

July 19, 2021

RE: Climate Protection Program - RAC Meeting #7 and Draft Fiscal Impact Statement

DEQ's Office of Greenhouse Gas Programs,

Thank you for the opportunity to submit comments following the Department of Environmental Quality (DEQ)'s final Climate Protection Program (CPP) Rulemaking Advisory Committee meeting. We submit for your consideration comments and feedback on DEQ's draft Fiscal Impact Statement (FIS) for the CPP program, including recommendations for more accurately quantifying and balancing the full scope of costs and benefits of the program.

Compliance Costs and Direct Economic Impacts

We are pleased that the FIS acknowledges that directly reducing emissions has the potential to benefit business for covered entities, and to benefit Oregon's economy as a whole. This assessment is in line with economic analyses that have clearly shown that emissions reductions can serve to reboot our economy and set it up for long-term success. Multiple states and countries have shown that it's entirely possible to decrease emissions while increasing economic growth. Oregon itself has demonstrated that carbon emissions are not synonymous with economic growth: according to the World Resources Institute, between 2005 and 2017, Oregon reduced emissions by 5% and increased GDP by 17%.¹ In total, 41 U.S. States and the District of Columbia are growing their economies while reducing emissions.² By requiring covered entities to reduce emissions, the CPP will incentivize industrial innovation and technological development that will benefit the state economy rather than weaken it.

Moreover, shifting to decarbonized ways of doing business and zero-emissions technologies will result in cost saving advantages. In the transportation sector, for example, electric vehicles (EVs) currently provide substantial lifetime cost savings in comparison to gasoline and diesel-fueled vehicles. In Oregon, an EV is estimated to save its owner between \$11,000 and \$14,000 in fuel costs alone.³ The U.S. Department of Energy estimates that it costs approximately \$0.99 per gallon to drive an EV in Oregon, compared to \$3.10 per gallon to drive a gasoline vehicle.⁴

¹ Joel Jaeger & Devashree Saha, *10 Charts Show the Benefits of U.S. Climate Action*, World Resources Inst. (July 28, 2020), <https://www.wri.org/insights/10-charts-show-economic-benefits-us-climate-action>.

² *Id.*

³ Brennan Borlaug, et al., *Levelized Cost of Charging Electric Vehicles in the United States* (July 15, 2020), [https://www.cell.com/joule/pdfExtended/S2542-4351\(20\)30231-2](https://www.cell.com/joule/pdfExtended/S2542-4351(20)30231-2).

⁴ U.S. Dept. of Energy, *eGallon: What It is and Why It's Important*, <https://www.energy.gov/articles/egallon-what-it-and-why-it-s-important>.

In the building sector, the shift from natural gas to electric systems and appliances also carries substantial cost savings. For example, the American Council for an Energy-Efficient Economy estimates that high-efficiency electric heat pumps save Oregon consumers approximately \$2,000 to \$3,000 over the systems' lifetimes when compared to gas furnaces.⁵ Leading deep decarbonization studies for West Coast states confirm it is more cost effective to electrify most current uses of natural gas (coupled with deep energy efficiency), particularly for reducing these emissions in residential and commercial buildings.⁶ For example, as Washington's Commerce Agency has found in their first draft of the Washington State Energy Strategy, released in November 2020: "Analysis...shows that electricity is the lowest cost option to decarbonize Washington's space and water heating end uses when high efficiency heat pump technologies are used."

Many gas utilities are currently planning to reduce emissions by shifting to renewable natural gas (RNG) or other substitute fuels, such as hydrogen. However, recent analyses indicate that this is not the most economical strategy for decarbonizing the gas system, and could create higher compliance costs for utilities and consumers than other decarbonization strategies. For example, E3 modeling for the California Energy Commission found that the lowest-cost pathway to eliminate direct emissions from commercial and residential buildings is to electrify. According to E3's analysis, an electric heat pump would cost \$34 to \$53 per month to operate, while fueling a gas furnace with RNG would cost \$160 to \$263 per month to operate—five times more than the electric option.⁷ Therefore, it is unrealistic to assume that a high percentage of existing fossil gas will be replaced with a more expensive (and unrealistic) level of reliance on RNG instead of cost-effective electrification. Moreover, we can expect costs to reduce emissions from natural gas to be at the lower range, closer to \$64 per metric ton of emissions reduced, and would urge DEQ to update the FIS to reflect this assessment.

The Costs of Inaction

While the economic impacts from CPP compliance will likely be negligible or even positive when aggregated across Oregon's economy as a whole, the costs of inaction—the failure to achieve the CPP's emissions targets—may be higher than the state's economy can bear. Climate change is already producing devastating impacts in Oregon, and the destruction caused by recent climate-influenced weather events and natural disasters, such as wildfires, droughts, and

⁵ Steven Nadel, Comparative Energy Use of Residential Gas Furnaces and Electric Heat Pumps (2016), <https://www.aceee.org/sites/default/files/publications/researchreports/a1602.pdf>.

⁶ WA Commerce Agency, "Washington State Energy Strategy," First draft released in Nov. 2020: <https://www.commerce.wa.gov/wp-content/uploads/2020/11/WA-2021-State-Energy-Strategy-FIRST-DRAFT-2.pdf> E.g., "Analysis...shows that electricity is the lowest cost option to decarbonize Washington's space and water heating end uses when high efficiency heat pump technologies are used."

⁷ California Energy Commission, "Final Project Report: The Challenge of Retail Gas in California's LowCarbon Future," 2019: <https://www2.energy.ca.gov/2019publications/CEC-500-2019-055/CEC-500-2019-055-F.pdf>

unprecedented heat waves, have price tags in the billions of dollars. The 2020 Labor Day fires alone destroyed more than 4,000 homes and killed 11 people. The healthcare costs associated with Oregon wildfires are incredibly high; according to an analysis by NRDC, Oregon’s 2012 fire season cost the state \$2.1 billion in healthcare costs alone.⁸ More than 1.2 million acres burned in Oregon in 2020—approximately the same amount of acreage that burned in 2012—and as we draft these comments, the largest wildfire in the United States is burning in Southern Oregon. The costs associated with wildfires and other climate-fueled disasters are projected to rise dramatically as the climate crisis worsens. According to the World Resources Institute, the annual economic damages from climate change could equate to 10% of US GDP by 2100.⁹

The recent unprecedented climate-fueled heatwave—which sent thousands of people to emergency rooms for heat-related illness and killed more than 110 people across the state—further underscored these impacts. Dozens of small businesses were forced to close shop as a result of the extreme temperatures. Just last week, Oregon OSHA issued emergency rules requiring employers to implement protective measures for workers from the threat of excessive heat. Further, with nearly 82% of Oregon facing extreme or severe drought conditions,¹⁰ fossil fuel-driven climate change is already threatening Oregon’s agricultural and other natural resource sectors.

We strongly urge DEQ to update the FIS to reflect the substantial job and economic benefits of reducing emissions under this program, including job loss prevention, avoided future business closures, reduced health care costs, and sustaining Oregon’s natural resource economy.

Benefits of CPP Compliance

As noted in the FIS report, the ICF analysis significantly underestimates the public health and economic benefits of emission reductions over the life of the program. For instance, the model used for the health analysis did not capture potential health benefits resulting from industrial process emissions changes or reduced air toxics. Likewise, we are concerned that the assessment of the program’s potential impact to Oregon’s economy does not account for the value of potential health improvements nor the economic value from CCI investments. Moreover, the FIS should be strengthened to more fully represent the health benefits and associated economic improvements from the program—and there is significant data available to do so. For instance,

⁸ Vijay Limaye & Juanita Constible, *Up in Smoke: Oregon Wildfires Cost Billions in Health Harms* (Oct. 2, 2019), <https://www.nrdc.org/experts/vijay-limaye/smoke-oregon-wildfires-cost-billions-health-harms>.

⁹ Joel Jaeger & Devashree Saha, *10 Charts Show the Benefits of U.S. Climate Action*, World Resources Inst. (July 28, 2020), <https://www.wri.org/insights/10-charts-show-economic-benefits-us-climate-action>.

¹⁰ U.S. Drought Monitor map for Oregon, July 15, 2021: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR>.

according to DEQ's own 2015 report on diesel pollution, the health impacts from diesel emissions in Oregon cost more than \$1.8 billion each year.¹¹

Given the decades of harm that polluting industries have already inflicted on the public—not to mention the public impacts to come as climate change worsens—it is critical that indirect public health and economic benefits are adequately quantified and weighted in the FIS assessment.

We appreciate your consideration of our comments and recommendations.

Sincerely,

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¹¹ Oregon Dept. of Environmental Quality, *The Concerns About Diesel Engine Exhaust (2015)*, <https://www.oregon.gov/deq/FilterDocs/DieselEffectsReport.pdf>.