

Rob Briggs response to PSE captured as an attachment to TAG 4 meeting notes

Appendix 1

Public comment letter written by Rob Briggs of Vashon Climate Action Group to Michele Kvam

Hi Michele,

I am in receipt of your email dated December 28, 2018. Unfortunately, upon review, I find this information only marginally useful and largely unresponsive to the requests made by me and other members of the TAG originally on October 11 at TAG Meeting #2, when the topic of fugitive methane emissions was first presented, and requested again on December 6 at TAG Meeting #3.

To reiterate our request, we need PSE to provide the **lifecycle methane leakage rate as a percentage of methane delivered**. This is the standard dimensionless percentage in which this information is represented in the scientific literature, it is information your technical people must have had at their disposal in order to calculate the CO₂e emissions in Tonnes CO₂/MMBtu, and it is consistent with how PSE represented its own in-house leakage rate in PSE IRP 2017.

I also request that you indicate the numeric value PSE is using in the CO₂e methane emissions calculation for global warming potential. This is also a value that was necessary for your technical people to have in order to calculate the CO₂e emissions in Tonnes CO₂/MMBtu that you provided below. Page 37 of the October 11, 2018 TAG #2 meeting notes indicates the 100-year GWP was used. I note that using the 100-year GWP is to rely on out-of-date science based on IPCC Fourth Assessment Report AR4 (2007), which is entirely inappropriate for a forward-looking 20-year planning exercise like the IRP.

Finally, would you please provide a full and complete reference (with hyperlink) for the BC Province's Natural Gas & Oil Statistics data series alluded to in your email below. It is difficult for TAG members to serve a useful technical review role if they cannot easily identify the documents that PSE is using to make IMPORTANT decisions.

This is a VERY IMPORTANT issue for this IRP process. In their abstract appearing in the 13 July 2018 issue of *Science*, Alvarez et al. find that US fugitive supply chain emissions are equivalent to 2.3% of gross U.S. gas production. They write, "Methane emissions of this magnitude, per unit of natural gas consumed, produce radiative forcing over a 20-year time horizon comparable to the CO₂ from natural gas combustion."² Consistent with this highly credible finding, I have suggested during TAG meeting discussions on this topic that the fugitive emissions value PSE is proposing to use appears to be low by a factor of approximately three to five. If PSE proceeds using the proposed value in their IRP analysis without proper vetting, it risks invalidating the entire IRP exercise, or at least all analyses in which a gas technology emerges as part of the optimal mix.

I do plan to raise this issue again at the TAG meeting this coming Wednesday (1/9/18), and I do hope PSE will provide the TAG satisfactory answers to these questions we first asked nearly three months ago.

Best regards,

Rob Briggs
Vashon Climate Action Group TAG Representative
[Phone number redacted]

² Ramón A. Alvarez, et al., *Assessment of methane emissions from the U.S. oil and gas supply chain*, Science 13 Jul 2018: Vol. 361, Issue 6398, pp. 186-188, DOI: 10.1126/science.aar7204.