

ODOT's Internal Efforts on Climate Change

Introduction

The Oregon Department of Transportation is actively working toward reducing the amount of greenhouse gases (GHG) emitted by our operations and the transportation sector. By collaborating with others to develop innovative responses we are minimizing energy use in facilities, increasing fuel efficiency and use of low carbon fuels in the fleet, and encouraging employees to reduce their commuting energy use. ODOT is striving to operate sustainably; to be responsible for the impacts of our transportation operations and activities on our workforce, the environment, and the planet. Although ODOT may not achieve every emissions reduction goal, simply by focusing attention on GHG reductions and climate change, ODOT will move beyond what would have been achieved in a business-as-usual scenario.



Process of Internal Climate Change Related Efforts

- ODOT was the first state agency in Oregon to have a comprehensive Sustainability Program and the first to develop a sustainability plan.
- ODOT has a Sustainability Program manager, who reports to ODOT's chief of staff and interacts regularly with ODOT staff. Climate change is one of the many topics within the scope of [ODOT's Sustainability Program](#).¹
- ODOT has a **Climate Change Executive Group** comprised of senior executive staff, the purpose of which is to provide overall direction within ODOT regarding the interrelationship of GHG production, climate change and the planning and operation of Oregon's transportation systems.
- ODOT has a **Climate Change Technical Advisory Committee (TAC)**, the purpose of which is to develop an understanding of the implications of climate change initiatives to the agency and its work. This group also provides credible technical advice regarding the interrelationship of GHG production, climate change, and the planning and operation of Oregon's transportation systems.
- ODOT representatives participate in a number of key groups:
 - Department of Environmental Quality Mandatory Greenhouse Gas Reporting Rulemaking
 - The Oregon Global Warming Commission (OGWC)
 - The Transportation and Land Use Committee of the OGWC
 - Oregon Sustainability Board
 - Low Carbon Fuel Advisory Committee
 - Truck Efficiency and Idle Reduction Committee

¹ ODOT has a Sustainability Council, comprised of mid- to senior-level managers representing a variety of functional and geographic backgrounds. The Council provides high-level direction, approves and monitors sustainability work items, and recommends policy and practice changes to ODOT's Director.

Internal Operations

- **ODOT Sustainability Volume II:**
 - The ODOT Sustainability Program is developing a Sustainability Plan comprised of three volumes covering the vision of sustainability at ODOT, ODOT's internal operations, and ODOT's sustainable management of the statewide transportation system.
 - **Volume II: *Sustainability Management Framework for ODOT's Internal Operations*** sets goals, strategies and performance measures for ODOT's internal operations, such as its facilities and fleet. There are seven focus areas in Volume II:
 - energy/fuel use and climate change
 - material resource flows
 - environmental stewardship
 - land use and infrastructure
 - economic health
 - social responsibility/ workforce well-being and development
 - health and safety
 - The goals and strategies in these seven focus areas will act as a roadmap for implementing sustainability within ODOT and its operations.
- **Conservation and Alternative Resource Teams (CART)** are small "green teams" of interested employees at major ODOT offices who help educate employees about work-related conservation efforts such as recycling, energy saving, and commuting options.
- ODOT undertakes annual reporting of its own GHG emissions to the Department of Administrative Services (DAS) and the Governor's office.
 - ODOT actively participated in the State of Oregon Greenhouse Gas Tracking Interagency Team to develop the methodology for agencies to track their own emissions.
 - Three sources are included: building energy use, fleet fuel use, and solid waste generation.
 - Internal processes are being updated to enable more accurate and efficient data tracking and reporting.
- **ODOT's Facilities Section** is a leader in state government.
 - Facilities Services is installing energy-efficient lighting, windows, insulation, thermostats, and white roofs to reduce energy costs in certain buildings when a replacement is needed. Through these actions ODOT is actively working to meet the Governor's energy goals.
 - The recommended project plans for the Transportation Building renovation meets Leadership in Energy and Environmental Design (LEED) Gold certification. This is justified by a cost-benefit study which showed that when lifecycle impacts are considered, a high performance environmentally friendly renovation of the Transportation Building would

ODOT Sustainability Program Facts

save about \$90 million over 20 years (compared to a market-rate renovation).

- **ODOT's Fleet Section** is a leader in state government.
 - As of 2009, there were 164 E85 (85% ethanol and 15% gasoline) vehicles in ODOT's fleet.
 - ODOT is replacing its older fleet with increased use of hybrid and all Electric Vehicles (EV) technology in sedans; including two 100 mpg Plug-in Hybrid Electric Vehicles (PHEV). Additionally, ODOT is exploring the feasibility of expanding electric plug-in facilities beyond the two located in Portland and Salem.
 - The Fleet Section updated the policy and fleet manual on proper tire inflation and maintenance to reduce tire wear and fuel consumption and improve safety.
 - ODOT successfully tested the Autotherm energy recovery system to reduce idling to conserve fuel and lower emissions in the heavy equipment fleet.
 - ODOT highway plans to meet and sustain a 30% B-20 biodiesel use by summer of 2010.
- ODOT strives to reduce energy consumption by its highway lighting systems.
 - For example, ODOT's Region 1 annual electric bill was over \$1.2 million of which 50 percent came from signals and flashers. Region 1 has retrofitted 95% of its signals and flashers with power-saving LEDs resulting in energy consumption reductions equivalent to the annual power needed for over 140 Oregon homes. This has saved ODOT \$110,000 per year on its electric bill.
 - ODOT continues to research and test innovative highway lighting technology that will reduce energy use, but still serve the essential purpose of lighting Oregon's highways.
- ODOT encourages alternative employee commute practices.
 - Employees who work outside Region 1 headquarters or the Capitol Mall, but within mass transit districts have the ability to purchase transit passes on a pre-tax basis via payroll deduction.
 - ODOT encourages participation in the Bike Commute Challenge, a competition between businesses to increase bicycle use, and the "Governor's Commute Challenge", which is aimed at reducing drive-alone trips.
 - ODOT employs technology solutions such as video conferencing, teleconferencing, and web casts (I-link) to allow employees to participate remotely in meetings and conferences and avoid excessive travel.

The Department is already reducing emissions throughout the agency in its fleet and facilities. ODOT will need to continue this work and create new programs to both mitigate future emissions from its internal operations and adapt its facilities to potential climate change.

Appendix 1: Policy Mandates Related to Internal Operations

ORS 276.900 states that “It is the policy of the State of Oregon that facilities to be constructed or purchased by authorized state agencies be designed, constructed, renovated and operated so as to minimize the use of nonrenewable energy resources and to serve as models of energy efficiency.”

OTP Policy 4.2.2 supports the conversion of fleets to more fuel-efficient and alternative fuel vehicles, especially those using renewable and cleaner fuels.

A goal of 20% energy reduction by state agencies by 2010 (over a 2000 baseline) is mandated by Executive Order 06-02; energy savings are required to come from both new and existing buildings and other metered electricity use.

When siting state office locations, Executive Order 94-07 “Siting State Offices in Oregon’s Community Centers” requires preferential consideration be given to locations within central business districts and conveniently close to transit in communities that have transit service. Other areas of mixed use development that are highly accessible to the public, have a fully developed pedestrian circulation system, have high quality transit service (in those communities with transit service), and are designated as urban centers in the applicable comprehensive plan may also be given priority consideration.

OAR 330-130 prescribes procedures to minimize energy use in new and renovated facilities designed and constructed by state agencies; guidelines for implementing these procedures are given in the State Energy Efficient Design (SEED) Program Guidelines.

Governor Kulongoski has stated his desire for state agencies to purchase 100% of their energy from renewable sources by 2010.

Oregon’s Renewable Energy Action Plan (REAP) mandates the following use of biofuels: 10% of the gasoline used by the state government’s fleet vehicles will be E85 by 2010, increasing to 25% by 2025; 10% of the diesel used by state government’s fleet vehicles will be B-20 by July 2007, increasing to 25% by July 2010 and 100% by 2025.

DAS Policy 125-6-010 “Sustainable Facilities Standards and Guidelines” requires:

- Building decisions must consider the full life of materials. The review must include life cycle assessment and life cycle cost factors.
- New state-owned buildings shall be designed to meet the point equivalent of a Leadership in Energy and Environmental Design (LEED) Silver rating.
- Renovations of state-owned or build-to-suit leased buildings shall be designed to meet the point equivalent of a LEED Certified rating.

DAS Policy 107-009-0050 “Sustainable Acquisition and Disposal of Electronic Equipment” requires the use of Electronic Products and Acquisition Technology (EPEAT) environmental and energy criteria for the purchase of computer equipment such as desktops, computer laptops, computer monitors, and input or output devices.