



Global Warming Progress Report

PROGRESS REPORT **ON THE** **CITY OF PORTLAND AND MULTNOMAH COUNTY** **LOCAL ACTION PLAN ON GLOBAL WARMING**

November 2007



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Portland and Multnomah County Make Substantial Progress, Yet Achieving Goals Remains a Significant Challenge

In 1993, Portland became the first local government in the United States to adopt a plan to address global warming. In 2001, Multnomah County joined the City of Portland in adopting a revised plan, the Local Action Plan on Global Warming, outlining more than one hundred short- and long-term actions to reduce greenhouse gas emissions 10 percent below 1990 levels by 2010. To place this goal in context, total greenhouse gas emissions in the U.S. are now 17 percent above 1990 levels, and the target for the U.S. under the never-ratified Kyoto treaty is to reduce greenhouse gas emissions seven percent below 1990 levels by 2010. Although the County and the City were among the very first local governments in the nation to address greenhouse gas emissions, the mounting scientific evidence on the increasingly rapid rate of the change in the climate demands that the County and City now act with a bold new sense of urgency.

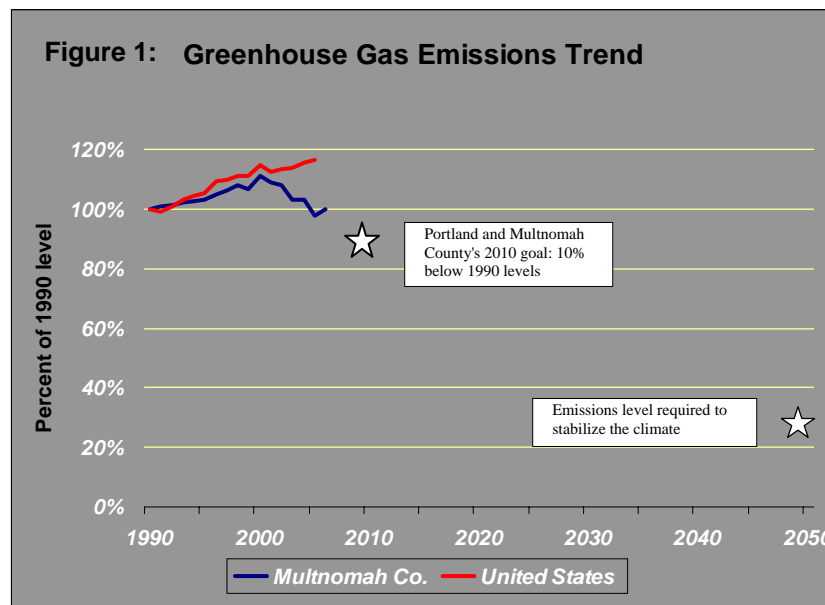
It is important to note that the City and County have made substantial progress in carrying out the goal of the Action

Plan, and local emissions have begun to drop, sharply countering the national trend. Despite rapid population and economic growth, total local greenhouse gas emissions in 2006 were less than one percent above 1990 levels (see Figure 1). On a per capita basis, emissions have fallen by 14 percent, an achievement likely

unequalled in any other major U.S. city. Similarly, total greenhouse gas emissions from the County's internal operations in 2006 were 8 percent lower than its 2001 emissions.

These accomplishments are the result of a diverse array of efforts by public agencies, businesses, non-profit organizations and local residents. Successes include:

- A 90 percent increase in public transit use since 1990.



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- The addition of two major light rail lines and the Portland Streetcar.
- A recycling rate of 63 percent, among the highest in the nation.
- 150 high-performance (LEED) green buildings completed or underway.
- Planting more than 750,000 trees and shrubs since 1996, improving the quality of local waterways as well as absorbing carbon dioxide from the atmosphere.
- The weatherization of 35,000 multifamily units since 1990.
- The establishment of the Energy Trust of Oregon and consistent funding for energy-efficiency and renewable energy programs.
- A quadrupling of bicycle commuting to 4.4 percent, the highest among large U.S. cities and more than eight times the national average.
- Passage of a statewide Renewable Energy Standard, requiring that 25 percent of all electricity be produced from renewable resources by 2025 and 5 percent by 2011.
- Implementation of a local Renewable Fuel Standard, requiring that all diesel sold in Portland include at least five percent biodiesel and all gasoline include at least 10 percent ethanol.
- The highest hybrid-vehicle registration rate in the U.S.

These and other successes build on the critical foundation of Oregon's landmark land-use, transportation and community planning. Continued commitment to these strategies is essential to reducing local greenhouse gas emissions in the long run.

Achieving the City and County 2010 goal of 10 percent below 1990 levels remains a significant challenge, and it is important to recognize that even this goal is only the first step in addressing global climate change. The Intergovernmental Panel on Climate Change estimates that emissions must decrease by 50 to 85 percent over the next 40 years to stabilize the climate. Portland and Multnomah County's efforts are a noteworthy accomplishment and represent a significant departure from the national trend, but these efforts must accelerate dramatically if we are to confront successfully the full magnitude of climate change.

Trends and Highlights, 1990 - 2007

Implementation of the Local Action Plan on Global Warming is led by the Portland Office of Sustainable Development (OSD) and the Multnomah County Sustainability Program. The current climate-protection plan identifies six focus areas: policy, buildings, transportation, renewable energy, solid waste, and forestry. Highlights and general trends for each of the focus areas follow.

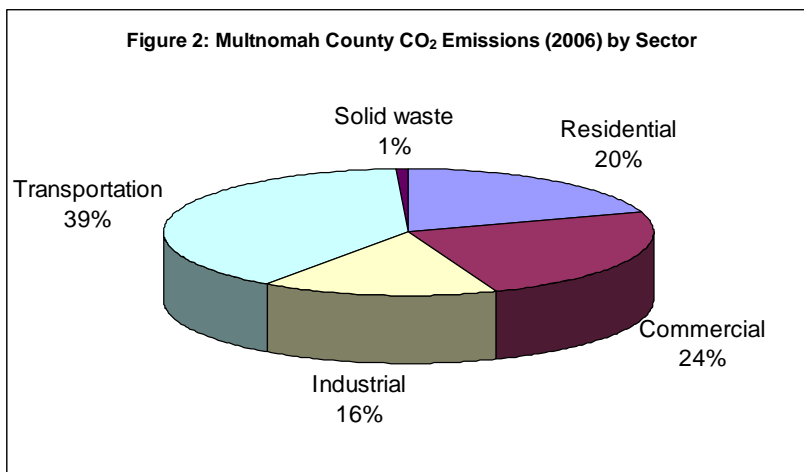
I. Policy, Research, and Education

In the two years since the last progress report, global warming has arrived as a major policy issue in city halls and state capitols across the U.S. More than 600 mayors have signed the U.S. Mayors' Climate Agreement, an effort initiated by the City of Seattle with support from Portland Mayor Tom Potter.

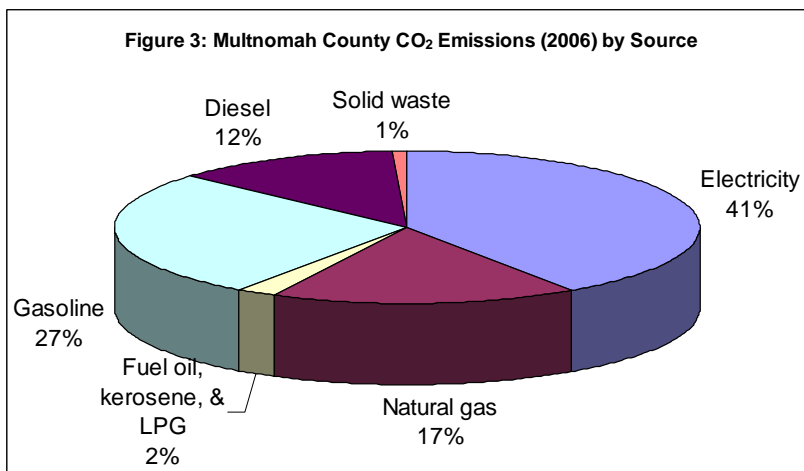
The climate-protection plan has three objectives for research and education:

- Monitor local greenhouse gas emissions.
- Educate government employees, local leaders, and community members on the challenge of global warming.
- Advocate for national action on global warming.

Portland has inventoried greenhouse gas emissions since 1990, allowing careful tracking of



emissions trends. As Figures 2 and 3 illustrate, these data show the major sources of the area's greenhouse gas emissions (e.g., electricity generation, gasoline use, natural gas use) as well as the consumers of those sources (e.g., the transportation, commercial, and residential sectors).



Education on global warming has also increased steadily over the last two years. At the City and County level, employees learn about energy efficiency and greenhouse gas reduction strategies through

interoffice communications and training sessions. At the community level, Portland has emerged as a national laboratory for global warming education and action. Many local

neighborhoods, advocacy groups, religious organizations and businesses have educated their members on the science of global warming and steps to mitigate this change in climate.

Though the federal government has taken exceedingly modest steps to address global warming, international cooperation continues to grow. Portland and Multnomah County have established an international reputation as leaders among North American communities in this respect, and efforts here have inspired and informed similar initiatives in cities in Europe, Asia, Australia, South America, and Africa.

II. Energy Efficiency and Green Building

Energy-efficiency activities have made solid progress since 2000, with per capita building energy use declining eight percent.

Much of this success is the result of the institutional foundation of the Energy Trust of Oregon. Created as a result of Oregon's electricity-restructuring legislation, the Energy Trust administers energy efficiency and renewable energy programs for customers of Portland General Electric, Pacific Power, and Northwest Natural, the energy utilities that serve Multnomah County and the City of Portland. Since its founding in 2003, the Energy Trust has provided energy-efficiency incentives to hundreds of local businesses and over 15,000 households in Multnomah County, generating millions of dollars in savings for local businesses and residents.

City partnerships with the Climate Trust, Energy Trust, Multnomah County, and the Oregon Department of Energy have brought about improved energy efficiency in 10,000 multifamily units in 2003, the most in any single year since Portland's program began in 1986. An innovative agreement between Portland and the Climate Trust enabled OSD to provide energy-efficiency services to developers and property owners in exchange for the Climate Trust receiving title to the resulting carbon offsets.

Energy efficiency has also achieved considerable success as a core element of green building, an emerging field in which Portland has established itself as a national leader. In 2000, OSD launched a program that offers technical assistance, education, and financial incentives for green building to the design, development and building communities and the general public. Since 2001, this type of technical and financial assistance by the City has affected more than 750 local buildings.

In 2005, the City strengthened its green building policy, requiring that all new City-owned buildings meet LEED Gold requirements. Green building requirements also now extend to improvements to existing City-owned buildings as well as all private developments that

receive public financing.

In its own operations, the City has cut energy use by more than 20 percent and now saves \$2.6 million each year in utility costs. The City completed converting its traffic signals to highly efficient LED bulbs eight years ahead of target, an improvement that saves the City almost five million kWh per year and over \$500,000 annually in energy and maintenance costs. The success led to partnerships among OSD, the Energy Trust and the Northwest Energy Efficiency Alliance to assist other Oregon government agencies in installing LED traffic signals, a technological improvement that reduces energy use by 80 percent.

Multnomah County's energy program also has achieved several notable successes. In 2002, the Chair's Office adopted an executive rule on energy conservation standardizing best energy-management practices countywide. This rule established energy performance standards for a diverse array of energy-using equipment and practices for lighting, heating and cooling, appliances, and personal computers. The energy program also increased Multnomah County's renewable energy commitments while staying within budget limitations. This was achieved through reduced renewable power costs as well as donations from the Willamette Light Brigade to light Multnomah County bridges with renewable power. Most recently, the County adopted high-performance, green building criteria for all County building construction projects.

III. Transportation, Telecommunications, and Access

Sensible land use and transportation planning has been a hallmark of the Portland area for several decades. With a successful and growing public transit network, walkable neighborhoods, and a long-term vision of managed growth, Portland addresses its transportation challenges from a position that most large American cities can only envy.

State and local land-use policies provide a critical foundation for successful community development and efficient transportation, and Portland's planning efforts have contributed greatly to a community that thrives while minimizing greenhouse gas emissions. The City's first Downtown Plan and Comprehensive Plan emphasized creating walkable places that encouraged access by transit. The City has continually expanded its efforts in this area, working with Metro and the Region 2040 Framework Plan.

In the last five years, transportation infrastructure has leapt ahead, and citizens and businesses are showing signs of changing their behavior as well. Portland's central city streetcar made its debut in 2001, and TriMet's light rail lines to the airport and to North Portland opened in 2001 and 2004, respectively. Construction is currently underway on two additional light-rail lines, the Portland Mall and I-205 routes, which are scheduled to open in 2009.

Bicycle use has grown dramatically, increasing by double digit figures in each of the last three years and increasing five-fold since 1990. In summer 2007, bicycles accounted for 11 percent of all vehicle traffic over the bridges into downtown Portland, and 4.4 percent of Portland workers commuted by bicycle in 2006, a figure that is more than eight times the national average.

Nevertheless, transportation continues to account for close to 40 percent of local greenhouse gas emissions. To reduce transportation emissions, the City and County must provide local residents and businesses with the infrastructure and incentives to get out of their cars.

Portland's Transportation Options Program addresses this need directly, using incentives, mass marketing and grassroots outreach to educate Portland businesses and residents about alternatives to driving alone. One component of these efforts is the Smart Trips program, an individualized marketing effort targeting households in neighborhoods with a variety of transportation choices. In the first three target areas, the program has reduced trips by an average of 8 percent.

These efforts and successes coincide with continued improvements to transit, bicycling and walking infrastructure.

Portland and Multnomah County have made changes in their own vehicle fleets as well. Portland has purchased nearly 50 highly fuel-efficient hybrid vehicles since 2001, and diesel vehicles now run on a 50 percent biodiesel blend, with 80 Water Bureau vehicles running on a 99 percent biodiesel blend. In addition, Multnomah County has purchased five hybrid vehicles since 2001 and has converted its diesel fuel to B20 biodiesel.

IV. Renewable Energy Resources

The Action Plan sets aggressive goals for renewable resources, including instructing City government to acquire 100 percent of the energy used for municipal operations from renewable sources like wind and solar power by 2010.

To meet this target, Portland added to its existing renewable energy resources, which include hydroelectric turbines in its drinking water reservoir system and microturbines powered by waste methane from the Columbia Boulevard Wastewater Treatment Plant. The City's Bureau of Environmental Services is in the process of installing two large turbines, totaling 1.7 megawatts, to utilize the remaining biogas at the treatment plant. The City has also installed a small wind turbine at PDOT's Sunderland Recycling Facility and solar installations at several fire stations. The City is currently in discussions with a few private companies and public entities to provide the City with enough renewable energy to meet all of City

government's needs.

Multnomah County has recently made progress towards supporting renewable energy resources by purchasing five percent of its electricity from renewable sources and by issuing a Request for Proposals to develop 1 million kWh per year of solar power on County-owned facilities.

Renewable energy has made steady progress in the broader community as well. Portland General Electric and PacifiCorp rank second and fourth, respectively, in a recent national survey of utility green power suppliers, and about 12 percent of the utilities' Portland customers now purchase green power.

V. Waste Reduction and Recycling

Portland has long been a leader in waste prevention and recycling. Portland's recycling system is one of the most effective in the nation. It offers universal residential coverage, requires businesses to develop plans to recycle a minimum of 50 percent of their waste and diverts 63 percent of the city's total waste from landfills.

Portland's most significant new waste initiative is a voluntary commercial food waste collection program. On the County side, an innovative resource management contract was established to create incentives for waste haulers to increase recycling recovery rates within Multnomah County facilities. County government buildings currently recycle an average of 40 percent of their solid waste, and the County recently adopted an innovative Waste Prevention and Recycling Plan to further reduce waste.

Through OSD's Recycle at Work business-assistance program, recycling participation among businesses is increasing and firms are using more sustainable practices. OSD is also working to boost an already high rate of residential recycling by focusing on low-participating neighborhoods and apartment buildings. Results indicate continuous improvements on both the commercial and residential sides.

VI. Forestry and Carbon Offsets

The Action Plan sets goals for the City to plant trees, develop wood purchasing policies to reduce old-growth timber consumption and to better quantify and value the benefits of urban forestry. In 2007, the City issued a report that estimated the structural value of the entire urban canopy at nearly \$5 billion and found that the existing urban forest sequesters nearly 90,000 tons of carbon dioxide annually. The City continues to pursue an aggressive tree planting policy.

The Next Generation of Climate Protection

Portland and Multnomah County have made respectable progress in carrying out the Local Action Plan on Global Warming. Efforts since 1990 span virtually all local government agencies as well as a lengthy list of community, regional and state partners. Overall emission trends are encouraging, but local efforts must accelerate quickly in the near future if Portland is to make a significant contribution to the global effort to reduce emissions.

Since the previous global warming progress report in 2005, the landscape surrounding climate-protection efforts has shifted dramatically. The European Union and other signatories to the Kyoto Protocol have put into place serious national efforts to reduce emissions. In the U.S., awareness at the individual level has continued to climb, as has support for efforts by states and cities to reduce emissions. The role of the federal government in addressing climate change is likely to be a significant issue in the upcoming national elections.

In charting a course toward Portland and Multnomah County's next climate policy, consideration must be given to larger efforts that inform and create opportunities for the city and county.

These include:

- State of Oregon Greenhouse Gas Reduction Strategy
- Western Climate Initiative
- U.S. Mayors Climate Protection Initiative
- Clinton Climate Initiative, an effort focused on 40 of the world's largest cities and an additional 13 innovative climate-protection "affiliate" cities, including Portland
- Potential federal global warming legislation
- Aggressive and far-sighted climate-protection plans and public awareness campaigns from London, New York City, Vancouver BC, San Francisco, Seattle, and dozens of other cities around the world

At the same time, a variety of local efforts have recently concluded or are currently underway that provide important input to a new climate-protection plan. Specifically:

- visionPDX, which establishes a vision for Portland in 2030 based on values of community connectedness, equity, and sustainability.
- Recommendations the Peak Oil Task Force provided to City Council in March 2007, outlining ways to reduce dependence on fossil fuels and minimize the disruptiveness of the anticipated rise in energy prices.
- The Portland Plan, a new comprehensive plan to guide the city's growth and develop-

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ment over the next 30 years, addresses sustainability as one of the Plan's major issues.

- The Portland Recycles! Plan, which establishes a goal of recycling 75 percent of all solid waste and identifies implementation strategies to achieve the waste reduction and recycling goals.
- Implementation of the Urban Forest Action Plan.
- A proposed transportation funding package to support street safety and maintenance, which will likely include a gas tax.

Achieving the 2010 emission reduction target of 10 percent below 1990 levels remains an ambitious goal. However, with persistence, coordination and innovation, Portland, Multnomah County and our many partners can serve as a model community that thrives, environmentally and economically, while addressing the challenge of climate change.

Appendix 1: Multnomah County Greenhouse Gas Emissions, selected years 1990 to 2006

Total emissions (metric tons CO₂ equivalent)

	1990	1995	2000	2001	2002	2003	2004	2005	2006
Residential	1,952,165	1,938,706	2,221,531	2,209,675	2,159,970	2,010,703	2,037,766	1,899,011	1,953,484
Commercial	2,078,620	2,244,684	2,624,202	2,624,705	2,519,282	2,381,057	2,463,967	2,300,247	2,361,502
Industrial	1,697,884	1,937,642	2,133,629	2,009,633	1,797,034	1,593,667	1,601,094	1,507,629	1,541,915
Transportation	3,793,150	3,732,348	3,714,505	3,678,057	3,946,193	3,916,000	3,886,256	3,768,574	3,848,065
Waste	262,009	249,979	162,424	141,441	142,734	164,681	86,084	91,441	87,482
TOTAL	9,783,828	10,103,359	10,856,291	10,663,511	10,565,213	10,066,108	10,075,167	9,566,902	9,792,448
% change from 1990		3.3%	11.0%	9.0%	8.0%	2.9%	3.0%	-2.2%	0.1%
% change from 2000			0.0%	-1.8%	-2.7%	-7.3%	-7.2%	-11.9%	-9.8%

Emissions calculated using STAPPA/ALAPCO and ICLET's Clean Air and Climate Protection Software developed by Torrie Smith Associates Inc.

Per capita emissions (metric tons CO₂ equivalent)

	1990	1995	2000	2001	2002	2003	2004	2005	2006
Residential	3.3	3.1	3.4	3.3	3.2	3.0	3.0	2.8	2.9
Commercial	3.6	3.6	4.0	3.9	3.7	3.5	3.7	3.4	3.5
Industrial	2.9	3.1	3.2	3.0	2.7	2.4	2.4	2.2	2.3
Transportation	6.5	6.0	5.6	5.5	5.8	5.8	5.8	5.6	5.6
Waste	0.4	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1
TOTAL	16.8	16.1	16.4	15.9	15.7	14.9	15.0	14.2	14.4
% change from 1990		-3.8%	-1.9%	-4.8%	-6.6%	-11.4%	-10.5%	-15.2%	-14.2%