

November 4, 2019

To: Irena Netik – Puget Sound Energy Director of Energy Supply Planning and Analytics

Cc: Jay Balasbas – UTC Commissioner
Rachel Brombaugh – King County Executive Energy Policy & Partnerships Specialist
Brad Cebulko – UTC Staff
Carla Colamonici – Regulatory Analyst, Public Counsel Division
David Danner – Utilities and Transportation (UTC) Commission Chair
Lisa Gafken – Assistant Attorney General, Public Counsel Unit Chief
Steve Johnson – UTC Staff
Ann Rendahl – UTC Commissioner
Kathi Scanlan - UTC Staff

Subject: 2019 IRP Technical Input – Upstream Gas Assumptions in PSE 2019 IRP

Note: The TAG acknowledges the WUTC Staff petition for an IRP schedule exemption. This technical input is submitted in response to PSE's commitment to "continue to ... maintain and respond to public input". This technical input should be considered an integral part of the collection of 2019 PSE IRP documents. We appreciate PSE's commitment to also include these technical inputs in the 2021 PSE IRP.

I am in receipt of Michele Kvam's email of October 17 entitled "Response to your Sept. 19 questions Re: Upstream gas assumptions in PSE's 2019 IRP." The email contains Keith Faretra's response to my request for information on the methane leakage rate planned for use in PSE 2019 IRP.

Keith Faretra's reply is unresponsive to my request. I asked that PSE provide the assumed leakage rate as a percentage of gas delivered. This is not an extravagant or unreasonable request. Rather, that value is the simplest, most-fundamental measure of fugitive methane emissions and is a value that must be known first before the composite value that PSE is using (Tonne CO₂eq/MMBtu) can be determined.

I also asked that PSE review my calculation in which I reverse engineered PSE's assumed leakage rate (as a percentage of gas delivered) and either affirm my result or correct any mistakes in my calculation. The October 17 email does not respond to this request either.

Rather than responding to my specific requests, Keith Faretra's response refers me to a spreadsheet that is part of Puget Sound Clean Air Agency's Supplemental Environmental Impact Statement for the Tacoma LNG plant. This response is inadequate for two reasons. PSCAA's SEIS cannot substitute for a primary scientific reference, particularly given that its technical content has been thoroughly discredited by several highly credible reviewers through the public

review process. Secondly, the reference is not a pointer to the specific requested information but more nearly a suggestion of where I could hunt for it.

The overriding concern here is that PSE is using a value for upstream methane emissions that is incorrect and indefensible based on available science. The value appears to be low by roughly a factor of five. The consequence of this error is to understate the costs that PSE's operations impose on the public in the amount of hundreds of millions of dollars per year and to entrench that error in PSE's legally-mandated planning process.

It is vitally important to get this right. Accurate methane leakage rates are fundamental to understanding the benefits and consequences of your acquisition plans. Based on the information you have made available; it would be impossible for the UTC or the PCU to adequately assess your IRP document.

I reiterate the simple requests for information contained in my correspondence to you on this topic dated September 18, 2019. I note that this request was first made to you at the October 11, 2018 IRP Technical Advisory Group meeting when PSE's approach to addressing fugitive methane emissions was first presented to the TAG. The request has been repeated at each subsequent TAG meeting and in writing on numerous other occasions. I do not consider this action item to be closed.

As an IRP TAG member, I formally request that PSE post this letter on their 2019 IRP website and provide a written response to these questions, posts them to the IRP website, and email them to me at rsb@turbonet.com:

- What is PSE assuming for upstream methane leakage rate as a percentage of methane delivered, and what is the basis for using that value rather than much higher rates consistent with current scientific findings?
- Why is PSE using an out-of-date value for global warming potential (GWP) for methane?
- Why is PSE using a GWP for a 100-year time horizon for methane when that time horizon is clearly illogical and inappropriate given the nature of the analysis and the environmental and political context in which the analysis is being performed?

Best regards,

Rob Briggs

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Enclosure: Email dated September 18, 2019, "Upstream Gas Assumptions in PSE 2019 IRP", Rob Briggs to Irena Netik