



VOLUME 4, ISSUE 2

POLLUTION PREVENTION VIEW  
A Newsletter from the Connecticut Department of Environmental Protection

SPRING 2004

# Connecticut's Climate Change Action Plan

**After the cold in New England this winter, it may be hard for some of us to believe that global warming is taking place. But the Earth's temperature has increased by about 1°F over the past 100 years and is continuing to rise at a record rate.**

This warming is already causing some changes in climate and many more are predicted – such as fluctuations in rainfall patterns, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

Global warming is already impacting Connecticut. The mean annual temperature in the state has increased 1.7° F in the past 100 years. Along Connecticut's southern shore, the temperatures increased 3.5° F in the past century. According to a recent report by Environmental Defense (Bracing for Climate Change in the Constitution State, 2004), Hartford's average temperatures by 2100 could be similar to those of Raleigh, NC. If this warming continues, regional air quality may worsen.

An increase in temperature, particularly during the summer, correlates with increased ground level ozone formation, which affects human health and the environment (e.g., higher asthma rates).

**Even though scientists have concluded that human activities are largely responsible for global warming, there are things we can do and already are doing right here in Connecticut to address the problem.** Governor Rowland and the other New England Governors and the Eastern Canadian Premiers worked together in 2001 on a climate change plan, pledging to reduce emission of greenhouse gases to 1990 levels by 2010 and 10% further by 2020. Continuing this effort, the Department of Environmental Protection (DEP), along with over 80 organizations, including businesses, non-profit organizations, state and local government agencies and academic institutions, worked to come up with solutions that reduce greenhouse gases in Connecticut.

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## WHAT IS CAUSING GLOBAL WARMING?

Human activities are contributing to global warming by adding large amounts of heat-trapping "greenhouse" gases to the atmosphere. The use of **fossil fuels** is the main source of these gases. When we drive a car, use electricity from coal-fired power plants, or heat our homes with oil or natural gas, we release **carbon dioxide (CO<sub>2</sub>)** and other greenhouse gases into the air.

In the last 150 years, we have increased the concentration of **CO<sub>2</sub>** in the atmosphere by 30% and we are now adding carbon dioxide emissions at 3-7 times the rate of the last 150 years.

# See Jane Run... and Save Energy



My friend Jane's days are probably a lot like yours: She gets up at 6:00 a.m., turns up the thermostat and starts a pot of coffee. After struggling to get her kids out of bed, Jane gets breakfast on the table while they take turns in the shower. When they leave the house Jane forgets to turn down the thermostat and the kids leave the lights on in their rooms, but they are already running a little late. Later in the evening Jane pays a few bills, shaking her head over the rising cost for heating and electricity, wondering if there is something she could do about it.





**So what can Jane and the rest of us do about energy that will be easy and have benefits for our families and the environment?**

Jane has a manual thermostat that she turns up and down. And when she forgets, her already large heating bill gets higher. Heating and cooling represents the biggest chunk of our home energy consumption.


## What to do?

Jane could replace her mechanical thermostat with an electronic setback thermostat – so she can program it once and forget about it. Setback or electronic programmable thermostats are affordable, easy to install and they allow the homeowner to choose the temperature for different times of the day.

 **Install and learn how to operate the features of your setback electronic thermostat so you can gain the most energy savings.** Setback thermostats allow you to lower the temperature at night and then bring the temperature up right before you awaken. Or if you are going on vacation, you can program the thermostat to lower your heating and cooling demands while you are away. For information on setback thermostats, go to [www.energy.ca.gov/efficiency/home\\_energy\\_guide/](http://www.energy.ca.gov/efficiency/home_energy_guide/).

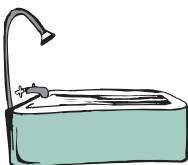
 **Turn the temperature down a few degrees in the winter and up a few degrees in the summer during the main occupancy time in your home.** Just

3 degrees of temperature may prevent the emission of nearly 1,100 pounds of carbon dioxide annually. If three degrees is too drastic all at once, try shifting just 1 degree at a time. For each degree lowered, turning the thermostat down may save you from 1% to 3% of your heating bill.

 **Bring your old mechanical thermostat to a household hazardous waste collection.** Most non-digital thermostats contain three to five grams of mercury. Mercury releases can pose a threat to human health and the environment. For a list of collections in your area, call your town's public works department or go to the DEP website, [www.dep.state.ct](http://www.dep.state.ct). Or check to see if your new thermostat comes with a no-cost offer to return your old mercury thermostat to the manufacturer for safe disposal.


## But what about all those hot showers that Jane's family takes?

**Water heaters are the second largest consumers of household energy.** Part of the problem is that the hot water is just sitting there in the tank waiting for us to use it – possibly working overtime to stay hot in a cold, drafty basement. And how hot does the water really need to be?



## What to do?

Jane could just turn down the temperature on the tank of her water heater. The EPA recommends keeping the tank at 120°. If the tank is old and not insulated consider putting a blanket on it so that energy is saved, along with the money it costs to heat it.

 **By adjusting the temperature down 10 degrees, you reduce emissions of carbon dioxide by 500 pounds a year.** That's a lot of heat pollution! By turning the water heater to 120° (and insulating if necessary), you could cut hot water costs by up to 10%. (If you have a dishwasher, check the owner's manual for the recommended temperature.)

## What about those lights that the kids keep leaving on?

**Lighting uses 10 percent of the electricity in the average home** and accounts for about 7 percent of the household energy costs. In homes heated by oil or gas, lighting's share of electricity use is even higher.

## What to do?

Jane could install compact fluorescent light (CFLs) bulbs or fixtures in her house. CFLs use, on average, about 1/3 the electricity and last ten times longer than standard incandescent bulbs. Standard bulbs convert only 10% into light – 90% of the energy they use is wasted as heat!



**Although CFLs cost 10 to 15% more than comparable incandescents, they last 15 to 20% longer. Major national and local retailers carry CFLs bulbs and fixtures.**

Simply look for the Energy Star label to make sure you are getting the most efficient product.

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# Towns and Cities Take the Lead

**From land use, to transportation, to building construction, local governments have major influence and control over energy consumption patterns.**

Even before the state's Climate Change report was completed, some Connecticut municipalities began taking a proactive approach to reducing their greenhouse gases (GHG). What these towns and cities have in common is that they joined the International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Protection and prepared an inventory of their GHG emissions. This inventory provided them with valuable information on their energy use. As a result, they were able to take action to reduce their energy costs and protect air quality – serving as models for other communities.

## **Among the highlights:**

- Stamford, Hamden, Hartford and New Haven are saving hundreds of dollars a year on their energy bills by replacing their traffic lights with energy-efficient LED traffic lights, which use 80 to 90 percent less energy and are certified under EPA's Energy Star Program. The cities are also saving tens of thousands of dollars a year on maintenance costs since the LED's last three to four times longer than the older traffic lights.
- A new hydrogen fuel cell facility at New Haven's wastewater treatment plant will save the city nearly \$700,000 on its electric bills over the next 10 years, while also supplying the heat necessary to run an expanded fats/oil/grease processing facility which will yield the city an extra \$200,000 in usage fees a year. The fuel cell will eliminate 948 tons of greenhouse gas emissions a year.

**For more information on ICLEI's Cities for Climate Protection, visit [www.iclei.org/us/ccp/](http://www.iclei.org/us/ccp/) or contact the DEP Office of Pollution Prevention at (860) 424-3297.**



- Fairfield has saved more than \$1 million on its energy bills the past two years thanks to energy efficiency improvements at 24 municipal and school buildings, as well as the town's wastewater plant. By mid-2004, the wastewater treatment facility will be generating more than \$500,000 of electricity a year using such alternative power sources as fuels cells, solar panels and methane gas.
- Hundreds of New Haven city residents are taking advantage of a Yale University program that provides employees with \$25,000 towards the purchase of homes that are within walking distance of the campus.
- Hartford and Windham are developing formal action plans that document where energy dollars are being spent and where energy reductions and cost savings can be found in buildings, streetlights, transportation, or trash disposal.
- New Haven has a new natural gas fueling station, is using low sulfur fuel in school buses and runs electric trolleys downtown.
- Hartford added 20 Honda Civic compressed natural gas (CNG) vehicles to the city fleet, resulting in a decrease in emissions equivalent to 8 tons of CO<sub>2</sub> as well as reductions in criteria air pollutants.

## WHAT'S NEW IN P2?

FROM THE CONNECTICUT DEP

### **Connecticut Hospital Environmental Roundtable Kick-Off**

The CT DEP, Hartford Hospital and Hospitals for a Healthy Environment (H2E) is sponsoring a forum. **How Hospitals Can Cut Costs and Reap Additional Benefits through Responsible Waste Management, on Monday, April 5, 2004.**

Mike Tortora from Hartford Hospital is speaking about what they have done to significantly cut waste management costs and how other hospitals can implement these proven solutions to save money, comply with regulatory requirements, and prevent pollution.

H2E is presenting an overview of their organization and how they can assist hospitals in their waste reduction efforts and Janet Bowen from EPA is talking about the agency's recent hospital environmental assessments. The forum will also serve as the kick-off meeting for the newly formed Connecticut Hospital Environmental Roundtable. The Roundtable will provide opportunities for hospitals to learn from each other by sharing ideas, presenting success stories, keeping up-to-date on available resources, and discussing environmental issues that affect the health care industry. The group will meet several times a year at a different host facility. **For more information, call Nan Peckham or Connie Mendolia at (860) 424-3297.**

# P 2 C A L E N D A R

## A S E L E C T I O N O F P 2 R E L A T E D E V E N T S

April 19, 2004

### Connecticut's First LEED-Certified Green Building – Mark Twain House Museum Center, Hartford

Building tour, award presentation and panel discussion sponsored by the CT Green Building Council from 5:30 – 7:30 pm. Registration is required. For more information, contact Kim Trella, DEP Office of Pollution Prevention at (860) 424-3234 or [kim.trella@po.state.ct.us](mailto:kim.trella@po.state.ct.us).

April 21, 2004

### Fuel Cell Kick-Off Event Dinosaur State Park Exhibit Center, Rocky Hill

Join us at this 10:30 am event to celebrate the operation of Dinosaur Park's new hydrogen fuel cell. Learn more about how the fuel cell works and why it's a cleaner way to light, cool and heat the Center. For more information, call Lynn Stoddard, DEP Office of Pollution Prevention at (860) 424-3236.

May 20, 2004

### New York Sustainability Tour.

Visit the first LEED certified high-rise apartment building in the country and a park located on reclaimed waterfront. Daylong tour is sponsored by the CT Green Building Council – registration is required. For more information, contact Kim Trella, DEP Office of Pollution Prevention at (860) 424-3234 or [kim.trella@po.state.ct.us](mailto:kim.trella@po.state.ct.us).

## Connecticut's... (continued from cover)

DEP and the other stakeholders came up with 55 recommended actions which are outlined in the January 2004 report: *Connecticut Climate Change Stakeholders Dialogue: Recommendations to the Governor's Steering Committee*. On March 9th, Governor Rowland announced his endorsement of 38 of these recommendations that the State will pursue. These include:

- Increasing the amount of renewable energy supplied into our electric grid,
- Testing the use of bio-diesel as an alternative fuel through a pilot program,

- Raising vehicle emission standards in CT,
- Upgrading residential and commercial energy building codes and set high performance standards for schools and state-funded buildings, and
- Improving recycling and waste reduction efforts.

*To view the above-mentioned reports or for actions you can take to reduce global warming, you can visit these web-sites: [www.ctclimatechange.com](http://www.ctclimatechange.com) and [www.environmentaldefense.org](http://www.environmentaldefense.org)*



## See Jane Run...

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**To gain the most efficiency, you should install fluorescents in places where they will be on for several hours at a time. If every home in America replaced their 5 most used bulbs with efficient CFLs, we would save enough energy to light 34 million homes for one year.** This would prevent the emission of more than one trillion pounds of greenhouse gases – and save the average homeowner about \$60 per year on energy costs! For more information, go to [www.energystar.gov](http://www.energystar.gov).

If we all join Jane in making these changes, we will be on our way to saving energy and money – while doing our part towards a cleaner and healthier environment. ■



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P2 View is published by the Connecticut Department of Environmental Protection, Office of Pollution Prevention. Editor: Judy Prill; Contributors: Nan Peckham, Mary Sherwin, Connie Mendolia, Tom Metzner, Lynn Stoddard and Kim Trella.

*Publication of this newsletter is funded by a grant from the U.S. EPA.*