

# 'Our predictions are coming true'

Oregon Global Warming Commission report examines climate change's impacts on the state and warns consumption-based emissions are rising due to transportation

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Oregon's greenhouse gas emissions from transportation are accelerating, and so are emissions released, within the state and elsewhere, to meet Oregonians' increasing demands for products and services.

"The significance of understanding global emissions is that a ton of carbon dioxide has the same impact on Oregon's climate and the global climate regardless of where it's emitted," David Allaway at Oregon Department of Environmental Quality told the Oregon Global Warming Commission at its Oct. 16 meeting in downtown Portland. "If Oregon contributes to these emissions, if we can influence these emissions," he said, "that can open up opportunities for climate action."

Allaway's presentation was one of several at the meeting intended to cover the contents of the commission's 2018 draft biennial report, which voting members adopted unanimously later that day. Oregon Legislature will be presented with the final version during the 2019 session that starts in January.

Since its creation in 2007, the Oregon Global Warming Commission has been recommending ways businesses, nonprofits and state and local governments in Oregon can reduce their greenhouse gas emissions. Every two years, it submits a report to Legislature, detailing Oregon's progress in meeting its greenhouse gas emission reduction goals and predicting how climate change will impact the state, although this year's report pivoted to comparing impacts already experienced to past predictions.

It also came just nine days after the Intergovernmental Panel on Climate Change warned humanity has just 12 years to avoid complete climate catastrophe – a warning echoed by the commission's chair, Angus Duncan, at the start of the meeting.

While the commission's report recognizes progress in reducing greenhouse gas emissions from Oregon industry and electricity production, increases from goods consumption and gas-guzzling vehicles have Duncan worried. In a statement he penned to serve as the report's introduction, he wrote:

"This letter reflects my profound concern, after ten years as Commission Chair, with whether we are rising to the challenges in meaningful and sufficient ways."

He also pointed to transportation emissions, which have been going up since 2013, as the state's mounting challenge.

"More miles are being driven in larger and less fuel-efficient cars, while the Trump administration undermines the effectiveness of national vehicle fuel economy standards," he stated.

And while overall greenhouse gas emissions generated within Oregon decreased in 2016, after increasing slightly

in 2015, Oregonians' "consumption-based emissions" have been increasing since 1990 and going up steeply since 2010.

Duncan told Street Roots these emissions are calculated by "looking at the stuff we import – the TV screens from China, the Nike sneakers from Vietnam."

He said this "parallel inventory" is based on the presumption that Oregonians are responsible for carbon expended to make goods used in Oregon, even if that carbon is expended somewhere else in the world. "It's a way to get at offshoring our carbon use," Duncan said.

Emissions generated in Oregon to make products consumed elsewhere, are then subtracted.

The emissions associated with imports coming into Oregon are double that of the state's exports.

Oregon Department of Environmental Quality calculates consumption-based emissions by including emissions expended in the production, delivery, use and disposal of a product or service. Top contributors, from greatest to least are: vehicles and parts, food and beverages, appliances, services, construction, health care, other manufactured goods, transportation services, electronics, retailers, furnishings and supplies, and other goods such as clothing and fixtures.

For 2015, Oregon's consumption-based emissions amounted to 89 million metric tons of carbon dioxide equivalent. The state's total emissions, with imports included, was about 114 million metric tons.

The report warns that given the current political climate, it falls on the West Coast states to lead the way on climate policy. In Oregon, the 2019 legislative session is crucial, as lawmakers consider carbon cap and trade policies, an effort the commission fully supports.

But the shape and success of carbon capping legislation next year may rely on the

outcome of the November election. While Gov. Kate Brown supports implementing carbon cap and invest policy, her challenger, Republican Knute Buehler, was quoted in The Oregonian as saying he believes it would be "a honeypot for special interests."

Also adopted at the meeting was the commission's "Forest Carbon Accounting Project" draft report. Carbon emitted from logging and other forest practices is not captured in official state reports on greenhouse gas emissions and state reduction goals, nor was it included in past bills aimed at capping carbon.

This draft was the first half of a two-pronged report aimed at quantifying carbon stores and losses from logging and other activities in Oregon's forests. The Oregon Department of Forestry will add to the commission's preliminary findings with data on carbon stored in wood products.

The commission found Oregon forests have uniquely immense carbon sequestering potential, on par with tropical rainforests. As they stand, Oregon's forests hold an estimated 3 billion tons of carbon, and add millions of additional tons annually. This presents a risk of carbon release, but also an opportunity for greater carbon withdrawal from the atmosphere and long-term carbon storage.

Duncan suggested "through modest changes in forest management and harvest practices" and further reducing energy-related emissions, Oregon could become carbon neutral by the 2030s and carbon negative thereafter.

Effects of climate change, however, could include mass die-offs of Oregon's forests, such as in Canada, Alaska and Russia.

And Oregon's environment is changing. "Our predictions are coming true," said Philip Mote of Oregon Climate Research Institute as he addressed the commission.

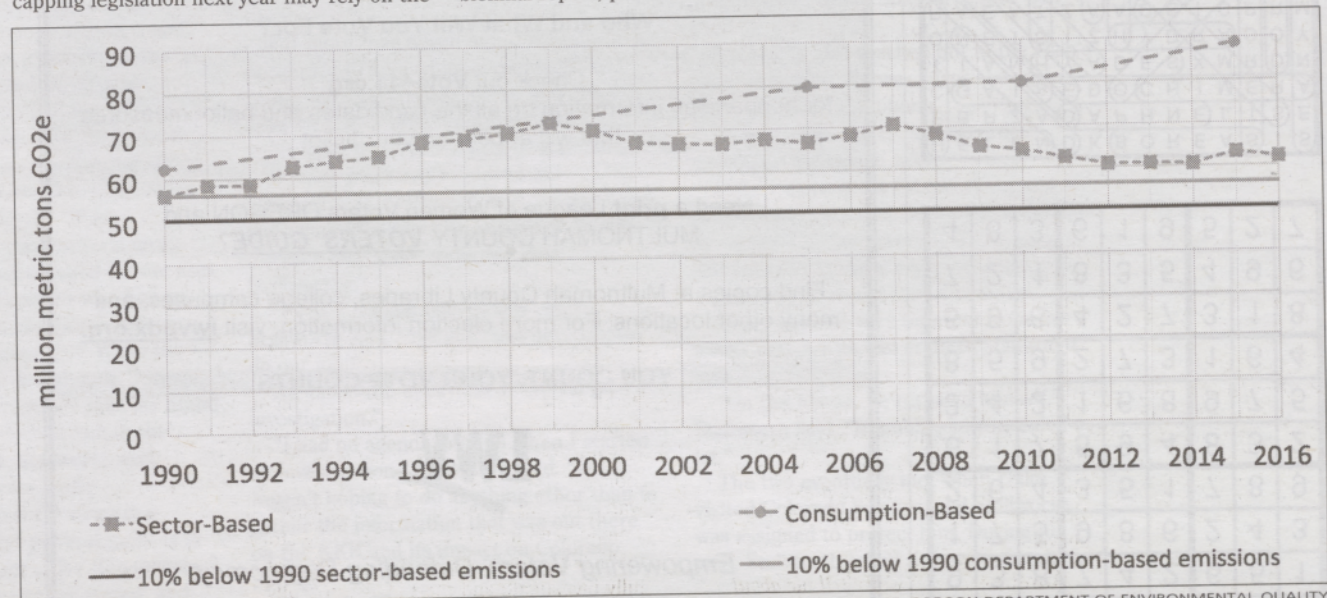
As illustrated in the commission's 2018 biennial report, predictions from Mote's

agency and the IPCC dating back as far as the 1990s are proving to be accurate. As predicted, Oregon is already experiencing:

- Larger and more frequent grassland and forest fires, with a fire season that starts earlier and ends later
- Health impacts – Each 1 degree Fahrenheit increase in climate has correlated with a three-fold increase in incidents of heat-related hospitalization in the Northwest, and the Eagle Creek fire correlated with a 29 percent increase in emergency room visits for respiratory symptoms in the Portland metro area
- Warmer ocean temperatures and acidification are hurting Oregon's oyster and crabbing industries as shellfish have difficulty forming shells and algae blooms render Dungeness crab toxic and threaten species salmon rely on for food
- Infrastructure impacts – TriMet MAX trains slow in hot weather, fires have caused multiple closures along Interstate 84 and other highways, and areas along coastal Highway 101 flood more frequently
- Economic impacts – During 2017, Oregon lost \$51 million in tourism dollars due to wildfires; as of August, the Shakespearean Festival had lost \$2 million; and the Substation Fire near The Dalles burned up \$5 million in wheat crop, while fires in other areas of the state also caused agricultural losses
- More frequent droughts and higher temperatures, with Oregon's average temperature up 1 degree Fahrenheit in the last 30 years, and 2 degrees Fahrenheit in the past 100 years
- Decreased snowpack and lower stream flows

"Now, more than 90 percent of snow monitoring sites in the Northwest have found decreases in snowpack since 1950," said Mote.

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Trends from Oregon's updated greenhouse gas inventories, 2018.

SOURCE: OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY