



Campaign Summary

Our Goal

1. Reduce benzene and air pollution exposure for Oregonians to protect the public's health and lower the overall risk of cancer.
2. Reduce Oregon's contribution to greenhouse gases and other pollutants associated with climate change.
3. Promote fuel efficiency and less dependency on fossil fuels.

Chronology and Accomplishments

1. 2006: Oregon Toxics Alliance raises awareness about the dangers of Oregon's excessively high levels of benzene exposure for residents, and determines that public health is protected when gas stations use State I vapor balance systems for underground storage tanks and end the practice of "topping off" the gas tank.
2. 2007: OTA submits request to the DEQ to initiate rulemaking related to reducing benzene emissions and other hazardous pollutants throughout Oregon by implementing rules that require Stage 1 Vapor Balance at gas stations, ban topping off practices and reduce idling (under most circumstances) to less than 20 seconds when a vehicle is not part of moving traffic.

OTA kicks off our official grassroots campaign to reduce benzene emissions throughout Oregon; website, interviews, distributes public information brochure, Don't Top Off and Don't Idle stickers.

3. 2007-2008: Multnomah and Lane county governments, some cities and a number of private businesses formally adopt OTA's recommendations to reduce truck, car and bus idling to less than 20 seconds and to ban topping off when fueling a vehicle.

OTA serves on DEQ stakeholder group to assess Oregon's rules related to gasoline dispensing and air quality.

4. 2008: The Oregon Department of Environmental Power adopts rulemaking that reduce toxic and carcinogenic air pollutants and save gasoline by banning "topping off" at all gas stations statewide and requiring all larger Oregon gasoline storage and dispensing facilities (dispensing an average of 40,000 gal. per month) to use vapor capture controls similar to those currently required in the Portland, Medford and Salem areas. OTA's Don't Top Off sticker designs are adopted by the DEQ.

FACTS

Benzene is a Potent Carcinogen.

The United States Environmental Protection Agency classifies benzene as a Class A carcinogen and has concluded that Oregon's cancer risk "is dominated by the emissions of benzene."

- Studies show that breathing air contaminated with benzene inflicts genetic damage linked to childhood leukemia.
- Recently, researchers are taking a closer look at what seems to be a direct connection between a parent's benzene exposure and the likelihood of leukemia in their offspring.
- Neighborhoods within two blocks of gas stations are exposed to benzene levels that increase the risk for leukemia, a cancer of the blood-making organs.

Excessive Benzene Pollution is a Substantial Problem in Oregon.

Benzene is one of the volatile organic compounds that play a significant part in the formation of ground-level ozone, a corrosive air pollutant that damages plants and increases climate change.

Gasoline refueling is a large source of ambient benzene concentration in Oregon's air. This is due, in part, to the fact that gasoline in the Northwest region has double the benzene content of gasoline sold in other parts of the country, and three times the amount allowed in California. The national average for benzene content is 0.97 percent to 0.62 percent by volume; however the EPA allows gasoline sold in the Northwest to contain 2.06 percent by volume.

While other states require benzene vapor controls at gas stations, Oregon until now, had not developed such a policy. As a result Oregonians were being exposed to excessive amounts of benzene from refueling activities and car exhaust.

Are Oregonians receiving chronic exposures that contribute to cancer and diseases of the blood?

Yes, according to a DEQ PowerPoint presentation to the public given in August 2008. Approximately 72% of Oregon's counties (26 out of 36) exceed the Oregon DEQ health exposure benchmark for ambient benzene levels (reference: Jerry Ebersole, DEQ). All of these counties have large population centers and in some areas, exposures are well over the health benchmark.

A study by the Oregon DEQ shows that benzene contributes almost a quarter of the cancer risk in Portland. Air monitoring equipment in Portland shows that average ambient benzene levels are 40 times the benchmark level believed to spur cancer in humans over a lifetime of exposure as established by National Air Toxics Assessment. The DEQ also estimates that Eugene-Springfield residents may be exposed to as much as ten times over (10X) safety levels of benzene in ambient air.

As a result, significant numbers of Oregonians have a higher than average cancer risk from benzene exposure, and their health is impacted from the other pollutants associated with exposure to gasoline fumes as well.

Cancer risk and serious non-cancer risks to Oregonians should be regarded as grave threats to long term health. The International Agency for Research on Cancer (IARC) classified benzene in Group 1: Human carcinogen based on sufficient evidence in humans (IARC, 1987a). As early as 1977, the Federal Register had concluded that chronic human inhalation exposure to benzene can cause hematopoietic system decreases in red and white blood cells and platelets and can progress to serious illness such as low white-blood cell counts, thrombocytopenia, and aplastic anemia. The State of California Office of Environmental Health Hazard Assessment has determined that benzene is a carcinogen and a major contributor to the overall cancer risk.

Oregon's children are at greatest risk for childhood leukemia associated with benzene exposure. Children who live in close proximity to gas stations have a dramatically higher rate of leukemia according to research published in *Occupational and Environmental Medicine* (vol 61, p 773). The research provides powerful evidence that this prevalent childhood cancer may be caused by exposure to the chemical benzene simply by growing up close to a gas station.

Based on DEQ estimates, a child currently living 100 meters from a relatively small gas station without vapor control (with a throughput of only 20,000 gallons per month) is exposed at levels above the DEQ health benchmark. At a distance of 50 meters, that child is exposed at 1.5 times the health benchmark.

Why should Oregonians wait for relief from this health risk when the solution is simple and the economic hardship to businesses and consumer so minimal? The DEQ estimates that, even if businesses pass the cost of Stage 1 vapor control equipment on to consumers, the burden would amount to a mere 0.003 cents per gallon.

A number of other states already require Stage 1 vapor controls including Washington, Vermont and Florida. Florida gave GDF's a period of 2 1/2 years to install the equipment (for any GDF with a throughput of greater than 20,000).

What is Oregon's Next Step to Healthy Air?

The objective of OTA's 2009-2010 Healthy Air Oregon Campaign is to establish a new public health policy requiring the further reduction of ambient benzene fumes and pollutants from vehicle exhaust. OTA is working with many businesses, including gas station owners, refueling companies, auto repair shops, restaurants and health organizations to raise awareness about the harmful effects of idling car and truck motors. Together we can encourage governments, businesses and individuals to adopt policies and habits that reduce idling to less than 20 seconds. Cutting back vehicles emissions will significant boost Oregon's efforts to address the causes of climate change.

You can play an important role in protecting public health and slowing climate change by:

- Taking a personal pledge to end idling.
- Becoming a Healthy Air Oregon business partner by adopting policies for your place of business, for example by giving out free Don't Idle stickers to customers and displaying No Idle Zone signs in your service delivery areas and customer parking lots.
- Working with OTA to help cities and counties adopt no-idling policies

Prepared by Oregon Toxics Alliance
P.O. Box 1106
Eugene, OR 97440
541.465.8860
theteam@oregontoxics.org
www.HealthyAirOregon.org