Central Connecticut

Inventory of Energy Use and Greenhouse Gas Emissions

Base Year 2000

ICLEI Local Governments for Sustainability

Cities for Climate Protection

CCRPA

Prepared for:

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Introduction

Climate Change Science & Policy

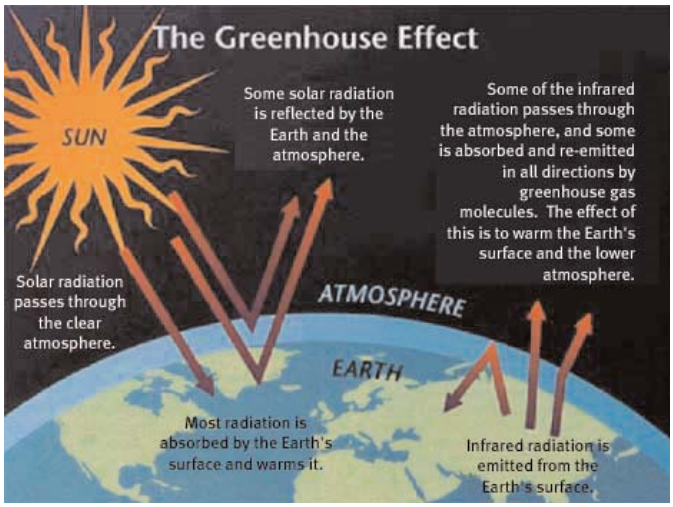
Climate Change Science

Climate change is emerging as one of the foremost environmental issues of our time. Scientists from the United Nations Intergovernmental Panel on Climate Change and the US National Academy of Sciences have reported that climate change is in fact occurring and that human activities play a significant role.

Climate change is caused by the accumulation of heat-trapping "greenhouse gases" (GHGs) in the Earth's atmosphere. Emissions of these gases, which include carbon dioxide and methane, among others, have risen dramatically in the last century due in large part to the burning of fossil fuels for energy. GHGs are also produced in vehicle exhaust and by the disposal of solid waste in landfills and incinerators.

Global impacts of climate change include rising sea-levels, severe weather patterns, and deadly heat waves. The New England region is predicted to experience a temperature increase of 6-10 °F over the next 100 years. This shift in climate will affect agriculture and water supplies, alter forest composition, and may increase the risk of insect-borne diseases such as West Nile Virus.

The potential costs of managing these changes, in terms of public works projects, disaster response, and insurance premiums, are enough to encourage governments to take preventative action.



Climate Protection Policy

In 2001, the Conference of New England Governors & Eastern Canadian Premiers published a Climate Change Action Plan and set a goal of reducing GHG emissions to 1990 levels by 2010. To work toward this goal, the Governor of Connecticut convened a group of leaders from state government, businesses, and not-for-profits to develop a set of recommended actions to reduce the State's GHG emissions. The final report, "CT Climate Change Stakeholders Dialogue: Recommendations to the Governor's Steering Committee" was delivered in December 2003.

In September 2003, recognizing both the need and opportunity for local climate protection planning, the Board of Directors of the Central Connecticut Regional Planning Agency (CCRPA) passed a resolution to join the Cities for Climate Protection (CCP) Campaign. CCP is a program of ICLEI—Local Governments for Sustainability, an international association of local governments that works to achieve sustainable solutions to environmental problems. Started in 1993, the CCP Campaign now has over 550 participant cities worldwide, with over 145 in the United States.

In 2004, grant funding from the Emily Hall Tremaine Foundation allowed the CCRPA to complete Milestone 1 of the CCP program—the emissions inventory—the results of which are summarized in this report. The CCRPA represents the municipalities of Berlin, Bristol, Burlington, New Britain, Plainville, Plymouth, and Southington.

ICLEI's Cities for Climate Protection Campaign: Five-Step Framework

1) Conduct a GHG emissions inventory
2) Set a reduction target
3) Develop a Local Action Plan
4) Implement Local Action Plan
5) Monitor and evaluate results

The GHG emissions inventory consists of two parts: 1) an analysis of GHG emissions produced by all sectors in each community, and 2) a detailed breakdown of GHG emissions produced specifically by the municipal governments of each city and town. The purpose of this two-tiered inventory approach is to provide a big picture of community-wide emissions in the towns, yet also give municipal leaders concrete examples of how their day-to-day decisions affect emissions within their government. The detailed government analyses consider the costs associated with various energy uses, allowing policy-makers to visualize the connections between energy efficiency, cost-savings, and reduced emissions. By taking action to reduce emissions from their own operations, local governments can set an example for the citizens they represent.

This emissions inventory is intended to aide policy-making. Methodology and assumptions differed slightly for each town, making it difficult to draw precise comparisons between towns. Detailed descriptions of the methodology are available on the CCRPA website, www.ccrpa.org, as Appendices to this report. The graphs contained in this report are intended to provide a general idea of how GHG emissions are produced on a local level, and case studies from each town offer ideas of actions that can be taken to reduce emissions.

What you will find in this Report

Inventory Basics

End-use energy data

GHG emissions were estimated by analyzing end-use energy figures. Instead of basing emissions on the amount of energy produced by a power plant or the total sales of fuel oil to the region, for example, this inventory looks at how that energy is eventually used. Does the electricity go toward streetlights or toward home appliances? Is the fuel oil used for home heating or to heat a commercial office building? Breaking emissions down into end-use categories allows planners to target specific areas where emissions reductions can be made.

Clean Air and Climate Protection software developed by ICLEI & Torrie Smith Associates was used to convert end-use energy figures into GHG emissions estimates. To simplify comparisons, all GHG emissions are calculated as tons of equivalent carbon dioxide (eCO_2).

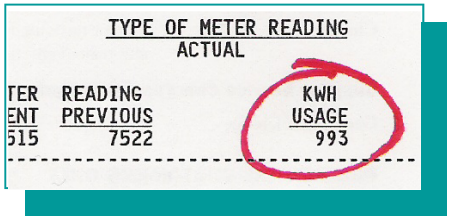
Where do the numbers come from?

Community-wide Inventories

For the residential, commercial, and industrial sectors, electricity and natural gas usage data were obtained from utility companies. Estimates of heating oil, propane, kerosene, coal, and fuelwood consumption were calculated from federal Energy Information Administration data. For the transportation sector, vehicle-miles traveled were estimated using models developed by the Connecticut Department of Transportation. For the waste sector, tonnage data was obtained from the Bristol Resource Recovery Facility, which serves the entire Central Connecticut region.

Municipal Government Inventories

Energy use data for buildings and streetlights were obtained from the utility bills of various municipal departments. Vehicle

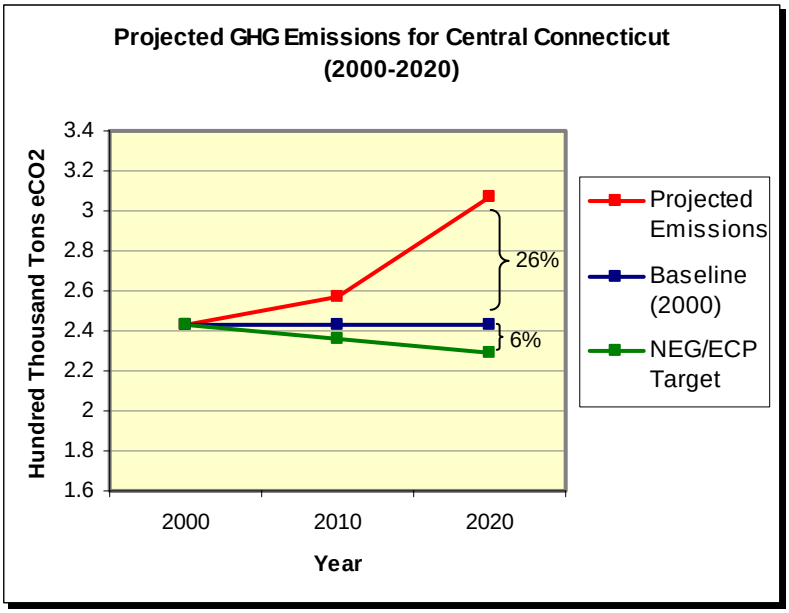


fleet emissions estimates are based on the gallons of gasoline and diesel fuel used along with a breakdown of types of vehicles in the municipal fleet. Emissions from employee commutes were estimated based on surveys of employees in each town, asking how many miles they drove to work each day, and in what type of car. The waste sector was not included in the municipal government inventory; however, local governments do produce solid waste, and pay the associated tipping and disposal costs. Decreasing solid waste can decrease GHG emissions and save taxpayer money.

Emissions Forecast

Base Year 2000

This GHG emissions inventory is the first conducted in the Central Connecticut region, and therefore establishes a baseline against which future emissions can be measured. The majority of the data collected was for the fiscal year 1999-2000. In some cases, however, 2000 data was unavailable and data from more recent years were substituted. In these cases, an effort was made to determine how much change had occurred since 2000, and these considerations are described in Appendices to this report, available at www.ccrpa.org.



Emissions Forecast

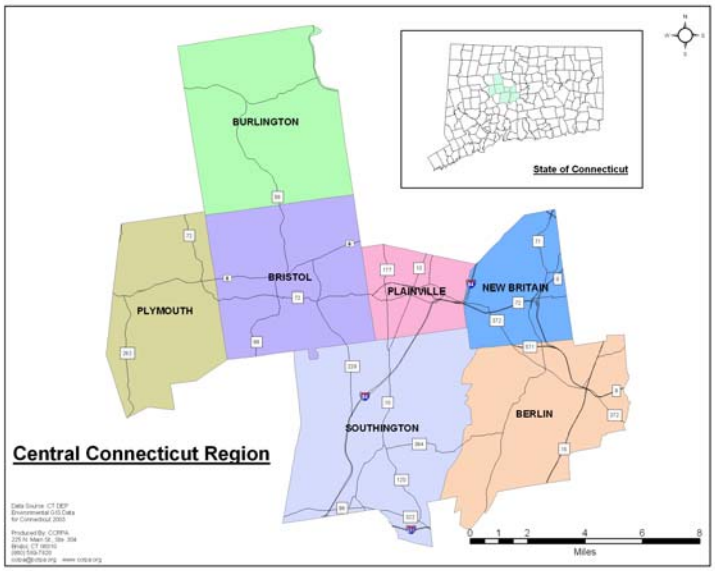
If current trends continue, GHG emissions will increase in the Central Connecticut region from 2,431,490 tons eCO_2 in the year 2000, to 3,067,292 tons eCO_2 in 2020. Significant changes in our energy consumption patterns are needed to reverse these trends and help meet the target set by the Conference of New England Governors & Eastern Canadian Premiers of returning emissions to 1990 levels by the year 2010.

Fortunately, measures that reduce GHG emissions tend to bring co-benefits that are appealing to those who may not recognize the need for climate protection. Improved public transportation systems reduce vehicle emissions and decrease traffic congestion. Preserving green spaces helps carbon sequestration while making communities more pleasant to live in. Promoting renewable energy sources can drastically cut emissions from power plants, improve air quality, and reduce our reliance on foreign fuel sources. Increased recycling minimizes emissions from incinerators and lessens the need for landfills, sites that are often plagued by environmental injustice issues.

According to UN estimates, a 75-85% reduction in GHG emissions is needed to stabilize the global climate over the long term. This inventory is a first step toward understanding how our activities contribute to climate change and what actions we can take to work toward a cleaner, cooler world.

Regional Greenhouse Gas Profile

Central Connecticut



The Central Connecticut Region covers 163.6 square miles, with a population of 226,695 in the year 2000. The two cities of Bristol and New Britain are commercial and industrial centers, while the other five towns in the region are suburban communities with a wide range of economic, political, and social conditions.

Located near the capital city of Hartford, and at the interchange of major interstates 84 and 91, the Central Connecticut Region has great potential for development programs that will strengthen the economy and improve the quality of life for its residents. By incorporating aspects of climate protection planning into the development process, the region can work toward a more sustainable infrastructure that is ready for the challenges of the 21st century.

INVENTORY HIGHLIGHTS

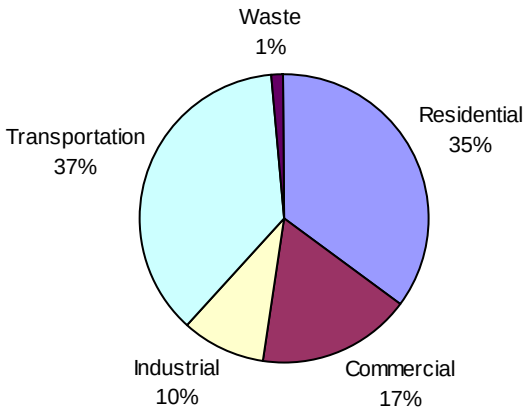
There was a total of 2,431,490 tons of eCO_2 produced in the region in the year 2000, corresponding to energy use of 28,324,073 mmbtu (million british thermal units).

Emissions by Sector

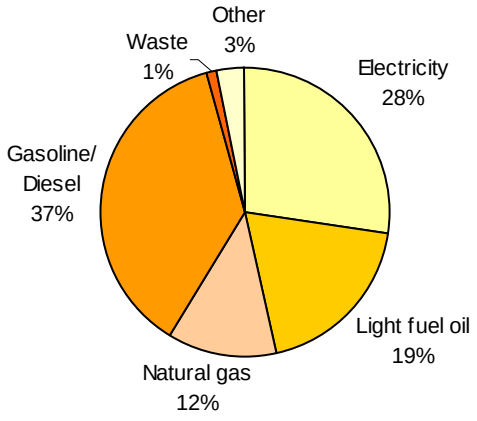
Residential: Approximately 35% percent of regional greenhouse gas emissions come from the residential sector, emphasizing the importance of outreach programs to educate the public about increasing energy efficiency and reducing emissions. Over 95% of residential emissions are associated with electricity and heat used in homes. Simple actions like shutting off lights and computers when not in use, and making sure windows and doors are well sealed, can make a huge difference in energy costs and emissions.

Commercial: The commercial sector comprises the majority of non-residential buildings, including office complexes, shopping malls, municipal buildings, and institutions such as hospitals and private universities. The majority (57%) of commercial emissions are associated with electricity use from lighting and appliances.

Central Connecticut GHG Emissions by Sector

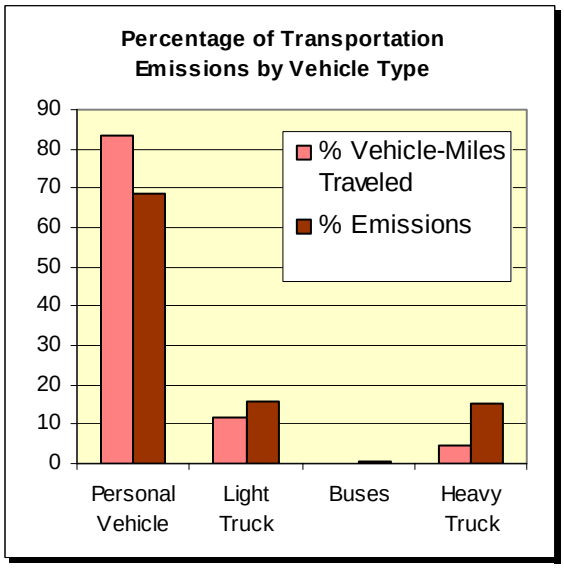


Central Connecticut GHG Emissions by Source



Industrial: The majority (55%) of industrial emissions are due to electricity usage. However, industrial establishments also use fuels such as propane, kerosene, and heavy fuel oil that are responsible for 15% of industrial emissions in the region.

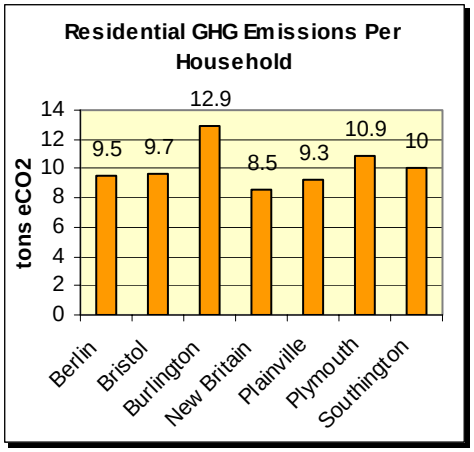
Transportation: In the year 2000, drivers logged 1.5 billion miles on Central Connecticut roads, including major interstates. The resulting GHG emissions totaled 884,839 tons of eCO_2, or 37% of total regional emissions. Vehicle emissions differ depending on the type of vehicle; for example, an 18-wheeler produces more GHGs per gallon of fuel than a mid-size sedan. Personal vehicles are responsible for 69% of transportation emissions, making it clear that finding ways to persuade drivers to purchase more fuel-efficient vehicles is a fundamental step in reducing GHG emissions.

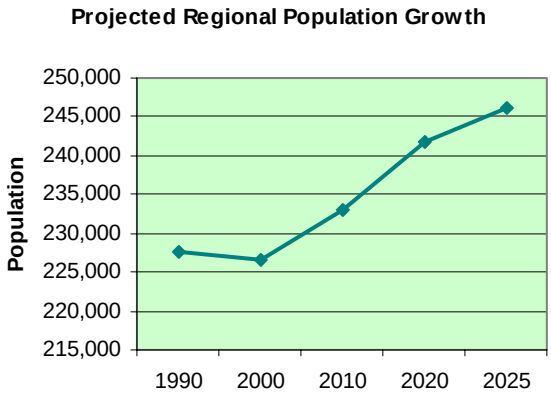


Waste: The majority of solid waste in the region is incinerated at the waste-to-energy Bristol Resource Recovery Facility, which emits GHGs in the burning process.

Per Capita Emissions

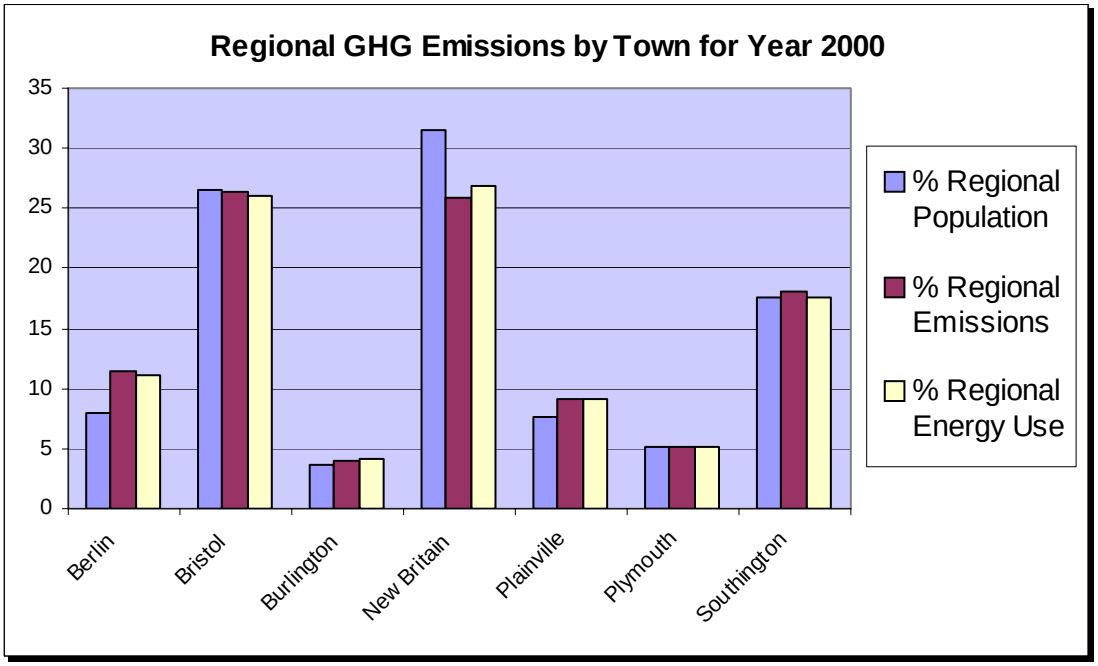
On average, each Central Connecticut resident is responsible for 10.7 tons of eCO_2 per year from driving, energy use at home and at work, and waste production. Residential emissions per household show an interesting correlation with average household income: higher incomes tend to be associated with greater emissions.





Emissions & Population

GHG emissions correspond closely to population—more people means more energy use, and when this energy comes from the burning of fossil-fuels, it results in higher GHG emissions. The challenge for communities is to find ways to increase energy efficiency and promote clean renewable energy sources, in order to reduce emissions while meeting the needs of growing populations.



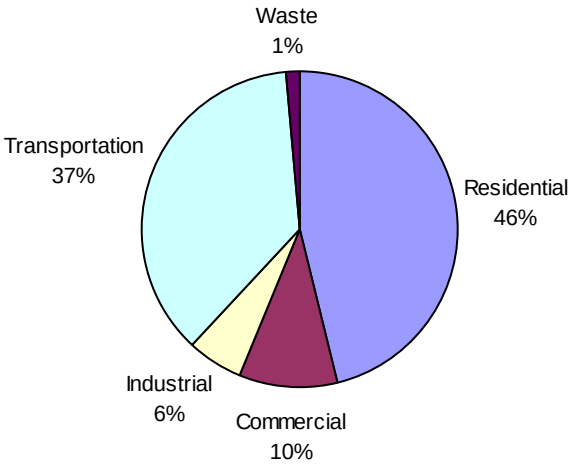
Town
Greenhouse Gas
Profile

Plymouth

At a Glance:

- 2000 Population: **11,634**
- Community-wide GHG Emissions : **104,969 tons eCO_2**

Plymouth Community Emissions



Plymouth is a small, mainly residential town, with the residential and transportation sectors accounting for 83% of total GHG emissions. The municipal government emissions inventory for Plymouth is not yet complete; town officials are in the process of gathering data for future analysis.

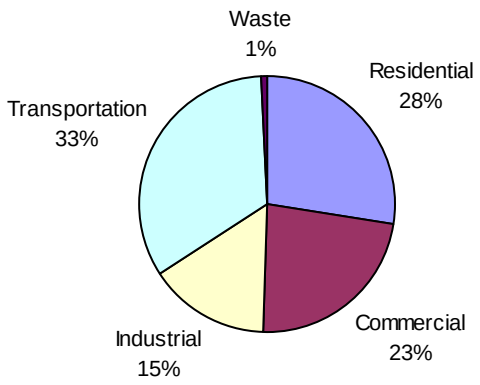
Town
Greenhouse Gas
Profile

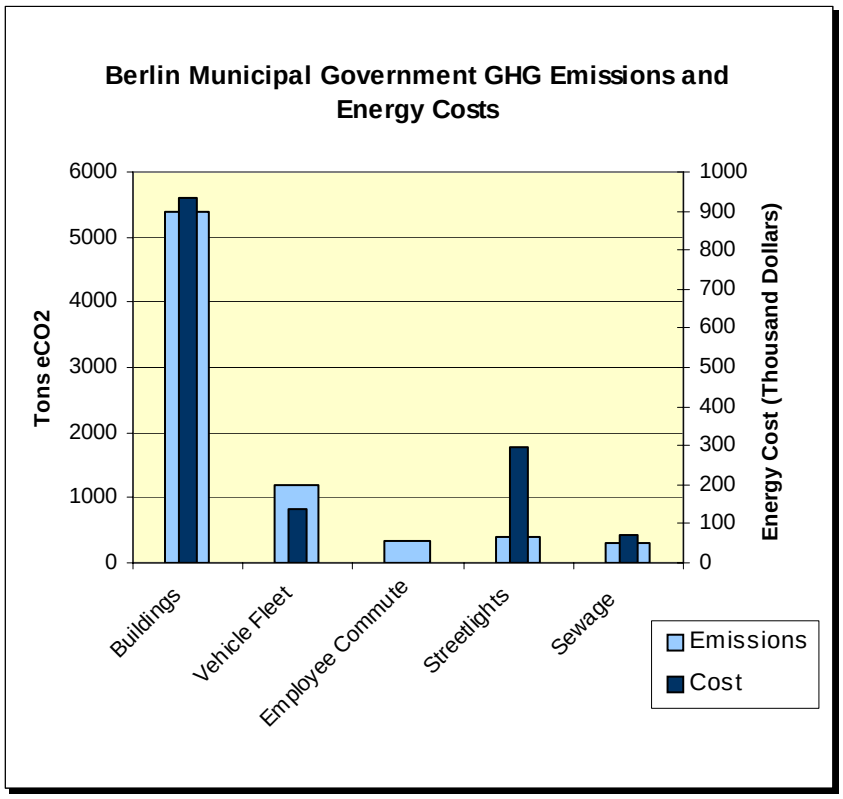
Berlin

At a Glance:

- 2000 Population: **18,215**
- Community-wide GHG Emissions : **223,145 tons eCO_2**
- Municipal government GHG Emissions: **7,717 tons eCO_2**

Berlin Community Emissions





Notes:
1) Employee commute does have an associated cost, but it is not included in these results because it is not a part of the municipal budget, but a personal expense of the employees.
2) The town of Berlin receives its water through the Kensington and Worthington Fire Districts, therefore the emissions produced by electricity used for water pumping *are not* included in the municipal government analysis.

Berlin has a strong commercial and industrial base, with several large corporate headquarters including that of Northeast Utilities, and a number of industrial parks. Given the rapidly expanding business sector, the Town has made open space preservation a priority, an action often recommended in climate protection planning.

The majority of municipal government emissions typically come from the energy used to provide electricity and heat to buildings. In Berlin, buildings are responsible for 71% of municipal emissions.

Emissions Reduction Measure: Alternative Fuel Vehicles

In 1999, at the suggestion of its natural gas utility company, the Town of Berlin purchased five 1999 Ford Crown Victoria police cruisers that run on compressed natural gas. The purchase was made through the Connecticut Department of Transportation's Alternative Fuel Vehicles program, which provides incentives for municipalities to purchase less polluting vehicles.

Compressed natural gas vehicles emit far fewer GHGs and criteria air pollutants. Many other Connecticut towns, including New Britain, participated in the program and purchased a variety of alternative fuel vehicles.

Natural gas compressor and pump outside the Berlin Municipal Garage.

In Berlin, Connecticut Natural Gas installed a compressor and natural gas pumping system at the municipal garage free of charge. The new cruisers were such a success that the town independently purchased a natural gas maintenance van in 2003, and is in the process of putting out a bid for another. Natural gas vehicles require a slightly higher initial investment, but according to Berlin Chief Mechanic Jim Simons, the vans begin to pay for themselves at around 27,000—30,000 miles. If gasoline prices remain near $2.00 a gallon, compressed natural gas vehicles will prove to be even more cost-efficient.

	Emissions	Annual Fuel Cost
5 Standard Police Cruisers	125 tons eCO_2	$15128
5 CNG Cruisers	93 tons eCO_2	$12751
Estimated Savings over 5-Year Period	190 tons eCO_2 (26% reduction)	$11885 (16% reduction)

Additional vehicle policies that reduce GHG emissions include:

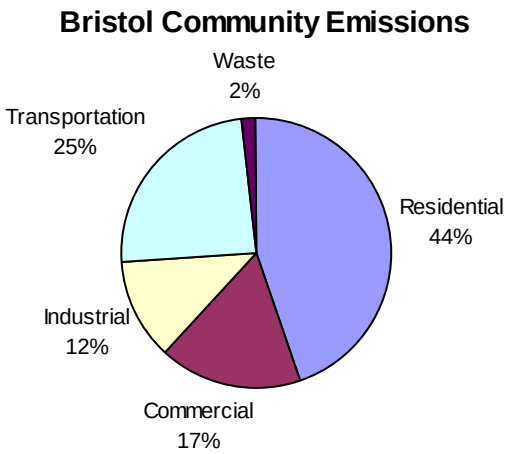
- Right-sizing fleets—making sure that larger more inefficient vehicles are not being used where they are not necessary.
- Adopting language that requires all new vehicle purchases to be the most efficient model available for the job.
- Encouraging employee carpooling and alternative modes of transportation such as walking, biking, or public transportation.

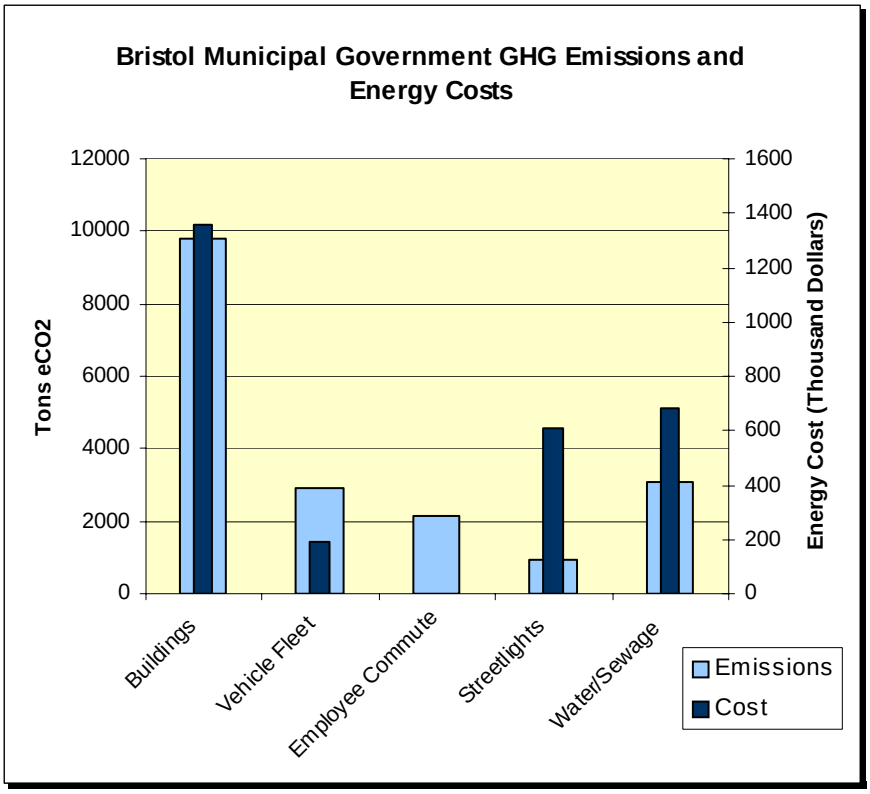
City
Greenhouse Gas
Profile

Bristol

At a Glance:

- 2000 Population: **60,062**
- Community-wide GHG Emissions : **539,295 tons eCO_2**
- Municipal government GHG Emissions: **18,749 tons eCO_2**



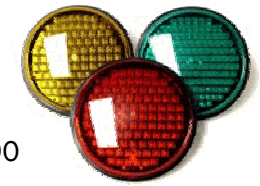


Bristol has the largest industrial sector of the seven towns in the region, accounting for 27% of total regional industrial emissions and 12% of the City's total emissions.

Streetlights are responsible for a large portion of municipal energy budgets, and have a relatively high cost in comparison to the emissions they produce. This is due to a flat rate that the towns pay for the lights, which includes the cost of leasing the streetlights from the electric utility company.

Notes:
1) The city of Bristol operates its own municipal water facilities, therefore the emissions produced by electricity used for water pumping *are* included in the municipal government analysis.
2) An employee commute survey was not conducted; instead, it was assumed that 1300 city employees commute an average of 10 miles roundtrip each day, 264 workdays per year, in a mix of vehicles defined as "passenger vehicle" by the FHWA.

Emissions Reduction Measure:
Converting to LED Traffic Signals



The City of Bristol has begun to switch its signal lights from incandescent bulbs to LEDs (light emitting diodes). LED traffic signal lighting provides a crisper light, easier for drivers to see, while using 80 to 90 percent less energy than incandescent signal lamps. Given that traffic signals operate 24 hours a day, 365 days a year, that translates to significant energy savings. LED signals also last for five to ten years, compared to one to two years for incandescents, resulting in considerable savings on maintenance costs.

Bristol is replacing its bulbs on a rotating schedule, beginning with red then green lights. Altogether, the City expects to save up to $100,000 per year in energy costs.

Traffic signal outside Bristol City Hall.

Converting to LEDs also opens the door for further technology improvements down the road. By drastically lowering the energy load at each intersection, LEDs make it possible for cities to install battery backups to keep traffic flowing smoothly during storm outages or rolling blackouts. Some cities, such as Los Angeles, are even considering installing small solar photovoltaic panels to recharge batteries that power the LEDs—making the traffic signals self-sustaining units with zero emissions!

A sample energy cost analysis for one intersection.

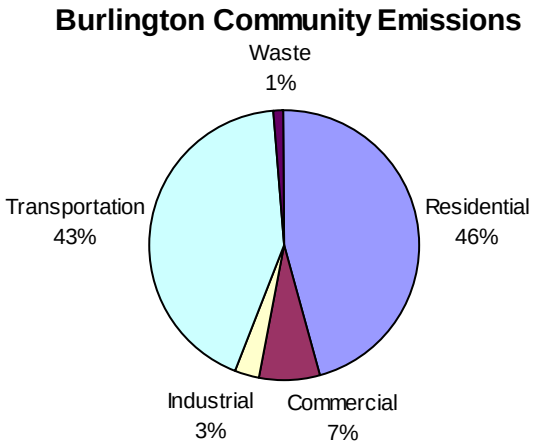
	Initial Purchase Cost	Annual Energy Usage	Annual Energy Cost	Annual GHG Emissions	Total Cost After 1 Year	Total Cost After 5 Years	Total Cost After 10 Years
Intersection with 20 Incandescent Signals	$40 ($2 per signal)	10000 kwh	$1000	3.7 tons eCO_2	$1040	$5080 (not including labor cost for 1 replacement)	$10400 (not including labor cost for 5 replacements)
Intersection with 20 LED Signals	$2000 ($100 per signal; less for red lights, more for green)	1500 kwh	$150	0.56 tons eCO_2	$2150	$2750	$5500 (not including labor cost for 1 replacement)
				NET SAVINGS	- $890	+ $2330	+ $4900

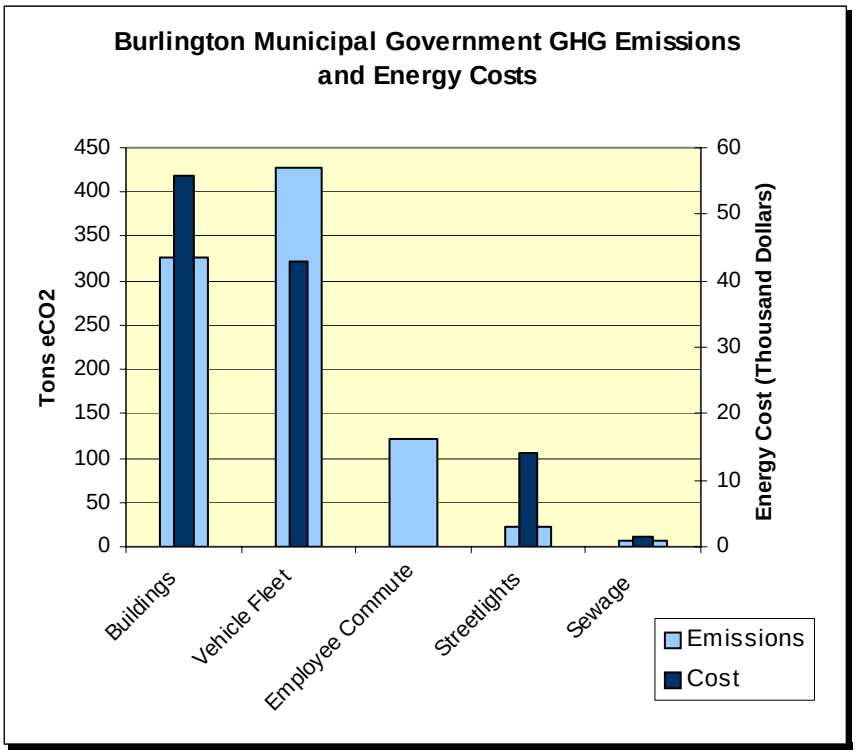
Town
Greenhouse Gas
Profile

Burlington

At a Glance:

- 2000 Population: **8,190**
- Community-wide GHG Emissions : **80,566 tons eCO_2**
- Municipal government GHG Emissions: **833 tons eCO_2**





Notes:
1) The Town of Burlington receives most of its water from nearby Canton, therefore the emissions produced by electricity used for water pumping *are not* included in the municipal government analysis.

Burlington is a small, wealthy, mainly residential town with emissions from the residential and transportation sectors accounting for 90% of total emissions.

Burlington schools are incorporated into the Region 10 District, and therefore are not included in the municipal government inventory. The majority of the government's GHG emissions come from its vehicle fleet. The town has no streetlights, but does maintain several traffic signals at intersections.

Emissions Reduction Measure:
Lighting Retrofits in Municipal Buildings

Several towns in the region have successfully completed lighting retrofits in their municipal buildings that have resulted in greatly reduced energy costs and consumption. The Town of Burlington is currently exploring lighting retrofit options for its Town Hall with the assistance of its electric utility, Connecticut Light & Power (CL&P).

CL&P's Municipal Program provides technical and financial assistance to local governments looking to save money through improvements in energy efficiency. Lighting retrofits typically include converting from magnetic to electronic ballasts, and installing new bulbs and fixtures.

Electronic ballasts can boost fluorescent efficiency by 30%. Some retrofits involve compact fluorescent lamps, which are up to 75% more efficient than standard fixtures and last considerably longer, saving on maintenance costs. The newer lamps also give off less heat, resulting in lower air conditioning bills. Through the Municipal Program, CL&P covers 75% of the cost of installation, and the other 25% is recovered through energy cost savings.

Additional lighting improvements include:

- Installing occupancy sensors in all rooms so that lights do not remain on when not needed. Utility companies often offer grants and/or rebates to facilitate these projects.
- Updating building codes to require energy-efficient lighting and design in all new buildings.

Improvements in municipal buildings help lessen the peak load, which is extremely important because the national grid is designed such that the dirtiest power plants come online last, typically during weekday work hours. If peak demand is sufficiently reduced, these highly polluting plants can operate less often.

	Electricity Usage	Electricity Costs	Emissions
Burlington Town Hall Lighting in FY '99-'00 (Approximate)	50,000 kwh	$5,000	19 tons eCO_2
After typical lighting retrofit	35,000 kwh	$3,500	13 tons eCO_2
ANNUAL SAVINGS	15,000 kwh	$1,500	6 tons eCO_2

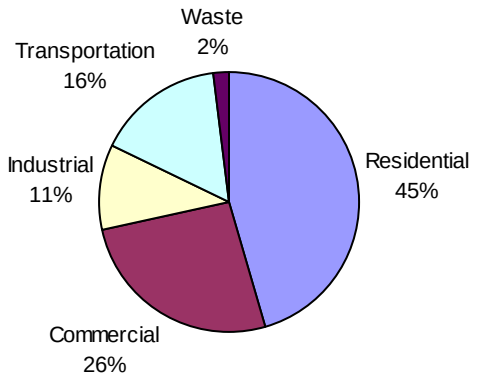
City
Greenhouse Gas
Profile

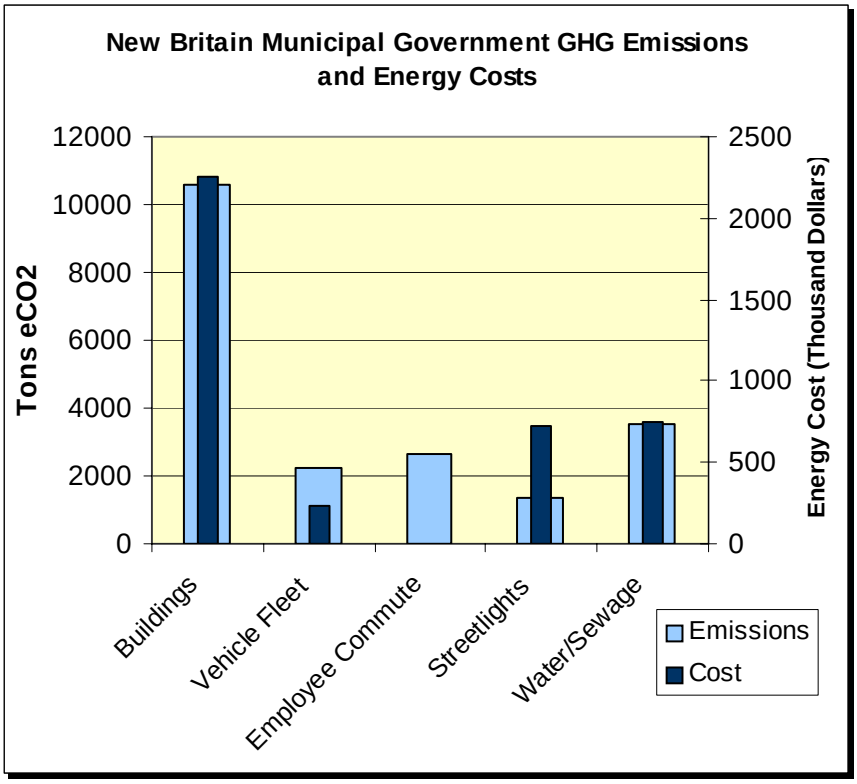
New Britain

At a Glance:

- 2000 Population: **71,538**
- Community-wide GHG Emissions : **6,453,220 tons eCO_2**
- Municipal government GHG Emissions: **20,332 tons eCO_2**

New Britain Community Emissions





Notes:
1) The City of New Britain operates its own water facilities, therefore the emissions produced by electricity used for water pumping *are* included in the municipal government analysis.

New Britain has the largest commercial sector of the region's seven towns, accounting for 26% of the city's total GHG emissions. The city is the second smallest in area within the region, which helps explain the relatively minor contribution of the transportation sector to total emissions.

New Britain has the highest government energy expenditures of the seven towns, at $3,962,965 in the year 2000.

Emissions Reduction Measure:
Energy Conservation in Schools

Among municipal buildings, schools are typically the largest energy consumers. In New Britain, schools accounted for 71% of the emissions from municipal buildings in the year 2000, and 37% of the total municipal government emissions . In 1998, the New Britain Board of Education (BOE) began to work with the consulting firm Energy Education, Inc. in an effort to save money through energy efficiency measures. An initial step was to hire an energy manager, middle school teacher Gene Russo, to oversee all energy-related issues within the district. The BOE now uses software to track energy usage in each of its school buildings, and identify areas that need improvement. Since the program was implemented in November 1998, the District has saved $1.89 million in energy costs.

New Britain Energy Manager Gene Russo checks a boiler at Slade Middle School.

Although many energy-efficiency measures are common sense, designating an energy manager makes it possible to coordinate efforts throughout the district. Russo can access automated controls for each school building online and make changes if needed.

Standard audits conducted through Connecticut Light & Power led to grant funding for sensors and timers for lighting and computer equipment. The New Britain schools also saved money by tracking fuel prices throughout the winter season. Most schools have dual-fuel boilers that can use either oil or natural gas, and by closely monitoring the natural gas and oil markets and switching to the cheapest fuel, Russo is able to save thousands of dollars in heating bills.

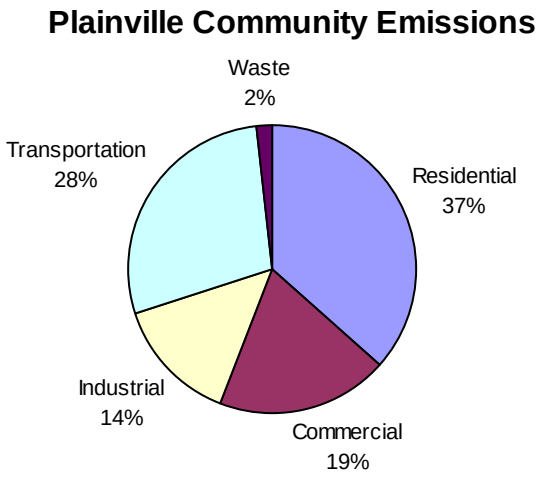
Energy Education, Inc. provides onsite training and continued technical support for school districts. There are no extra costs involved in the Energy Education program; all program fees come out of existing utility costs. The firm works mainly with larger school districts, but smaller towns have the option of partnering with another district and designating an energy manager to oversee both towns. More information is available at www.energyeducation.com.

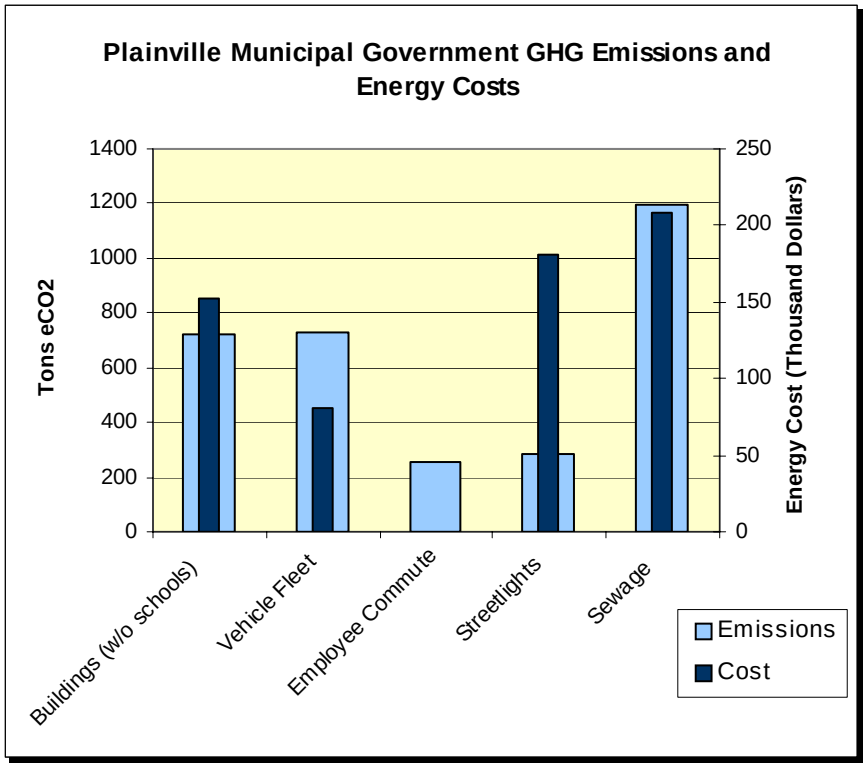
Town
Greenhouse Gas
Profile

Plainville

At a Glance:

- 2000 Population: **17,328**
- Community-wide GHG Emissions : **188,887 tons eCO_2**
- Municipal government GHG Emissions: **3,192 tons eCO_2**





Notes:
1) Data for the Plainville school buildings was not available, and therefore the building sector represents a relatively minor percentage of emissions in comparison to towns where schools are included.
2) The Town of Plainville receives its water from Valley Water Systems, therefore the emissions produced by electricity used for water pumping *are not* included in the municipal government analysis.

The smallest in area of the seven towns in the region, Plainville is working to expand its Enterprise Zone and attract businesses. Application of Smart Growth principles and appropriate zoning ordinances can help ensure that economic development is compatible with climate protection.

Plainville recently constructed a new police building, and is considering converting its municipal center from electric to natural gas heat - two actions that may have an effect on emissions.

Emissions Reduction Measure:
Improving Water Pollution Control Facilities

The Town of Plainville collaborated with Select Energy and the engineering firm Woodard & Curran to make energy efficiency improvements at its Sewage Treatment Plant. The facility converted to lower horsepower blowers, significantly reducing electricity consumption. Select Energy also conducted standard lighting retrofits such as installing new bulbs and ballasts. The project was begun in 2000, and was expected to be paid off within 10 years as a result of lower energy costs.

Plainville Water Pollution Control Supervisor Janet Marineau consults with colleagues outside the treatment plant.

In the fiscal year 2000 the electricity use at the treatment plant was responsible for 803 tons of eCO_2 emissions, with energy costs of $164,230.

The renovation project exceeded expectations, reducing electric costs by $40,411 and lowering GHG emissions by 22% in the first year alone. Although unrelated to emissions, the new equipment also resulted in huge cost savings through sludge disposal—$356,134 in the first year.

	Energy Use	Cost	Emissions
ACTUAL SAVINGS IN FIRST YEAR	475,420 kwh	$40,411	176 tons eCO_2

Additional water-related policies that reduce GHG emissions include:

- Water conservation in municipal government operations: Install automatic shut-off faucets, eliminate unnecessary lawn sprinklers, incorporate water-conserving landscape design.
- Public education campaign to conserve water at home: Install water saving faucets, shower heads, and clothes washers; purchase low-flow toilets; cover swimming pools when not in use; encourage residential water audits.

Beyond reducing GHG emissions related to water-pumping, water conservation measures serve to protect communities against water shortages in droughts, and help offset the increasing demands on water supplies caused by population growth.

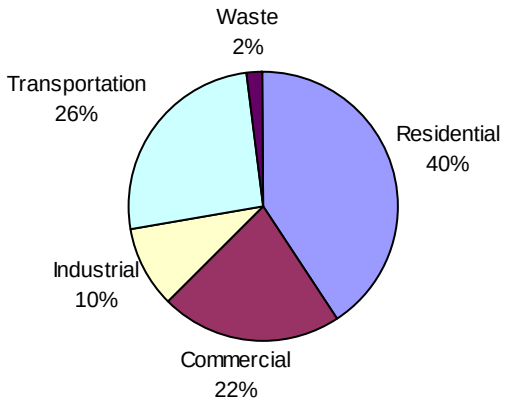
Town Greenhouse Gas Profile

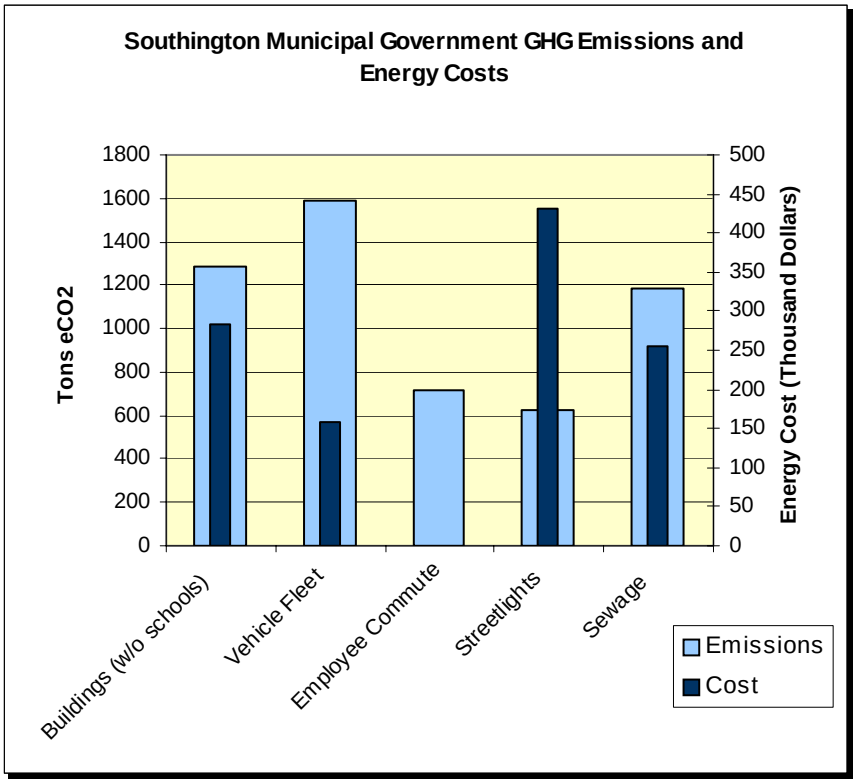
Southington

At a Glance:

- 2000 Population: **39,728**
- Community-wide GHG Emissions : **370,541 tons eCO_2**
- Municipal government GHG Emissions: **5,475 tons eCO_2**

Southington Community Emissions





Notes:
1) Data for the Southington school buildings was not available, and therefore the building sector represents a relatively minor percentage of emissions in comparison to towns where schools are included.
2) The Town of Southington operates its own water facilities, however historical energy use data was not available and therefore the emissions produced by electricity used for water pumping *are not* included in the municipal government analysis.

Southington is one of the region's larger municipalities and works to maintain a small-town atmosphere. Downtown redevelopment and beautification have been priorities, with the goal of creating a mixed-use, pedestrian-friendly down-town area. This should reduce transportation emissions by reducing vehicle-miles traveled.

Southington's 290 employees commute an average of 13 miles roundtrip each day, resulting in 714 tons of eCO_2 emissions annually.

Emissions Reduction Measure:
Converting from Heating Oil to Natural Gas

In 2001, The Southington Public Library converted from oil heat to natural gas heat. The switch was suggested by Library Director James Johnston, who had overseen similar conversions in other library buildings, and recognized that natural gas heating could be less expensive and improve indoor cleanliness and Tair quality.

The town worked with the natural gas utility Yankee Gas to install the gas line free of charge.

According to Johnston, the library utility bill dropped from around $55,000 to 46,000 following the heating conversion and a series of lighting upgrades. Recent spikes in market prices for oil and gas have made it difficult to calculate long term cost-savings, but the reduction in GHG emissions has been significant, with around 39 tons eCO_2 avoided over the last three years.

The Southington Public Library has updated its heating system and lighting equipment.

	Fuel Usage	Emissions
Library Heating Oil in Year 2000	4379 gallons	51 tons
If Converted to Natural Gas	5950 ccf	38 tons
	Emissions Reduced By:	25%

Additional heating policies that reduce GHG emissions include:

- Upgrade building insulation, weather-stripping for doors and windows, ensure good furnace maintenance.
- Turn thermostats down if building is not occupied.
- Encourage energy audits for homes and businesses.

Next Steps

The Central Connecticut Regional Planning Agency is looking to obtain funding to work on CCP Milestones 2 and 3—setting an emissions reduction target and developing a Local Action Plan to meet that target. In the meantime, this inventory report will give each municipality an opportunity to identify areas where emissions reductions can be made and begin to consider various policy options.

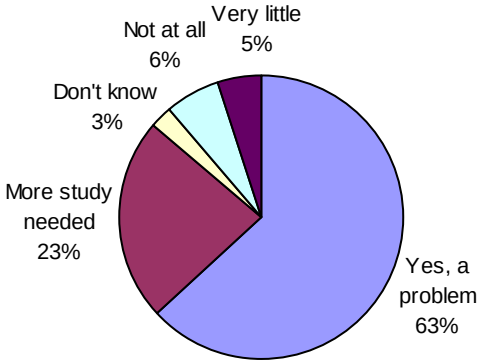
The goal of the Cities for Climate Protection Campaign is to generate policy commitment among municipal councils. Each town has the option of joining CCP individually, in order to benefit further from direct contact with ICLEI to receive technical assistance and training, as well as recognition from agencies and organizations on the state and federal level that look to provide funding for municipalities that have demonstrated a commitment to climate protection. The City of New Britain is the first in the region to officially join CCP, passing a resolution in August 2004.

It is recognized that differences in emissions characteristics and inventories, social and political systems, infrastructures and resources will lead to varying approaches among the municipalities in contributing to regional emissions reduction. What is important is that each local government makes a commitment to finding the best ways to implement reduction measures suited to its community.

Public awareness of climate change issues is high in Connecticut and surveys indicate that voters support stronger legislative action on global warming, and would even be willing to accept certain increases in taxes and utility rates for the sake of climate protection.

What Do Connecticut Voters Think?

A majority of Connecticut voters believe global warming is a problem.



Source: 2003 CTLCV Education Fund/Impact Strategies survey of 500 likely voters.

As climate change continues to rise to the top of legislative agendas around the world, Cities for Climate Protection staff strive to ensure that CCP work supports and complements other regional, state, and national initiatives currently being implemented. The state of Connecticut has been a national leader on climate protection, and the work being done in Central CT will demonstrate the ability of municipalities to take on the challenge at the local level.

Climate Protection Resources in Connecticut:

Clean Air Cool Planet
www.cleanair-coolplanet.org
Partners with campuses, communities, and companies throughout the Northeast to help reduce their carbon emissions. CA-CP also works to build support for the implementation and strengthening of the New England Governors and Eastern Canadian Premiers Regional Climate Change Action Plan.

Connecticut Clean Energy Fund
www.ctcleanenergy.com
Invests in enterprises and initiatives that aim to make Connecticut a leader in the development, production, and use of energy from clean and renewable sources.

Connecticut Climate Change Action Plan
www.ctclimatechange.com
Information on state legislation and stakeholder recommendations to the Governor's Steering Committee.

Connecticut Climate Coalition
www.newenglandclimate.org/connecticut.htm
Coordinated coalition of over 65 organizations, whose memberships represent over 500,000 CT residents. Supports platform of climate policies called the 10 Action Principles.

Connecticut Fund for the Environment
www.cfenv.org
Works to improve air and water quality, control toxic contamination, and minimize the adverse impacts of highways and traffic congestion.

Connecticut Green Building Council
www.ctgbc.org
Works to educate policy-makers, the Connecticut construction industry and building owners as well as the financial community on the benefits of high performance energy efficient buildings.

Connecticut League of Conservation Voters Education Fund
www.conservationeducation.org
Non-profit, non-partisan environmental organization dedicated to increasing environmental awareness in Connecticut.

Conservation Law Foundation
www.clf.org/aboutclf/connecticut.htm
Advocates for smart growth, safe neighborhoods, and cleaner power in Connecticut.

Connecticut Public Interest Research Group
www.connpirg.org
Works on a number of issues related to global warming including more efficient appliances, cleaner public transit, reduction of vehicle-miles traveled, and increasing the development of zero-emission vehicle technology.

Institute for Sustainable Energy
www.sustainenergy.org
Located at Eastern Connecticut State University, focuses on matters relating to public policy, conservation and load management, efficient and renewable distributed generation, protection of environmental resources, and the dissemination of useful information on energy alternatives to users and providers of energy.

Northeast Energy Efficiency Partnerships, Inc.
www.neep.org
Works to increase energy efficiency in homes, buildings, and industry by engaging all concerned and capable organizations in cost-effective regional initiatives.

Northeast Recycling Council
www.nerc.org
Works to leverage the strengths and resources of its member states to advance an environmentally sustainable economy in the Northeast by promoting source reduction, recycling, and the purchasing of environmentally preferable products and services.

Peoples Action for Clean Energy
www.pace-cleanenergy.org
Public health and environmental all-volunteer organization working for energy-efficiency, conservation, and benign renewable energy in Connecticut.

Sierra Club Connecticut
www.connecticut.sierraclub.org
Part of national Challenge to Sprawl campaign, works to build citizen involvement on issues of urban sprawl and transportation, including reducing vehicle-miles traveled.

SmartPower Connecticut
www.smartpower.org
Works to educate energy consumers on the benefits of renewable energy sources and to create consumer demand for increasing the amount of renewable energy supplied. Engaged in an aggressive effort (20% by 2010 Campaign) to encourage consumers, businesses, municipalities and institutions to commit to using energy from clean, renewable sources.

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