Central Services
Facility Management

City of Eugene
210 Cheshire
Eugene, Oregon
97401
(541) 682-2690
(541) 682-6222 FAX
www.eugene-or.gov

MEMORANDUM

Date: **August 2, 2007**

To: **Eugene Mayor Piercy and City Council**

From: **Glen Svendsen, Division Manager**

Subject: **Eugene Community Greenhouse Gas Inventory**

Local governments are increasingly playing a key role in the development and implementation of local measures to prevent climate change and reduce global warming. Eugene is one of some 600 cities that have signed the U.S. Mayor's Climate Protection Agreement. As the first step to developing local strategies for climate change initiatives, the City has completed an inventory of greenhouse gas emissions (attached) within the Eugene urban growth boundary.

Background

To help carry out this effort, the City has joined the International Council for Local Environmental Initiatives (ICLEI) "Cities for Climate Protection" program, which provided a framework for completing the emissions inventory. The ICLEI framework, used by over 200 US communities, also provides a model for developing a climate action plan. Eugene's greenhouse gas emissions inventory will provide a basis for developing and then evaluating community-wide greenhouse gas reduction strategies.

The development of the greenhouse inventory was guided by a consortium of local agencies that are also pursuing green house gas reduction initiatives. This inter-agency steering group, comprised of EWEB, Lane Community College, Lane Council of Governments, Lane County Solid Waste, Lane Regional Air Pollution Authority, Lane Transit District, Northwest Natural Gas, School District 4j, the City of Springfield and the University of Oregon reviewed the City's approach to developing the community-wide greenhouse gas inventory and the findings of the inventory.

Greenhouse Gas Inventory

The community-wide inventory of greenhouse gas emissions provides baseline information on past, current and projected emissions levels. The community's emissions for 1990 and 2005 have been calculated. Emissions for the year 2020 have been projected based on current population and business growth estimates. The inclusion of a "business as usual" scenario for the year 2020 provides a benchmark against which the future impact of emissions reduction strategies can be measured.

The inventory focuses on greenhouse gas produced within Eugene, including electricity, natural gas, and other minor fuel sources such as wood fiber and heating oil. The impact of gasoline and diesel fuel used

in trips made by residents and businesses within Eugene is also included. The inventory does not include the energy embedded in consumer goods and food imported into Eugene from outside the metro area or in the transportation of goods into Eugene. The impacts of through travel on I-5 are also not included.

Key Findings

The inventory shows the source of local greenhouse gas emissions in terms of both economic sectors (residential, commercial, industrial and transportation activities) and fuel sources for 1990, 2005 and 2020. Currently, the transportation sector contributes one-half of the community's greenhouse gas emissions. Transport is expected to account for one-half of the Eugene area emissions in the future, even with the projected benefits of nodal development and the extension of LTD's EMX system. The residential and commercial sectors each contribute about 20% of total greenhouse gas emissions, and the industrial sector is responsible for the remaining 10% of emissions.

Natural gas used in the residential, commercial and industrial sectors is the fastest growing source of greenhouse gas emissions. Emissions from natural gas are likely to increase from about 30% of total emissions in 1990 to 40% of emissions in 2020. By 2020, natural gas and transportation fuels are projected to account for about 90% of Eugene's total community-wide greenhouse gas emissions.

Electrical generation accounts for only 11% of Eugene's total greenhouse gas emissions, reflecting EWEB's reliance on hydroelectric power and renewable energy sources. Statewide, electrical generation accounts for 42% of Oregon's total greenhouse gas emissions from fossil fuels. Partly due to EWEB's "clean" energy, Eugene's per capita emissions are relatively low, at 8.6 metric tonnes in 2005, compared to a statewide average of 16.6 metric tonnes in 2000.

While the level of per capita emissions in Eugene is projected to grow moderately from 8.1 metric tonnes in the baseline year 1990 to 8.8 metric tonnes in 2020, the total volume of greenhouse gas emissions community wide will have increased by two-thirds. This increase is due primarily to the growth in Eugene's population. This is significant, in that emissions reductions goals are usually expressed in terms of reductions in total greenhouse gas emissions, rather than per capita emission levels. This magnifies the impact of reduction strategies when they are converted to per capita emissions measures. For example, reducing community-wide greenhouse gas emissions just to 1990 levels by the year 2020 would require a 40% reduction in per capita emissions, from a projected level of 8.8 metric tonnes, down to 5.2 metric tonnes per capita.

Next Steps

Strategies to reduce greenhouse gas emissions have the potential to impact a broad range of personal choices and economic decisions, and deserve significant public involvement. It is vital to have in-depth discussions with community members as well as partner with local agencies in order to discuss options and develop strategies to reduce greenhouse emissions. Once the Sustainability Commission is formed, this inventory will be presented to the group as the starting point in discussions on the need to develop a comprehensive community climate action plan for Eugene.

For more information on the Eugene community-wide greenhouse gas inventory, contact Glen Svendsen, Facility Division Manager, at 682-5008 or by email to glen.l.svendsen@ci.eugene.or.us For information on the City's overall sustainability program, contact Felicity Fahy, Sustainability Manager, at 682-5017 or by email to: felicity.m.fahy@ci.eugene.or.us