

Attachment A

City's Climate Resolution Co2 Emission Study

Introduced by Hindman Council Bill No. R 160-06 A

A RESOLUTION

endorsing the U.S. Mayors Climate Protection Agreement.

WHEREAS, the U.S. Conference of Mayors has previously adopted strong policy resolutions calling for cities, communities and the federal government to take actions to reduce global warming pollution; and

WHEREAS, state and local governments throughout the United States are adopting emission reduction targets and programs and that this leadership is bipartisan, coming from Republican and Democratic governors and mayors alike; and

WHEREAS, many cities throughout the nation, both large and small, are reducing global warming pollutants through programs that provide economic and quality of life benefits such as reduced energy bills, green space preservation, air quality improvements, reduced traffic congestion, improved transportation choices, and economic development and job creation through energy conservation and new energy technologies; and

WHEREAS, mayors from around the nation have signed the U.S. Mayors Climate Protection Agreement, as amended at the 73rd Annual U.S. Conference of Mayors meeting.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

SECTION 1. The City Council hereby endorses the U.S. Mayors Climate Protection Agreement modified to read as follows:

- A. The City of Columbia will strive to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking actions in our own operations and community such as:
1. Inventory global warming emissions in City operations and in the community, set reduction targets and create an action plan.
 2. Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities.
 3. Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit.
 4. Increase the use of clean, alternative energy by, for example, investing in "green tags," advocating for the development of renewable energy resources,

recovering landfill methane for energy production, and supporting the use of waste to energy technology.

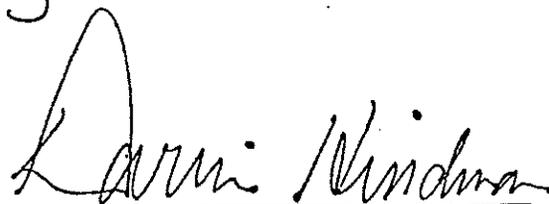
5. Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money.
6. Purchase only Energy Star equipment and appliances for City use.
7. Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or similar system.
8. Increasing the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel.
9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production.
10. Increase recycling rates in City operations and in the community.
11. Maintain healthy urban forests and promote tree planting to increase shading and to absorb CO₂.
12. Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.

ADOPTED this 17th day of July, 2006.

ATTEST:



City Clerk



Mayor and Presiding Officer

APPROVED AS TO FORM:



City Counselor

Source:

Agenda Item No. _____

Water & Light
Department

TO: City Council
FROM: City Manager and Staff

Dan Dasho

DATE: June 1, 2007

RE: CO2 Emissions Study

Fiscal Impact

YES

NO

EXECUTIVE SUMMARY:

On July 17, 2006, the City Council passed a resolution which endorsed the U.S. Mayors Climate Protection Agreement. The Climate Protection Agreement is an initiative started by the City of Seattle which supports the efforts of the Kyoto Protocol. The U.S. Mayors Climate Protection Agreement calls cities, communities and federal government to take actions to reduce global warming pollution. The resolution passed by the City Council incorporates 12 action items. The first deliverable suggests creating an inventory or baseline of CO2 emissions for Columbia. The baseline inventory for Columbia was created by Water and Light staff. The study is attached.

DISCUSSION:

The Water and Light Department was directed to create a baseline inventory of CO2 emissions for the City of Columbia. This involved a great deal of research and data collection. To better understand the inventory process, staff discussed methodologies and procedures with other communities participating in the process. As a result of this fact finding, the City of Columbia became a member of ICLEI – Local Governments for Sustainability USA for guidance and technical support to complete the emissions inventory. As a member of ICLEI, a standardized software package was provided. The software served as the template for data collection. Staff initiated the data retrieval process, analyzing the three sectors of the emissions, identified by the software as energy (both electrical and natural gas usages), transportation and waste. The consistency of the 1990 data available for these three main sectors was not acceptable. Based on methodologies used by other municipalities that encountered this same obstacle, staff chose to use data and reports for the emissions modeling using data from the year 2000 to create the baseline inventory. Staff feels this makes the Columbia report as accurate as possible.

The report inventories only carbon dioxide and methane, the two most predominately emitted greenhouse gases. The report indicates the process and entities contacted to generate the baseline. The graphs within the report identify these gas emissions by sectors; energy, transportation and waste. The most complicated sectors to analyze were energy and transportation.

The energy portion of the report required input data from Ameren UE (gas), Boone Electric, Columbia Water and Light and the University of Missouri, Columbia. Only 7% of the electricity used within the city is generated locally, the remaining electricity delivered is via purchase power agreements. To create the most accurate emissions accounting, the report utilizes a weighted EPA emission coefficient specific to each generating facility. It should be noted, that many municipalities opted to use a default factor for their input data, not providing the most accurate scenarios.

Transportation data required input from the Federal Highway Administration, Missouri Department of Transportation and City of Columbia Planning Department. The emissions numbers were generated on vehicle miles traveled within Columbia. The report details the particulars of the segment. Waste sector was very straight forward.

SUGGESTED COUNCIL ACTION:

The suggested process to develop an action plan is: accept the emission inventory report, develop focus groups or work with the visioning committees to set targets for each sector, establish measurable reduction goals and set an action plan for each of the sectors.

Local action plans outline specific goals, targets and action strategies and commitments. As a "Full Service City" the City of Columbia and its leaders can directly influence and ultimately reduce the energy consumption of Columbia. Energy reduction can occur through research, policy changes, planning and education of Columbia residents and businesses. The City of Columbia is well on its way of incorporating policies, providing programs and services which benefit the environment and reduce greenhouse gases. Actions that improve the livability of a city also save money safeguard public health and protect the climate. An action plan will address and potentially expand programs which actively engage climate protection concepts.

Areas of consideration for a Protection Plan might include the following component areas:

1. **Policy Research, planning, education, and market outreach**
2. **Energy Resources** - Engage all energy providers in discussions regarding energy efficiency. (Ameren, Boone Electric, City of Columbia and UMC)

Columbia Water and Light is actively pursuing an Integrated Resource Plan which will carry the City of Columbia for the next 15 - 20 years with power and demand reduction plans and options. There are many components to the IRP which will be researched.

- a. **Renewable Energy** - to meet and exceed the Renewable Energy Standard for the City of Columbia.
 1. Continue the development of the city's landfill gas to energy project.
 2. Continue the City of Columbia's landfill gas to energy project with Jefferson City, Missouri.

3. Continue to investigate additional landfill gas projects as they become available
 4. Investigate wind energy options and work with MISO to eliminate transmission obstacles of wind energy
 5. Net metering ordinance has been introduced to encourage small scale renewable energy projects within the city's distribution system
 6. Incentives/rebates for renewable projects
- b. Energy efficiency and energy conservation programs for residential, commercial and industrial customers identify new programs for commercial customers as they are the largest energy consuming sector within Columbia - (see attachment for detailed programming)
 - c. Future power supply options - investigate the use of biomass for local production
- 3. Transportation** - As a community - promote transportation options such as bicycle trails through the Columbia Pednet program, expand the walk-able community program, create initiatives for car pooling, promote the use of public transportation
- a. Increase the average fuel efficiency of the municipal fleet vehicles, convert from diesel to bio-diesel, purchase hybrid where feasible
 - b. Research and investigate traffic flows – reduce idle times, and encourage employees to eliminate idle times in vehicles investigate incentive program for the CATS system to increase rider ship
- 4. Energy Efficiency in the Built Environment**
- a. Make energy efficiency a priority through building code improvements. Columbia has a large percentage (over 50%) of rental property – work to improve the efficiency of existing structures through Energy Star programs – Home Performance with Energy Star as an example being developed through the Water and Light Department. It is a voluntary program but could be used for rental housing standards. Energy Star Home is a new construction program which is scheduled to be started in 2008.
 - b. Purchase only Energy Star equipment and appliances for City use
 - c. Continue the City's rebate program for energy efficiency improvements, including lighting, air conditioning and renewable energy initiatives
 - d. Complete the City Hall renovation project by building the new structure to LEED standards and any city building project following should be LEED or Energy Star rated.
- 5. Carbon Offsets** - maintain healthy urban forests, promote tree planting to increase shading and to absorb CO₂
- a. Columbia Water and Light has provided Tree power trees to Columbia Water and Light electric customers since 1992. Trees provide a huge benefit to the community by cooling structures and providing carbon offsets. Offsets - counteract or offset greenhouse gases. Offsets are a critical piece to the climate protection solution.

- b. Maintain open area and create new wooded landscapes.
Columbia Parks and recreation maintains acres of parks and wooded area within Columbia.
- c. Tree preservation and replacement policy
- d. Street tree ordinances
- e. Promote water efficient landscapes, using xeriscape methods, Grow Native plants and Plants of Merit, Show Me yards, control storm water runoff by increasing water gardens

The list provided is not intended to be a comprehensive list of all the programs and services offered by the City of Columbia or as the total criteria for an action plan, but rather provide a reference or sample of what is being offered in Columbia and as a tool to use as the plan is fleshed out.

DMD/srb

City of Columbia Emissions Inventory

Introduction

On July 17th, 2006 the Columbia City Council passed a resolution adopting the U.S. Mayors Climate Protection Agreement. (Appendix A) The resolution states that the City of Columbia will strive to meet or exceed Kyoto Protocol* targets for reducing global warming pollution by taking actions in the city operations and in the community. City staff was charged with the first step in accomplishing the goal, completing an inventory of CO2 emissions within the city limits.

*[The Kyoto Protocol is a legally binding agreement under which industrialized countries will reduce their collective emissions of greenhouse gases by 5.2% compared to the year 1990 (but note that, compared to the emissions levels that would be expected by 2010 without the Protocol, this target represents a 29% cut)]

Background

In December 1997 at Kyoto, Japan, the Parties to the UN Framework Convention on Climate Change adopted the Kyoto Protocol. This agreement calls for the reduction of greenhouse gases in developed countries. Over the next decade 141 countries signed the agreement and 38 are now legally required to reduce greenhouse gas emissions. The U.S. has signed the agreement but has not been ratified by the U.S. Congress.

The U.S. Mayors Climate Protection Agreement is an initiative started by Seattle Mayor Greg Nickels in 2005. It calls for support of the Kyoto Protocol's goals through the action of local governments. As of March 19, 2007, 425 U.S. mayors and cities have given varying degrees of commitment to the agreement.

In response to the July resolution, the City of Columbia has joined ICLEI - Local Governments for Sustainability USA - for guidance and support in conducting a citywide emissions inventory. ICLEI has partnered with the U.S. Conference of Mayors to provide software and technical assistance to help calculate emissions based upon energy use, fuel consumption, and waste generation. ICLEI is pioneering efforts to help cities implement climate protection measures both in the U.S. and internationally.

The data collection strategies in this plan are largely based on similar plans developed by other cities and states. The inventory is based on accepted international protocols and keeps with a similar approach. The inventory is not meant to be precise GHG accounting; rather it is examination based on the best data available. In the course of researching data for the ICLEI software, it became clear that finding reliable data from 1990 was not possible due to lack of such data locally. Natural gas, gas transport, and transportation data is not available from 1990. A portion of the transportation data is based off of 2000 census data and there are no transportation numbers available since then. In the interest of accuracy and repeatability, 2000 was chosen as the baseline year for the emissions inventory. Other participatory cities, such as Kansas City, Missouri, have taken this approach with much success.

The inventory only considers carbon dioxide and methane, the most predominate emitted greenhouse gasses. The study does not include other greenhouse gasses covered under the Kyoto protocol, such as nitrous oxide, sulfur hexafluoride, HFCs, and PFCs the reasoning behind this is that the gasses resulting from fossil fuel combustion and waste decay account for the large majority of climate influencing emissions.

Study Methodology

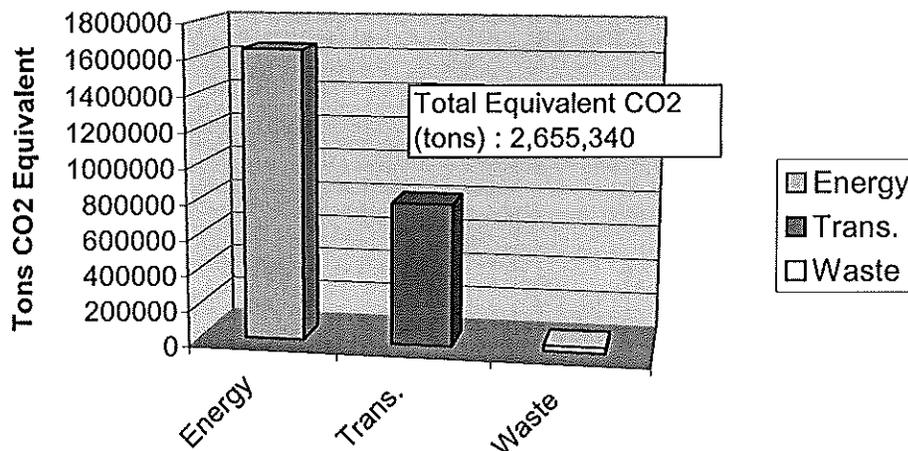
Water and Light Staff completed the City of Columbia greenhouse gas inventory. The staff contacted the various entities to collect and combine the necessary data required to run the ICLEI software analysis. The data inputs feed algorithms of the worksheet that tabulate the results. For the purposes of the inventory and identifying areas in which the City can realize climate change objectives, emissions were disaggregated on source basis. The three areas of consideration are transportation, waste and energy. Only in the electricity consumed by Columbia Water and Light customers is a breakdown by customer sector provided as a reference for the year 2000.

The City of Columbia Water and Light, Columbia Public Works Solid Waste division and Wastewater Treatment facilities, Columbia Planning Department, the University of Missouri, the Missouri Department of Transportation, the Missouri Department of Natural Resources, Division of Energy, Ameren UE and Boone Electric were consulted to obtain the data for the report.

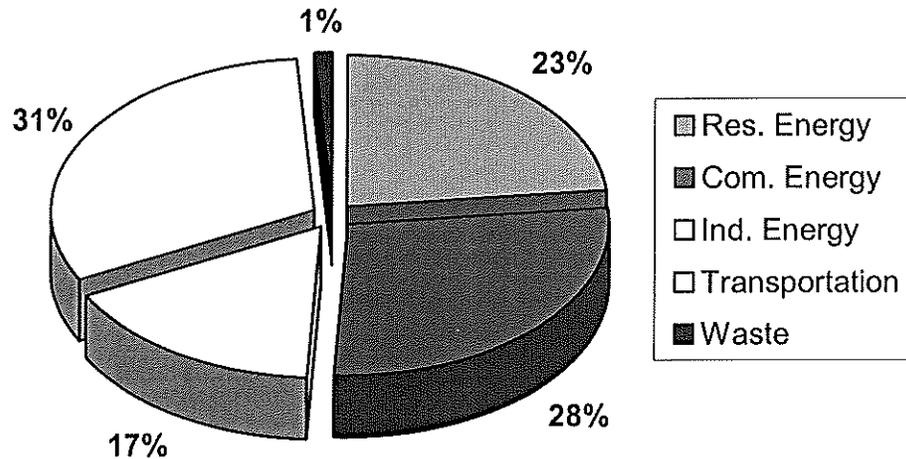
The following charts are a direct result of the data collection and analysis using the ICLEI software, which details CO2 emissions by sector.

All Charts and graphs represent numbers from 2000.

Emissions by Sector



Columbia CO2 Emissions Breakdown



CO2 Source Data

Transportation

The amount of CO2 produced by all transportation within Columbia city limits was found using data from The Federal Highway Administration and the City of Columbia Planning Department. The FHWA publishes daily vehicle mileage in urbanized areas corresponding to each census. To further refine the FHWA numbers, roadway mileage was obtained from the City of Columbia and added to transportation totals. These were used in conjunction with the FHWA report to estimate the annual vehicle miles traveled within Columbia. It is important to note that Highway 70 is included in this total. E-85 and Biodiesel were not considered in this report.

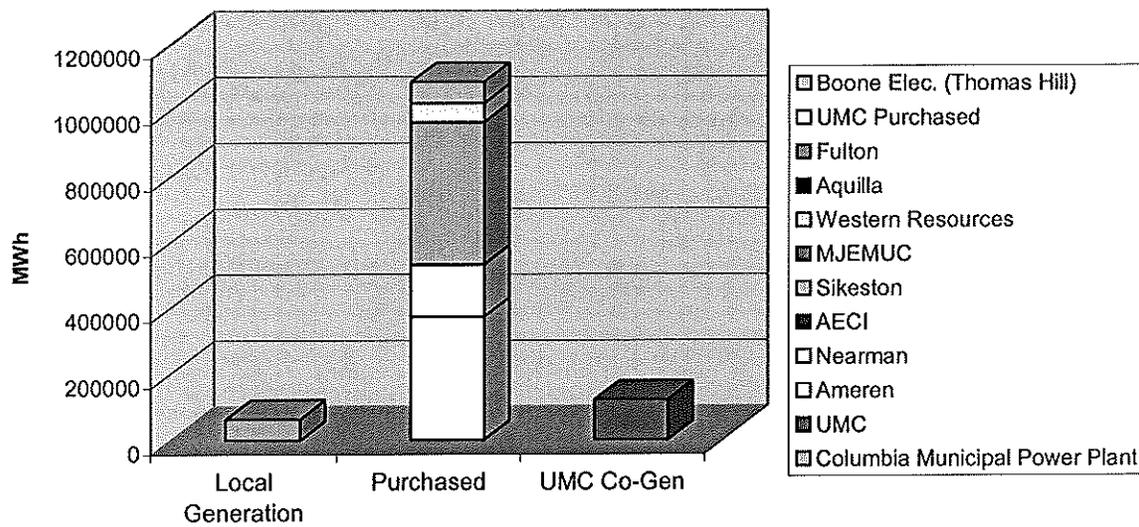
Energy

Natural Gas: Ameren UE is the sole supplier of Natural Gas to Columbia residences. They provided 2000 usage data showing 2,552,290 Mcf sold that year. Deregulated commercial transport customers, mostly industrial customers who purchase natural gas from independent sources, were not accounted in this report.

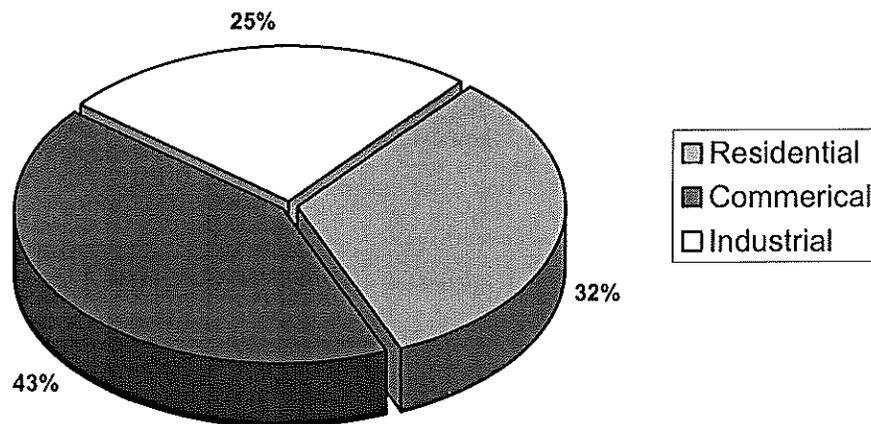
Electricity: Three main electricity suppliers provide power within the City of Columbia: Columbia Water and Light, Boone County Electric Cooperative, and UMC power plant. The Columbia Municipal Power Plant is a public owned utility operated by the City of Columbia to provide reliable, responsive, not-for-profit electric service. Public power utilities are directly accountable to the people they serve through local elected officials. The University of Missouri, Columbia power plant is a cogeneration facility, which provides highly reliable utility service to over 13 million square feet of facilities. Boone Electric Cooperative is a non-profit electric utility owned by the consumer-

members who use the electricity and other services it provides. Headquartered in Columbia, Missouri, the cooperative serves Boone County with a small portion of customers inside Columbia city limits. Annual 2000 production quantities were obtained from each entity to account for the city's usage, 1,212,957 MWh. Most electrical power used in Columbia originates from providers outside of the city limits. This power is purchased and distributed through Columbia Water and Light. An average weighted CO2 emissions rate per kWh was generated using EPA emissions information for each specific generation facility.

Columbia Total Electric Consumption by Source



CWL Customer Class Usage



Waste

Solid Waste: The Columbia Sanitary Landfill operated by the Columbia Public Works department operates using environmentally sound engineering practices for disposal of municipal solid waste while complying with state and federal regulations. Organic landfill contains carbon compounds from a variety of sources and produces methane as it decomposes. The Missouri Department of Natural Resources funded a 1999 study to classify and quantify the waste entering all Missouri landfills. This report was used to characterize the incoming Columbia landfill waste and estimate methane production. Methane has 21 times the potency of CO₂ as a greenhouse gas. The Columbia landfill captures this gas to be flared and in this process the methane is converted into CO₂ and H₂O. Not all of the carbon that enters the landfill as waste is converted to methane in decomposition. Some of the carbon remains in the ground and therefore landfills are sometimes considered carbon sinks rather than emitters. In this inventory, all landfill emissions add to the total emitted CO₂ amount.

Wastewater: The Columbia Wastewater system is managed by Public Works. Columbia Regional Wastewater Treatment Plant is called the complete-mix activated sludge process plant. The methane gas is produced by this anaerobic digestion and is used as fuel for an engine-generator providing 240 kW of electrical power used in the treatment process. Waste heat from the engine is recovered for heating the treatment plant buildings and to provide heating to improve the sludge digestion process and produce more gas. The annual amount of gas produced is recorded and was readily available for analysis.

Analysis

The ICLEI software, called Clean Air and Climate Protection, uses established and estimated coefficients for CO₂ production to help calculate a citywide “carbon footprint.” The software categorizes CO₂ production in three categories; energy, transportation, and waste. After finalizing a baseline inventory, the software also provides forecasted results from implemented CO₂ reduction measures.

2000 Columbia Detailed CO2 Emissions Report

<i>Columbia, Missouri</i>	2000 Eq. CO2 (tons)	2000 Eq. CO2 (%)
Transportation		
<i>Vehicles</i>		
Gasoline	669,002	25.19%
Diesel	133,150	5.01%
Subtotal Vehicles	802,152	30.21%
Subtotal Transportation	802,152	30.21%
Waste		
<i>Columbia Landfill</i>		
Paper Products	19,523	0.74%
Food Waste	6,288	0.24%
Wood/Textiles	1,967	0.07%
Subtotal Columbia Landfill	27,778	1.05%
<i>Wastewater Treatment</i>		
Flared Methane	3,100	0.12%
Subtotal Wastewater Treatment	3,100	0.12%
Subtotal Waste	30,878	1.16%
Energy		
<i>Ameren</i>		
Natural Gas*	190,437	7.17%
Subtotal Ameren Customers	190,437	7.17%
<i>Boone Electric Coop</i>		
Electricity	72,712	2.74%
Subtotal Boone Electric Coop	72,712	2.74%
<i>Columbia Municipal Power (Produced and Purchased)</i>		
Electricity	1,152,917	43.42%
Subtotal Columbia Municipal Power	1,152,917	43.42%
<i>UMC Power</i>		
Coal and Alternative Fuels	388,916	14.65%
Natural Gas	17,328	0.65%
Subtotal UMC Power	406,244	15.30%
Subtotal Energy	1,822,310	68.63%
Total	2,655,340	100.00%

*Natural Gas delivered and used at the UMC power plant is included under *UMC Power*.

It should be noted that the software used for CO2 baseline, also provides forecasted results from implemented CO2 reduction measures. Other municipalities that have conducted a baseline inventory have developed action plans to reduce greenhouse gas emissions. The processes followed to develop action plans varied only slightly by municipalities. Typically the following steps were adopted:

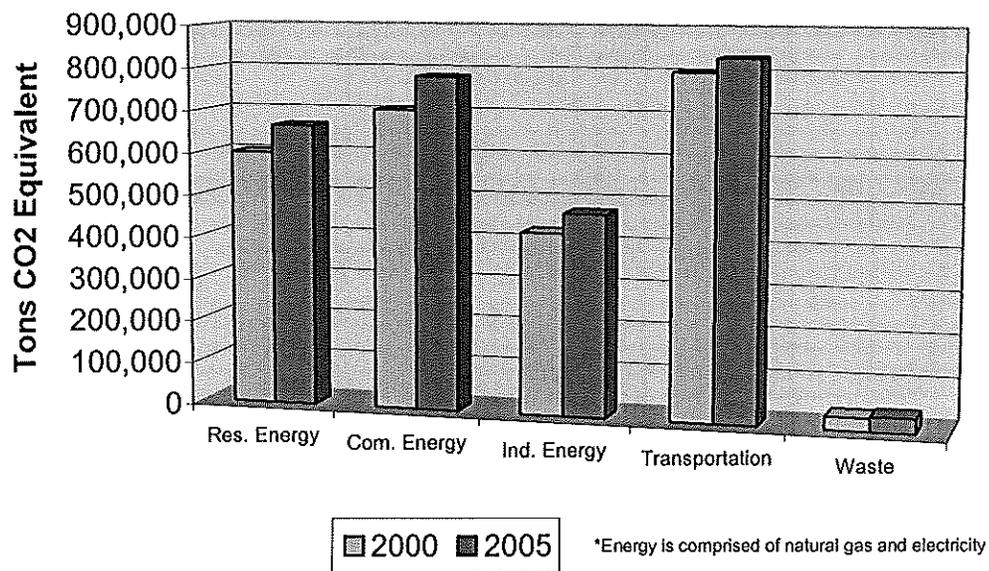
- Acceptance of the baseline inventory report by the City Council.
- Development of focus groups in the three areas: Energy, transportation, and waste
- Focus Groups establish measurable reductions goals
- Set an action plan for the goals in each area

Addendum

2000 and 2005 Detailed Columbia CO2 Emissions Report					
<i>Columbia, Missouri</i>	2000 Eq. CO2 (tons)	2000 Eq. CO2 (%)	2005 Eq. CO2 (tons)	2005 Eq. CO2 (%)	Percent Change
Transportation					
<i>Vehicles</i>					
Gasoline	669,002	25.19%	695,945	23.93%	4.03%
Diesel	133,150	5.01%	138,513	4.76%	4.03%
Subtotal Vehicles	802,152	30.21%	834,458	28.69%	4.03%
Subtotal Transportation	802,152	30.21%	834,458	28.69%	4.03%
Waste					
<i>Columbia Landfill</i>					
Paper Products	19,523	0.74%	22,053	0.76%	12.96%
Food Waste	6,288	0.24%	7,103	0.24%	12.96%
Wood/Textiles	1,967	0.07%	2,222	0.08%	12.96%
Subtotal Columbia Landfill	27,778	1.05%	31,378	1.08%	12.96%
<i>Wastewater Treatment</i>					
Flared Methane	3,100	0.12%	3,100	0.11%	0.00%
Subtotal Wastewater Treatment	3,100	0.12%	3,100	0.11%	0.00%
Subtotal Waste	30,878	1.16%	34,478	1.19%	11.66%
Energy					
<i>Ameren</i>					
Natural Gas*	190,437	7.17%	206,998	7.12%	8.70%
Subtotal Ameren Customers	190,437	7.17%	206,998	7.12%	8.70%
<i>Boone Electric Coop</i>					
Electricity	72,712	2.74%	102,716	3.53%	41.26%
Subtotal Boone Electric Coop	72,712	2.74%	102,716	3.53%	41.26%
<i>Columbia Municipal Power (Produced and Purchased)</i>					
Electricity	1,152,917	43.42%	1,353,671	46.54%	17.41%
Subtotal Columbia Municipal Power	1,152,917	43.42%	1,353,671	46.54%	17.41%
<i>UMC Power</i>					
Coal and Alternative Fuels	388,916	14.65%	362,433	12.46%	-6.81%
Natural Gas	17,328	0.65%	13,793	0.47%	-20.40%
Subtotal UMC Power	406,244	15.30%	376,226	12.94%	-7.39%
Subtotal Energy	1,822,310	68.63%	2,039,611	70.12%	11.92%
Total	2,655,340	100.00%	2,908,547	100.00%	9.54%

*Natural Gas delivered and used at the UMC power plant is included under *UMC Power*.

CO2 Emissions by Sector





CITY OF COLUMBIA/BOONE COUNTY, MISSOURI



ENVIRONMENT AND ENERGY COMMISSION

September 24, 2008

Mayor & City Council
City of Columbia
PO Box 6015
Columbia, MO 65205

RECEIVED
SEP 26 2008
CITY MANAGERS OFFICE

Ladies and Gentlemen:

The Environment & Energy Commission (EEC) is requesting you to direct the City Staff to conduct a self assessment of its programs related to the 12 action items listed in the Mayors Climate Protection Agreement (MPCA - resolution 160-06). The action items, and likely departments responsible, are attached to this letter.

In the attached document the EEC is urging the City of Columbia to issue an annual report card showing how they are doing on the 12 action items in resolution 160-06. The report card would describe how the city is meeting its goals and highlights challenges and successes. We suggest each annual report card "debut" at the EEC booth on Earth Day and then provide access to it via the City website thereafter.

The EEC requests input from the departments responsible so as to provide the public with as much information as possible. If collaboration is not possible, the EEC will create the report card to the best of their ability with the information they have.

Sincerely,

Barbara Buffaloe, Chair
Columbia/Boone County Environment & Energy Commission

Cc: Boone County Commission
Bill Watkins, City Manager
J. Kraig Kahler, Water and Light Director

Mayor's Climate Protection Agreement

An Annual Report Card

The City Council passed a resolution endorsing the U.S. Mayors Climate Protection Agreement (MCPA) on July 17, 2006. The Agreement calls for cities to take action to reduce global warming pollution. City of Columbia's Resolution 160-06, incorporates 12 action items.

Most cities that have signed the MCPA have created a report card to measure the successes and failures of their projects created to reduce their global warming pollution. The Environment and Energy Commission (EEC) urges the City of Columbia to issue an annual report card showing how they are doing on the 12 action items in Resolution 160-06. The report card would describe how the city is meeting its goals and highlight challenges and successes.

Below, the EEC has indicated likely City departments that might contribute meaningful input regarding these 12 action items and the City's efforts to address them.

- A. The City of Columbia will strive to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking actions in our own operations and community such as:
1. Inventory global warming emissions in City operations and in the community, set reduction targets and create an action plan. **(Water & Light)**
 - a. The City of Columbia has created a CO2 Emissions study to inventory its current carbon emissions and the levels at 2000.
 - b. Reduction target – does the City of Columbia have one stated?
 - c. Action plan – On June 1, 2007, Water and Light suggested the process to develop an action plan. What is the status of this process?
 2. Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities. **(Planning & Development)**
 - a. Cite current policies
 - b. Cite proposed policies
 3. Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit. **(Public Works • GetAbout • Planning & Development)**
 - a. Cite current policies
 - b. Cite proposed policies
 4. Increase the use of clean, alternative energy by, for example, investing in “green tags,” advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology. **(Water & Light)**
 - a. Cite current policies
 - b. Cite proposed policies
 5. Make energy efficiency a priority through building code improvements, retrofitting City facilities with energy efficient lighting and urging employees to conserve energy and save money. **(Water & Light • City Council • City Manager)**

- a. Cite current policies
 - b. Cite proposed policies
6. Purchase only Energy Star equipment and appliances for City use. (Purchasing • City Council • City Manager)
 - a. Cite current policies
 - b. Cite proposed policies
7. Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or similar system. (City Council • City Manager)
 - a. Cite current policies
 - b. Cite proposed policies
8. Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel. (Purchasing • City Council • City Manager)
 - a. Cite current policies
 - b. Cite proposed policies
9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production. (Water & Light • Public Works)
 - a. Cite current policies
 - b. Cite proposed policies
10. Increase recycling rates in City operations and in the community. (Public Works)
 - a. Cite current policies
 - b. Cite proposed policies
11. Maintain healthy urban forests and promote tree planting to increase shading and to absorb CO₂. (Public Works • Parks & Rec)
 - a. Cite current policies
 - b. Cite proposed policies
12. Help educate the public, schools, other jurisdictions, professional associations, businesses and industry about reducing global warming pollution. (City Manager • Public Relations • Board of Education)
 - a. Cite current policies
 - b. Cite proposed policies