, developing resources and programs for teachers and students, facilitating new collaboration among community-based organizations, and improving information and outreach to the general public. The Climate Change Education Committee is responsible for the myriad activities and significant progress made in this sector. Participants include staff from state agencies, community-based organizations, educator/teacher associations, electricity distribution companies, and municipal/regional organizations.

**POLICY-MAKERS AND STATE GOVERNMENT** – Governor Rell helped engage the leaders of state government in implementation of climate change actions over the past year by sending letters to commissioners and directors of all state agencies to stress that “each state agency has a role in addressing climate change” and to request their help in reducing greenhouse gas emissions, and directed all agencies to reduce energy consumption by 10 percent in 2006. An Energy Roundtable to help state facility personnel address rising energy costs and reduce greenhouse gas emissions was formed by OPM.

**COMMUNITY LEADERS: BUSINESSES, MUNICIPALITIES AND UNIVERSITIES** – The network of community leaders taking action on climate change grew extensively over the past year. These leaders from Connecticut’s businesses, institutions, municipalities, churches, universities and colleges have demonstrated their commitment

**More Success Stories at:**  
[www.ctclimatechange.com](http://www.ctclimatechange.com)

- Learning about Clean Energy through Corn?



*Chris Mason of the Northeast Sustainable Energy Association and Roxanne Hosking of the CT Earth Science Teachers Association discuss climate change educational resources with teachers at the National Science Teachers’ Association regional conference in Hartford, October 2005.*

to greenhouse gas reductions and served as mentors to peers. The marketing of the Clean Energy Communities program resulted in a critical mass of municipal leaders who are purchasing clean energy, taking additional actions to reduce greenhouse gases and encouraging other towns to follow their lead.

Business leaders, including those from Connecticut's insurance and financial services sector, recognized the need to be ahead of the curve in understanding and reacting to climate change impacts that will have a profound impact on their businesses and our economy. In October 2005 the Commissioners of the Connecticut Insurance Department and the DEP and the State Treasurer convened the first-ever summit on climate risks and opportunities for insurance executives. More than 100 insurance industry leaders attended. Additional workshops for Connecticut's insurance and financial services sectors are being developed.

During 2005, the GSC on Climate Change developed a "Climate Change Leadership Award Program," which will be unveiled in early 2006. The program will increase awareness of actions taken in Connecticut to address climate change and honor exemplary actions by community leaders in all sectors.

**FUTURE GENERATIONS** – Great progress was made in developing programs to educate school-age children who will be Connecticut's citizens of the future. The development of curriculum and teaching resources on climate change is closely tied to the Connecticut Department of Education's Curriculum Frameworks and Content Standards, providing additional benefits to teachers and broader applicability to classroom learning. Through coordination, curriculum on climate-related topics has been developed by the DEP, eeSmarts, MetroPool, and the Institute for Sustainable Energy, and is being used in many school districts. In addition, outreach is provided through science centers, teacher workshops, and presentations to students. Climate change teaching resources were provided to many of the 3,000 teachers who attended the National Science Teachers' Association regional conference in Hartford this year and to participants at other workshops throughout the year. Presentations on climate change science and solutions were made directly to students involved in competitions such as the Future Problem Solving Program and Envirothon.

During 2005, the Connecticut Science Center Collaborative developed from a nascent affiliation of science centers to a strong organization with participation by more than 40 Connecticut science centers and museums, a steering

committee, a strategic plan, funding and a full-time program coordinator. The Collaborative's programs have the potential of reaching more than 3 million visitors each year in Connecticut with educational programs on climate change impacts and solutions.

**COMMUNITY-BASED ORGANIZATIONS** - Many of these organizations continued to provide invaluable grassroots outreach on climate change through congregations and faith communities, environmental and energy organizations, and other civic groups. The Climate Change Education Committee enables strong networking and collaboration among these groups.

**GENERAL PUBLIC** – The state's climate change website, [www.ctclimatechange.com](http://www.ctclimatechange.com), is a major means of increasing public awareness about climate change. The content of the website was expanded and the average number of hits per month increased from 8,000 in 2003 to 19,500 in 2005. During 2005 additional material was placed on the site, including climate change solutions, policy initiatives, success stories, news and events, a page for students and educators (with speakers available on climate change topics), business initiatives, and state agency initiatives. The site also enables public input on the Connecticut climate change initiative and will be further developed in 2006.

All in all, well over 50 workshops and presentations were held in 2005 to engage targeted sectors and the general public in climate change actions. This outreach was the result of a vast network of agencies and organizations throughout the state. ■



# Insurance Industry Takes a Close Look at Climate Change

**On Oct. 27, 2005, Connecticut sponsored the first-ever summit with insurance industry executives and state regulators on the business risks and opportunities of climate change.**

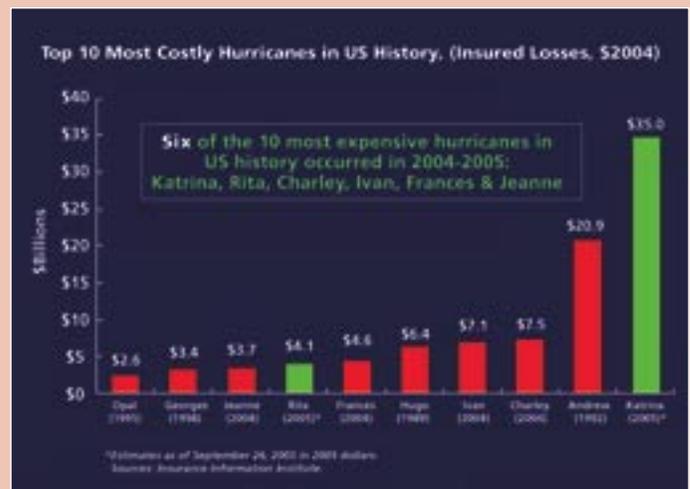
The summit was co-sponsored by Commissioner Susan Cogswell (Connecticut Insurance Department), Commissioner Gina McCarthy (Connecticut Department of Environmental Protection), and State Treasurer Denise Nappier. Insurance industry leaders shared their visions and actions with more than 100 participants, including seven of Connecticut's top 10 insurers. In her invitation letter to the summit, Governor Rell stated, "One critical element of maintaining a vibrant [insurance] industry in a highly competitive marketplace is to be ahead of the curve in understanding and reacting to emerging issues that will have a profound impact on your business and our economy. Global climate change is one such issue." The insurers and reinsurers who have incorporated climate change into their strategic planning recognize not only the risks from increased storm intensity, but also the opportunities of investing in clean energy technologies and developing new products.

"In view of the fact that the majority of history's most damaging hurricanes, in terms of insured losses, have occurred in only the past several months, it is clear the insurance industry and society need to gear-up for a newly frequent phenomenon, the mega-disaster," said Joseph Boren, Chairman and CEO of AIG Environmental, who spoke at the summit about underwriting with an eye toward climate change risks. During his presentation, Mr. Boren highlighted that Connecticut's shoreline makes it particularly vulnerable to insurance losses. In terms

of insured costal exposure, Connecticut ranks sixth on the list of states, following Florida, New York, Texas, Massachusetts and New Jersey.

"The Hartford is eager to join the discussion of climate change at Connecticut's seminar, both as it relates to the insurance industry and what we as a company have been doing to reduce emissions," said David Johnson, CFO of the Hartford Financial Services Group. "We have participated in the EPA's Energy Star program for many years and take pride that our Southington headquarters received the Energy Star label. The results achieved through trimming hours of air conditioning, installing advanced carbon dioxide sensors and adding insulation have been well worth the effort. We've come a long way, but we're not done yet, and we look forward to sharing what we've learned."

The summit was the first in a series of workshops planned for Connecticut's insurance and financial services companies. The three state agencies and industry representatives are working to develop the next seminars. For additional information and to view the video recording of the summit, go to <http://www.ctclimatechange.com/Insurance.html>



# Connecticut Science Centers and Museums Educate the Public about Climate Change

During the past year, the Connecticut Science Center Collaborative has grown from an informal organization interested in working with science centers to educate the public about climate change to a vibrant collaborative with a full-time coordinator, a steering committee, a strategic plan, 34 members, and funding for programs. The collaborative's mission—to educate the people of Connecticut about the science of climate change, its impacts, and solutions—resonates strongly with the state's science centers and museums. It has the potential of reaching 3.5 million visitors annually and is a vital part of educating the public on climate change.

The collaborative held two "Meet the Scientist" events during 2005, which included presentations by Dr. Cameron Wake, University of New Hampshire, Tundi Agardy, Ph. D., executive director of Sound Seas and Dr. Robert B. Whitlatch, University of Connecticut.

But the greatest accomplishment over the past year has been the growth of the collaborative from an informal entity supported by staff from Clean Air-Cool Planet, Connecticut DEP, and the New England Science Center Collaborative to an organization that is being lead by the state's science centers with strong support from local funders. The executive committee includes education directors from the Discovery Museum, The Maritime Aquarium at Norwalk, and the Science Center of Connecticut. Additional members include: Connecticut Audubon, Yale Peabody Museum, The Center for Science and Exploration, Talcott Mountain Science Center and many others.

Funding from the Emily Hall Tremaine Foundation supports the collaborative's full-time coordinator, who began work in December 2005. The Tremaine Foundation is also funding the first year of an annual statewide competition for students on climate solutions.

The Connecticut Clean Energy Fund is supporting a two-year project to develop exhibits on clean energy solutions to climate change. For more information see: [www.sciencecentercollaborative.org/cscc](http://www.sciencecentercollaborative.org/cscc)

*Art Ellis, center, from the Eli Whitney Museum demonstrates a wind mill and other student-created energy devices at a meeting of the Connecticut Science Center Collaborative. Jonathan Craig from the Talcott Mountain Science Center, left, and Adam Markham of Clean Air-Cool Planet, right, observe.*





# Leading by Example

## State Government Cutting Greenhouse Gas Emissions

**The Governor's Steering Committee on Climate Change (GSC) and state agencies recognize the importance of state leadership in reducing greenhouse gas emissions and have made significant progress in their own operations during 2005:**

### LEADERSHIP

- The U.S. Environmental Protection Agency (EPA) presented a 2005 Climate Protection Award to the GSC for its extraordinary accomplishments and significant contributions to protecting the environment. Connecticut's framework formed the basis for the establishment of EPA's Clean Energy Environment State Partnership effort, with 17 states now participating. Several states, notably North Carolina, New Mexico and Arizona are replicating Connecticut's stakeholder process and steering committee structure.
- Connecticut received high marks from environmental groups on the 2005 Report Card on Climate Change Action. Connecticut received a grade of B, the highest grade in New England and an improvement over the previous year. The report card is developed by a coalition of environmental advocates in the U.S. and Canada. It measures progress on meeting the goals of the NEG/ECP Climate Change Action Plan 2001.

### CLEAN ENERGY

- Some state agencies have installed clean energy systems at their facilities including a solar photovoltaic system at the DOT's garage in Hartford and a 25-kilowatt fuel cell at the DEP's Dinosaur State Park in Rocky Hill.
- State agencies have started to purchase clean energy through the grid. DEP became the first agency to take advantage of the clean energy option and is purchasing 100 percent clean energy for all DEP facilities. The energy comes from wind, landfill gases and small hydroelectric plants. This switch will reduce emissions of carbon dioxide by 3,716 tons a year.
- GSC agencies are encouraging their employees to purchase clean energy for their homes. Both DEP and CCEF have successful employee clean energy campaigns.



*DEP headquarters became the 14th Energy Star building in Connecticut.*

### **ENERGY CONSERVATION AND EFFICIENCY**

- The University of Connecticut and three of the universities in the Connecticut State University system have constructed new buildings that meet LEED standards. These buildings incorporate energy efficiency features and other “green” design elements. They include a science classroom building and a residential hall at Eastern Connecticut State University, a residential hall at Southern Connecticut State University, a science classroom building and a residential hall at Western Connecticut State University, and a football complex/training center at the University of Connecticut.

- Governor Rell directed the DPUC, Office of Consumer Counsel (OCC) and the Energy Conservation Management Board (ECMB) to create a working group and prepare a report on opportunities to reduce electric consumption at state facilities. The report, titled “Energy Efficient Opportunities in State Facilities,” was delivered to the Governor in February 2005. The Governor asked all agencies to reduce energy use by 10 percent in 2006. OPM initiated an Energy Roundtable to assist state agencies with implementing energy conservation and efficiency measures.

- OPM, the Department of Public Works (DPW) and the Institute for Sustainable Energy (ISE) at Eastern Connecticut State University completed efforts to determine energy use at several state agencies. Energy Star benchmarking was performed at six buildings in 2004: DEP, DAS, DPUC, OPM, DRS, and CT Innovations. In 2005 it was done at courthouses (27 buildings), regional vocational technical high schools (21 buildings) and college residence halls (16 buildings). In May 2005 EPA recognized the DEP headquarters building in Hartford as an Energy Star Building.

- Sales of energy efficient light bulbs and fixtures were held during 2005 at the State Office Building, at DEP, at 505 Hudson Street and 25 Sigourney Street - Department of Social Services. At these sales, more than 1,185 state employees purchased bulbs and fixtures that will reduce greenhouse gas emissions by approximately 53 million pounds (based on energystar.gov savings calculator).

### **REDUCTION OF VEHICLE MILES TRAVELED**

- The Department of Social Services saves about 50 hours per week in staff time and state car usage by using videoconferencing for administrative hearings instead of traveling to sites.

### **ENVIRONMENTALLY PREFERABLE PURCHASING**

- The Department of Administrative Services purchased more than 125 new hybrid gasoline-electric vehicles for the state fleet in May 2005, including the Toyota Prius, Honda Civic and Ford Escape. These vehicles have substantially improved fuel economy and lowered greenhouse gas emissions by 50 percent or greater compared to the ones they replaced. ■

# Next Steps – Call to Action

## There are many opportunities to reduce GHGs, and in Connecticut

many organizations and individuals are already involved in taking action on climate change, as the “success stories” included in this report and on [www.ctclimatechange.com](http://www.ctclimatechange.com) amply demonstrate. We urge you to use these success stories as models of what you can do, and we encourage you to take action now.

### *What You Can Do*

**CALCULATE YOUR “CARBON FOOT PRINT”** – Visit [www.ctclimatechange.com](http://www.ctclimatechange.com) and use the easy online calculator to see the amount of greenhouse gases you generate, based on your lifestyle and choices. This will provide a basis for your personal reduction goals.

**CHOOSE CLEANER ALTERNATIVES** – In transportation and in energy, we all need to get serious about reducing demand and choosing cleaner alternatives. Essentially all Connecticut ratepayers—towns, businesses, schools and individuals—can choose to support clean energy from wind power, small-scale hydroelectric power, and landfill gas through their electric distribution companies (Connecticut Light & Power or United Illuminating). Consider installing solar panels and taking advantage of the financial incentives offered by the Connecticut Clean Energy Fund. This will be a big step toward cleaner air and healthier communities. Cut energy use by benchmarking commercial buildings and purchasing EnergyStar appliances. Purchase a hybrid car or one that gets high miles per gallon. Use mass transit to reduce the number of cars on the road.

**REDUCE, REUSE, RECYCLE** – Simply reducing the amount of trash you dispose of and being diligent about recycling will have an impact on reducing greenhouse gases. Town public works department, and the DEP can provide information on how to recycle more, compost and prevent waste.

**ADVOCATE FOR NEW APPROACHES** – Transportation and land use planning will require cooperation among towns, rather than the town-by-town rivalry that only increases sprawl.

**MORE IDEAS** – such as buying locally grown food and reducing lawn fertilizers, as well as listings of educational events you can attend are available at [www.ctclimatechange.com](http://www.ctclimatechange.com). Check back often for new information. ■





Connecticut Climate Change

[www.ctclimatechange.com](http://www.ctclimatechange.com)