

**Northwest Power and Conservation Council
Natural Gas Advisory Committee
April 9, 2020**

Steve Simmons, NWPCC, began the webinar at 10:00am with introductions.

Upstream Methane Emissions & Power Planning

Steve Simmons, NWPCC

Post-Presentation Discussion [Slide 14.]

Dan Kirschner, NWGA, stated that the IEA Methane Tracker is new information and wished he could have seen it before the presentation. Kirschner then stated that measuring full-cycle emissions for one fuel source creates bias. He suggested that if this approach is taken for the natural gas system it should also be taken for all other resources, stressing that there is available data for that analysis.

Kirschner then bristled at using a national, or international, average for the Northwest as the region is distinctive. He pointed to the rigorous regulatory constructs around British Columbia gas production, which accounts for 2/3rd of the region's supply, and tighter conveyance systems as example.

Kirschner summed up by saying using a national average inflates what is occurring in the region and using the high estimate inflates that number further. He called this approach subjective and arbitrary. Kirschner was confident that a regional methane emission estimate could be calculated using existing materials. He called for:

1. Calculating full-cycle emissions for all energy resources
2. Calculating a regional estimate

Simmons thanked him for his input, noting that his proposal is not the full life cycle of natural gas or oil system and any full, life cycle study is a significant undertaking.

Simmons asked Kirschner how he would calculate a regional estimate. Kirschner offered help and pointed to information found in environmental impact statements from major energy projects like Tacoma LNG and NW Innovation Works.

Clay Riding, NW Innovation Works, pointed to a lack of Canadian data in the proposal and suggested that it would be informative. Riding then stressed that gas from "super emitters" cannot be imported into the Northwest.

Simmons stated that the EPA study is based on equipment and wouldn't apply well to Canadian gas. He lamented the lack of a good Western Canadian study to mine for data.

Simmons then asked if there is any concern around the National EPA inventory number. Bill Donahue, PSE & Tacoma LNG, pointed to his work with BC to gather a significant amount of

recent regional emissions data. Donahue agreed that close to 2/3rd of the region's gas comes from BC production and argued that the province has the tightest regulations in North America.

Donahue then stated that the EPA study considers the entire US pipeline and supply system which is much older than the relatively new Northwest system. He felt that the combination of a newer, tighter system that moved a mostly highly-regulated supply warranted a different, regional analytical approach.

Simmons asked what the leakage rate is for British Columbia. Donahue did not have data available but guessed that converted, upstream emissions out of BC is in the 8/10 of 1% range. He added that much of that supply has become available in the last two to three years and uses newer production and drilling techniques.

Simmons asked if Puget Sound Energy includes that information in their IRP. Donahue was not sure but guessed that it's a pro rata use of BC data combined with EPA data for the non-BC portion of fuel. Riding said data and sources could be found in Tacoma's lifecycle analysis. Donahue agreed saying the study was conducted by the air permitting agency.

Fred Heutte, NW Energy Coalition, called this a difficult topic as it is more about science than economics. He agreed the work is complicated and the data gaps are huge. Heutte called the EDF assessment the current, best-available source and the right place to start, but agreed that a Northwest context must also be considered.

Heutte suggested focusing on the lower end of the EDF assessment instead of considering all of the studies and picking something in the middle. Heutte concluded that this is a judgement call and suggested bringing in scientific experts to help make that call.

Mary Moerlins, NW Natural, thanked Simmons for his addental work and agreed that science should guide this decision. She then asked if the highest priority is finding a national number or a Northwest number. Simmons stated that everyone is on a tight timeline to lay down baseline data for the 2021 Plan. He agreed that the priority is finding a Northwest number but stressed that the importance of landing a number that everyone feels confidence in and shows a trend over 20 years.

Simmons stated that data transparency that shows the system is getting cleaner would be really helpful for power planning.

Jim Robbins, Kootenai Electric, noted that the majority of reported "lost or unaccounted for" isn't in fact lost but a glitch in the method of gas measurement. He felt caution should be exercised when using "lost or unaccounted for" numbers because of this. Simmons thanked him, saying "lost and unaccounted for" is a small component compared to upstream pipeline transmission numbers in both studies.

Edward Finklea, AWEC Solutions, agreed that a regional approach has merit. He stated that consumers are interested in the lifecycle costs of all of the energy sources and asked if the Council is interested in taking up that work. Simmons replied that his proposal is not a full lifecycle analysis of the oil and gas system. He noted that full lifecycle analysis would be a big undertaking but can be discussed further.

Heutte said there is a lot of literature on full lifecycle analysis. Ryan Bracken, NW Natural, agreed with Heutte, saying there are studies and meta studies of those studies. Simmons agreed but said full lifecycle studies open up other issues and is a big undertaking. Bracken asked if it made sense to just look at some pieces as that approach might bias the work.

Heutte agreed that taking on a huge project this late in the process would be burdensome. He suggested a narrative about this issue be included in the 2021 Plan. Simmons thanked him reiterating his concern that while a full lifecycle study would be worthwhile it's also an enormous undertaking.

Kirschner interjected that if you can't do this comprehensively for all sources why do it for one. He suggested that if conducting a lifecycle analysis is too burdensome perhaps it is better to delay. Kirschner stressed that his organization doesn't oppose this kind of analysis and is looking for constructive ways to contribute.

Andrew Rector, WA UTC, asked if this upstream emissions analysis starts directly from the well or just looks at transportation and distribution. Simmons said they currently have emission rates at the point of combustion while upstream emission rate studies look at everything from the well to the point of combustion while a full lifecycle analysis would look at CO2 emissions from compressor stations, diesel, oil and gas emissions at the sight, equipment and more.

Moerlins asked how increasingly stringent Canadian and (hopefully) domestic regulations would be modeled in a 20-year Power Plan. Simmons said this would be looked at for decarbonization strategies which is why it needs to be included in the baseline. Moerlins pointed to the One Future initiative which looks at the full value chain of the gas system. She agreed that if it's not included in the baseline you can't capture improvement trends. Simmons called the One Future initiative promising but stated that it's voluntary and not regulatory.

Donahue said this highlights the importance of using regional values, noting that the whole western Canadian basin is already at 1%.

Heutte supported a declining "response factor" over time as the industry responds to economic and regulatory aspects. He again suggested starting at the low end of the EDF number, making some adjustments based on Northwest realities and includes a declining "response factor."

Jody Morehouse, Avista, supported the NW Gas Association moving ahead with a study to find a better number for the region. This approach was also supported by: Mike Hopkins, Fortis BC,

Mitch Meyer, TC Energy, the representative from NW Pipeline, Xan Kotter, Williams Northwest, Bill Donahue, PSE and Tacoma LNG and Edward Finklea, AWEC Solutions.

Bracken asked about next steps. Simmons explained that he will summarize the points from today's meeting and send them to Committee members for review. He will discuss concerns with the Council and Council staff and make decisions from there.

Simmons adjourned the meeting at 11:00am.

Attendees via Webinar

Steve Simmons	NWPCC
Massoud Jourabchi	NWPCC
Randy Friedman	NW Natural
Tomás Morrissey	PNUCC
Rob Diffely	BPA
Selisa Rollins	BPA
Tom Pardee	Avista Corp
Melinda Holdsworth	TC Energy
Dan Kirschner	NWGA
Jody Morehouse	Avista
Ryan Bracken	NW Natural
Clay Riding	NW Innovation Works
Tamy Linver	NW Natural
Fred Heutte	NW Energy Coalition
Shirley Lindstrom	NWPCC
Jim Robbins	Kootenai Electric
Mary Moerlins	NW Natural
Xan Kotter	Williams Northwest
Erin Saylor	Columbia Riverkeepers
Bill Donahue	PSE and Tacoma LNG
Andrew Rector	WA UTC
Edward Finklea	AWEC Solutions
Greg Nothstein	Washington State Energy Office
Mitch Meyer	TC Energy
Brian Dekiep	NWPCC
Mike Hopkins	Fortis BC
Brian Robertson	CNGC
Michael Cocks	BPA