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Department of Ecology

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To the GHG reporting rule making committee,

We appreciate the opportunity to comment on Chapter 173-441 WAC - Reporting of Emissions of Greenhouse Gases for the Climate Commitment Act.

My main concern is with methane leakage. Recently, the US EPA estimated that methane is responsible for one-third of human caused climate change to date.¹ While the volume of methane that is emitted into the atmosphere is far lower than carbon dioxide emissions, over 20 years, methane molecules are 84 times more effective at trapping infrared (IR) radiation from the earth than CO₂.² Methane leakage is difficult to detect since it is an invisible, scentless gas. Methane emits IR radiation, so measuring leaks is only possible with specialized equipment. Current estimates of methane emission vary widely from 2% to 10% from well to consumption.³ At leakage rates higher than 3%, the global warming effect of fossil gas generated power becomes higher than coal power generation.

Methane leaks are possible at any point in the supply chain from well heads, through piping, storage containers, compression equipment, and the distribution piping that runs under our streets into our homes and businesses. Methane producers are interested in limiting leakage because leaks represent lost revenues.

Unlike CO₂, methane precipitates out of the atmosphere on the timescale of a human lifetime. After 80 years, enough methane has fallen out of the atmosphere that it is “only” twenty-five times as potent as CO₂. That means that reducing methane leakage is one of the few measures we can take against climate change that will produce notable results within our lifetimes.

I wish to make sure that all forms of methane leakage are addressed in the GHG reporting rule. Methane leakage is plausibly attributable to two types of emitters, suppliers and facilities. Facilities are subject to Federal rule that requires detection equipment or modeling to sum the leakage from all the equipment in facilities.

I am concerned that there is a gap in methane emissions from suppliers. The current rule reads that emissions are measured as if the provided methane is combusted or oxidized. Study after

¹ <https://www.epa.gov/newsreleases/us-sharply-cut-methane-pollution-threatens-climate-and-public-health>

² <https://climatechangeconnection.org/emissions/co2-equivalents/>

³ Howarth, Santoro & Ingraffea, Climatic Change 679, 2011.
<https://link.springer.com/article/10.1007/s10584-011-0061-5>

study has shown that significant fractions of methane can leak throughout the gas supply chain. A small fraction of leaked methane can generate much more global warming than if that same gas was assumed combusted or oxidized.

I urge Ecology to ensure that the rules properly account for methane leakage throughout the supply chain. The statement that suppliers only count emissions as if the gas is combusted or oxidized significantly undercounts the true warming methane leaks cause. While it is not possible to monitor leaks from all the miles of pipelines that local distributors manage, it would be better if the rule assumed some default minimum leakage rate. Even at just 1%, those fugitive emissions would be responsible for 84% of global warming from gas provided by suppliers over the next twenty years.

Thank you for considering our comments.

Sincerely,

Greg Stinson

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