



Recycle at Work

ENERGY AND CLIMATE CHANGE

Average energy savings from using recycled materials in manufacturing:

Paper	40%
Aluminum	95%
Plastic	33%
Steel	74%
Glass	30%

By recycling materials such as metal or paper, you capture the energy and resources already used to make that product. Because the materials you recycle already have been refined and processed once before, manufacturing the second time is much cleaner and more energy efficient.

How recycling saves energy

In 2007, residents and business in the Metro region recycled 695,760 tons of paper, plastics, metal and glass. This saved almost 14.4 trillion Btu (British thermal units) of energy – enough to power nearly 136,787 homes for one year!

Making products from recycled materials typically requires less energy than making products from raw (unprocessed) material. For example, it requires less energy to make paper from old paper than to make it from wood chips. Less energy used often means less burning of fossil fuels such as coal, oil and natural gas. In Oregon, 40 percent of generated electricity comes from coal. Burning coal produces more carbon emissions than other fuel sources.

Saving energy = fewer greenhouse gas (GHG) emissions

When fuels are burned, they release pollutants such as sulfur dioxide, nitrogen oxide and carbon dioxide into the air. Carbon dioxide has been identified as the major contributor to global warming and climate change.

2007 local greenhouse gas reductions

In 2007, the Metro region reduced carbon dioxide by just over 2 million metric tons – equivalent to taking more than 450,000 passenger cars off the road – by recycling, composting, and recovering energy.

For more information

Visit www.RecycleAtWork.com or call Metro Recycling Information at 503-234-3000.

continued

Fact sheets were created by Metro and your local governments to help reduce waste in the business sector. Printed on recycled paper. 09150



Metro



Recycle at Work

from Metro and your local governments



Frequently asked questions

How does recycling affect climate change?

Recycling materials such as bottles, cans and paper yields energy savings and reduced greenhouse gas emissions. It takes less energy to make new products out of recycled materials than it does to make products from virgin materials. The Oregon Department of Environmental Quality (DEQ) estimates that current Oregon recycling avoids emissions equivalent to about 5 percent of total Oregon greenhouse gas emissions.

Where do those reductions come from?

The products you use every day have impacts beyond their immediate use. From the extraction of materials that go into a product, to the manufacturing, transport, sale and final disposal, a lot of energy is consumed. Most of this energy is from fossil fuels that emit greenhouse gases into the atmosphere.

When you recycle products instead of sending them to the landfill, they will be made into new products, saving energy in the process. Emissions are also reduced by keeping materials out of landfills, where they would begin to decompose and create methane, a potent greenhouse gas.

Are those reductions in greenhouse gases significant?

Materials from all those business and household recycling bins add up in a hurry. Today, for example, recycling in the United States saves the energy required to fuel 11 million cars. Increasing recycling directly increases energy and greenhouse gas savings.

What about the extra emissions from collection trucks?

Recycling requires the addition of separate trucks to collect recyclables. However, these added emissions from collection trucks are more than offset by the much larger reductions in greenhouse gases resulting when recycled materials displace virgin materials in manufacturing. DEQ estimates that the total greenhouse gas savings from residential recycling in Portland are more than 60 times larger than the emissions from the extra trucks. So recycling is an excellent investment in reducing greenhouse gas emissions.

Sources

The National Recycling Coalition

Oregon Department of Environmental Quality