



City of Cambridge

O-10

IN CITY COUNCIL

December 16, 2002

VICE MAYOR DAVIS
COUNCILLOR DECKER
COUNCILLOR GALLUCCIO
COUNCILLOR MAHER
COUNCILLOR MURPHY
COUNCILLOR REEVES
COUNCILLOR SIMMONS
MAYOR SULLIVAN
COUNCILLOR TOOMEY

ORDERED: That the Council approve the Climate Protection Plan submitted by the City Manager and prepared in consultation with the Climate Protection Task Force, and further adopts the target outlined in the plan of reducing greenhouse gas emissions in Cambridge by 20 percent below 1990 levels by the year 2010.

In City Council December 16, 2002.

Adopted by the affirmative vote of nine members.

Attest:- D. Margaret Drury, City Clerk.

A true copy;

D. Margaret Drury

ATTEST:-

D. Margaret Drury
City Clerk

Vice Mayor Davis requested the city staff to outline the Climate Protection Plan.

The committee heard from John Bolduc who stated that on May 24, 1999 the City Council passed a resolution to join the Cities for Climate Protection Campaign as a participant. Cambridge was one of eighteen Massachusetts communities to join this campaign. Mr. Bolduc distributed information to the committee (**ATTACHMENT A**) outlining strategies and action in the areas of transportation, land use, waste management and implementation. The effects of climate change are showing in the thinning of the polar ice caps. A New England Regional Assessment was done on climate. Over the next 100 years climate will increase 6 to 8°. Since 1900 the temperature has increased by 1°. These changes affect the climate parameters.

Vice Mayor Davis stated that the 1990's the climate was the hottest. Mr. Bolduc responded that the northern climate is seeing the climate increase now. He described reasons to take action, such as sea level rising and beaches being destroyed. Greenhouse gas emissions look at the overall environmental footprint. The greenhouse gas (GHG) inventory show that 63% of GHG is associated with commercial and residential use.

Councillor Murphy questioned the GHG reduction. Mr. Bolduc stated that the plan is to reduce emissions by 20% below the 1990 level by the year 2010. Some of the strategies to accomplish this will be to:

- Switch from fossil fuel to air and wind;
- Become more efficient;
- Reduce the amount of automobile use; and
- Reduce waste.

Vice Mayor Davis asked who could use district steam. Mr. Bolduc responded that the East Cambridge steam station has steam lines that serve large users. The steam station does not have to have its own boiler, which is more efficient. Other entities could buy into the steam station. Steam, he said, is an unregulated energy source. Harvard University sets steam from the Blackstone Steam Plant. The Housing Authority utilizes an efficiency program where savings is kept as an incentive. Vice Mayor Davis asked if Energy Service Companies (ESCO) funding is used. Mr. Bolduc stated that ESCO funds are used to fund other programs. Ms. Carmean referred to a model that is used in the School Department. At this time Vice Mayor Davis made the following motion:

ORDERED: That the Cambridge Housing Authority and the School Department be invited to attend a Health and Environment Committee meeting to discuss their efficiency upgrade models.

The motion carried on a voice vote.

Mr. Bolduc stated that MIT received a grant from a renewable energy trust. LED traffic signals are being installed. The second phase of LED for North Mass. Avenue has started.

Vice Mayor Davis stated Cambridge needs to find out if it will lose reimbursement from NSTAR. Mr. Bolduc stated that Mass. Energy would be offering an energy-switching program. Councillor Murphy stated that the problem is deregulation. This is risky for consumers. In 2005 every standard offer disappears stated Mr. Bolduc.

Mr. Bolduc now concentrated on the transportation actions. Some of the actions included:

- The Parking and Transportation Demand Management Ordinance;
- EZ Ride Shuttle; and
- Using more natural gas.

Ms. Peterson informed the committee of a pilot program that will use alternative fuel vehicles for the Public Works and Water Departments. The cemetery diesel tank will be used to refuel these vehicles.

On land use actions, Mr. Bolduc stated that it is hard to quantify these reductions. Promotion of cool roofs that absorb less sunlight is a land use action.

Vice Mayor Davis stated that 30 Cambridgepark Drive should be added as a green building.

MIT adopted a Leadership in Energy and Environmental Design (LEED) Project review. LEED is a nationally recognized rating system to provide guidelines to evaluate buildings for their environmental and energy performance. Vice Mayor Davis stated that all refurbished or renovated buildings should become energy efficient. Ms. Peterson stated that a Green Roundtable has been formed to establish regulations for renovation of buildings. LEED focuses on new construction said Mr. Bolduc. Renovation is cutting edge.

Cambridge has an active recycling program stated Mr. Bolduc. Vice Mayor Davis stated that she has scheduled a meeting on recycling. She wants to focus on recycling with the hospital, schools, MIT and Harvard University.

Councillor Murphy asked how does the 33% figure affect other communities with solid waste. Vice Mayor Davis responded that the state's goal is 60%. Ms. Peterson stated that some communities in western Massachusetts deal with yard waste. Commercial recycling will get more focus in Cambridge. Vice Mayor Davis asked if the hospital and schools are part of the commercial sector. Ms. Peterson responded that the school is included in the commercial sector, but not the hospital.

Mr. Bolduc addressed the issue of implementation. The city needs to lead by example. The task force needs to engage the whole community including businesses and institutions. Burlington, Vermont has a challenge of 10%. Cambridge is thinking of using this same initiative. Ms. Carmean stressed a logical step-by-step approach to the issue of implementation. Mr. Bolduc informed the committee that Harvard University has a new campus initiative. The faith community has an energy program. Cambridge, he said, needs to partner with the International Council for Local Environmental Initiatives (ICLEI). The Climate Protection Plan needs to be monitored and a status report needs to be provided.

Councillor Murphy stated that the plan has ambitious goals. Brainstorming is very important to the plan. He asked about the composition of the coordinating committee. Mr. Bolduc stated that the committee consists of a membership of 7-9, including representatives from Harvard and MIT. Professionals may not be used to prevent a conflict of interest. Ms. Peterson stated that representatives of the city must be also included on the committee.

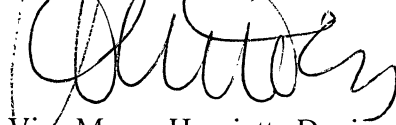
Vice Mayor Davis stated that Cambridge should review Harvard's plan to encourage every efficient initiatives. The Harvard plan has a savings payback of five years.

Ms. Peterson stated that the solid waste reduction is a radical change. This area needs to be evaluated.

Vice Mayor Davis thanked all attendees.

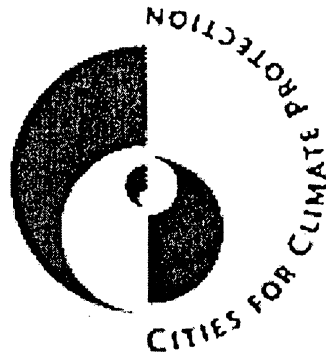
The meeting adjourned at eleven o'clock and fifty minutes a.m.

For the Committee,

A handwritten signature in black ink, appearing to read 'Henrietta Davis', written over a circular stamp or seal.

Vice Mayor Henrietta Davis

Chair



CAMBRIDGE CLIMATE PROTECTION PLAN

**Presentation to
Health & Environment Committee
November 22, 2002**

THE PROBLEM = EARTH IS WARMING ABRUPTLY

Signs of Climate Change

- ◆ Global average temperature has increased about 1.1 degree F since 1900.
 - ◆ The 20th Century was the warmest during any century over the past 1,000 years, with the 1990s being the warmest decade and 1998 the warmest year
 - ◆ Arctic summer sea ice thickness has declined about 40% since the 1950s
 - ◆ Glaciers in non-polar regions are in general retreat
 - ◆ Rising sea level
 - ◆ Rising greenhouse gas concentrations
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MASSACHUSETTS CCP PARTICIPANTS

Amherst

Arlington

Barnstable

Boston

Brookline

Cambridge

Falmouth

Gloucester

Lynn

Medford

Newton

Northampton

Salem

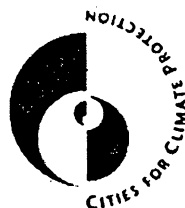
Shutesbury

Somerville

Springfield

Watertown

Williamstown

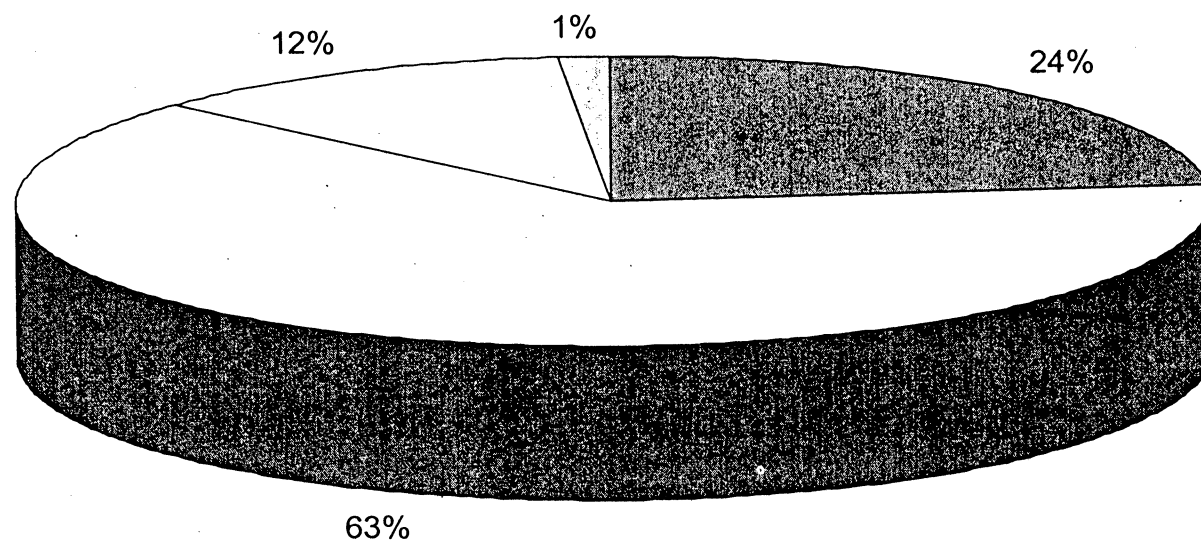


REASONS TO TAKE LOCAL ACTION

- ◆ Climate change will cause local and regional impacts
- ◆ Actions that reduce greenhouse gas emissions provide multiple benefits including financial savings, conventional air pollution reductions, improved livability of communities
- ◆ Gauging local environmental footprint
- ◆ Network with local governments around the state, region, nation, and world



1998 Cambridge Greenhouse Gas Emissions Tons of CO₂



☒ Residential Energy Use	☐ Commercial/Industrial Energy Use
☐ Transportation	☐ Waste Disposal

Cambridge GHG Emissions

1990

1.68 million tons
eCO₂

1998

1.76 million tons
eCO₂

2010

2.16 million tons
eCO₂



GHG REDUCTION STRATEGIES & ACTIONS

Emissions reduction target = 20% below 1990 levels by 2010

Fuel switching

Efficiency

Reduce VMT

Reduce waste
generation &
disposal



- ◆ Energy efficiency upgrades
- ◆ Purchase & install renewable energy
- ◆ Green buildings
- ◆ TDM programs
- ◆ Alternative fuels
- ◆ Recycling & waste prevention
- ◆ Urban forest management
- ◆ Environmental purchasing policies



Energy Strategies

- ◆ Improve electricity efficiency by 12.5% and natural gas and fuel oil use by 10%
- ◆ Purchase 20% of electricity from green power

Energy Actions

- ◆ Energy management, LEDs, CFLs,
- ◆ Energy Star business recruitment
- ◆ Energy efficiency purchasing policies
- ◆ Install renewable energy systems & buy green power
- ◆ Increase use of district steam



Current & Past Energy Actions in Cambridge

- ◆ GreenLights Program
- ◆ Housing Authority efficiency upgrades
- ◆ Harvard revolving loan fund & halogen torchiere replacements
- ◆ PV Installations: Porter Square Shopping Plaza, UCS Headquarters, Greenworks Building, Alewife Garage, City Hall Annex
- ◆ LED traffic signal conversions on Hampshire Street and Broadway
- ◆ Participated in Mass. Energy Consumers Alliance consumer aggregation planning study

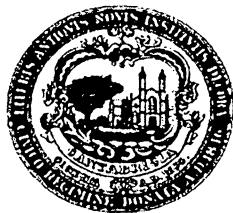


Transportation Strategies

- ◆ Reduce VMT by 10%
- ◆ Improve fuel economy to 40 mpg

Transportation Actions

- ◆ TDM programs, zoning requirements
- ◆ Improve bicycle & pedestrian facilities
- ◆ Parking incentives & disincentives
- ◆ Education programs
- ◆ Green fleets policies, alternative fuels, efficient vehicles
- ◆ Anti-idling campaign
- ◆ Promote and enhance public transit



Current & Past Cambridge Transportation Actions

- ◆ Cambridge Parking & Transportation Demand Management Ordinance
- ◆ Transit-oriented development
- ◆ Pedestrian & bicycle improvements
- ◆ EZ Ride Shuttle
- ◆ Alternative fuel vehicles



Land Use Strategies

- ◆ Mixed use, transit-oriented development
- ◆ Optimize vegetation to shade buildings and reduce UHI
- ◆ Reduce heat island effect through design of built environment
- ◆ Promote transit-oriented regional planning

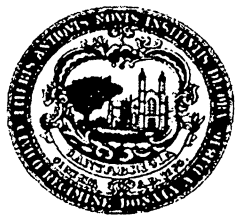
Land Use Actions

- ◆ Zoning changes
- ◆ Open space acquisition & protection
- ◆ Maintain and expand tree canopy
- ◆ Promote cool roofs
- ◆ Promote green buildings



Current & Past Cambridge Land Use Actions

- ◆ Comprehensive rezoning
- ◆ Green Ribbon Committee
- ◆ Tree maintenance & education
- ◆ Tree canopy assessment
- ◆ LEED: Project Review guidance; MIT policy
- ◆ Green buildings: Cambridge Co-housing, Genzyme, City Hall Annex, Main Library expansion, Gravestar/Nightstage property, Harvard projects, Stata Center



Waste Management Strategies

- ◆ Prevent & minimize waste
- ◆ Increase recycling rate
- ◆ Reuse products
- ◆ Composting
- ◆ Environmental purchasing

Waste Management Actions

- ◆ Implement City waste prevention program
- ◆ Conduct waste composition studies
- ◆ Develop Community Based Social Marketing programs and business block projects



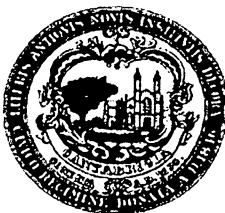
Current & Past Cambridge Waste Management Actions

- ◆ City Recycled paper purchasing policy
- ◆ Community recycling rate = 33%
- ◆ Harvard & MIT recycling programs



Implementation

- ◆ City leadership
- ◆ Citywide campaign focused on businesses, institutions, & residents
- ◆ Build on existing efforts
- ◆ Network with other communities & organizations
- ◆ Monitor progress
- ◆ Establish coordinating committee



Next Steps

- ◆ Establish coordinating committee to advise City on implementation, especially community engagement
- ◆ Begin update to GHG emissions inventory
- ◆ Energy management workgroup
- ◆ Fleet management workgroup: CNG & biodiesel
- ◆ Complete LED traffic signal conversions
- ◆ Green building guidelines for renovations
- ◆ Complete City Hall Annex & Main Library as green buildings
- ◆ Collaborate with MIT Laboratory on Energy & Environment on community-based social marketing approaches
- ◆ Support formation of New England CCP network



City of Cambridge

HEALTH AND ENVIRONMENT

*Vice Mayor Henrietta Davis, Chair
Councillor Anthony D. Galluccio
Councillor Brian Murphy*

In City Council December 16, 2002

The Health and Environment Committee held a public hearing on Friday, November 22, 2002, beginning at ten o'clock and thirty minutes A.M. in the Sullivan Chamber.

The purpose of the meeting was to conduct a roundtable discussion for the City Council members with city staff on the proposed Climate Protection Plan.

Present at the hearing were Vice Mayor Henrietta Davis, Chair of the Committee, Councillor Brian Murphy, Julia Bowdoin, Assistant to the City Manager, Lisa Peterson, Commissioner of Public Works, John Bolduc, Environmental Project Planner, Community Development Department, Rosalie Anders, Environmental and Transportation Division, Community Development Department, Garrett Simonsen, Assistant to the Mayor and the Vice Mayor and Donna P. Lopez, Deputy City Clerk.

Vice Mayor Davis convened the hearing and explained the purpose. At this time Vice Mayor Davis opened the meeting to public comment.

Ian Todreas, a member of the Climate Protection Task Force, stated that he supported the plan. He informed the committee that his background is in energy efficiencies, transmission and renewable energy. He worked with an agency to reduce greenhouse gasses. He encouraged the city to implement and act on the plan.

Gwen Noyes, a member of the Climate Protection Task Force, stated that her background is she is a developer of housing. Her development will be the first in the country to get "green certification". She supported the plan. She stated that the sooner the city has an energy coordinator the sooner the plan will be enhanced. She supported the Actions and Possible Action of the plan.

Karen Carmean, a member of the Climate Protection Task Force, stated her support for the adoption of the plan. She suggested that this plan be placed on the city's website to collect more concrete ideas. She also urged adoption by the city of the Tree Protection Ordinance. More trees, green and water ideas will enhance the plan.

At ten o'clock and forty-five minutes A.M. Vice Mayor Davis recessed the meeting.

At ten o'clock and fifty-five minutes A.M. the meeting was reconvened.

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Committee Report #1

Committee Report from Vice Mayor Henrietta Davis, Chair of the Health and Environment Committee, for a meeting held on November 22, 2002 to conduct a roundtable discussion for the City Council members with city staff on the proposed Climate Protection Plan.

In City Council December 16, 2002

**REPORT ACCEPTED.
PLACED ON FILE.
SEE ORDER #10.**