

Climate Change and Safety Concerns regarding Natural Gas

Docket # UE-170033 and UG-170034

Testimony from Kevin Jones, Carbon Free PSE – Vashon campaign lead

kevinjonvash@gmail.com

206-463-1766

Good evening. My name is Kevin Jones and I am a PSE customer. Thank you for this opportunity to provide testimony regarding the replacement of Colstrip 1 & 2 coal fired power plants as part of the PSE rate structure.

I would like to discuss the related climate change impacts from a regulations point of view, which I prefer to think of as a “protections” point of view. Your charter includes “ensuring private... energy... companies are providing services that are fairly priced, reliable and safe”. I will focus on safety, and your role to protect us from dangers and damages that could be inflicted on us by energy providers.

My testimony will address my direct experience with PSE regarding their approach to coal use, my indirect experience of PSE regarding their documented disregard of safety emphasis with respect to Natural Gas, new observations that Methane leaks have been significantly underestimated and a recent, local example of ignoring the impacts of Methane leaks during the Natural Gas extraction and transportation process that I hope you will not overlook while considering PSE plans to replace Colstrip 1 & 2.

My first point is in response to statements captured in the [Bellevue Reporter Article Environmental advocates call for Bellevue-based Puget Sound Energy’s closure of Montana coal plant](#) written by Raechel Dawson on August 2 following your July 31 rate case hearing. In that article Sameer Ranade of the Washington Environmental Council said “President Donald Trump is not going to implement the Clean Power Plan, which would have reduced emissions from coal-fired power plants”. Subsequently the article states that “Grant Ringel, a spokesman with Puget Sound Energy, said environmental issues are also “of great concern” to the company”.

[My letter to the editor](#), citing my direct experience with PSE, indicates little incentive to address environmental and climate change issues, in part:

Since December of 2016 I started calling PSE to ask a simple question “How can PSE ratepayers help you move away from coal based electricity?” I expected a simple and straightforward answer. I called almost every week, for four months – first the media department, then a community outreach department. I can assure you that PSE did not offer any concrete thoughts about how their million-person rate payer base can accelerate this transition away from coal. When a new PSE community outreach person did call me, he mainly repeated “the (Colstrip closure) settlement is the settlement”, meaning the lawsuit that enforced the current schedule for PSE to shut down half the Colstrip plant was not something they planned to alter. Throughout the 20-minute conversation, despite repeated requests on my part, there was not one suggestion offered to accelerate this process.

PSE has not evidenced, to me, an interest in moving away from carbon based fuel. I do not expect them to be inclined to evaluate this approach in their future energy planning. As Commissioners, you should not expect PSE to have an interest or a strategy to abandon carbon based fuel.

We should also expect PSE to propose a gas plant to replace Colstrip. This leads me to comment on PSE statements about Natural Gas safety, in this case their planned Tacoma LNG facility, in an article from [KNKX](#):

Puget Sound Energy says ... the project ... is safe.

"It virtually eliminates the spill risk from bunker fuel because liquefied natural gas simply evaporates. It's non-toxic. It simply evaporates if in fact the unlikely spill happens," according to PSE spokesman Grant Ringel.

A more realistic assessment of Natural Gas leaks is included in a [Crosscut](#) article, which states:

Liquefied natural gas is not explosive, but if it warms up and reverts back to its gaseous form (*ie: evaporates*) and [mixes with the air](#) in the right proportions — and these vapors find a spark or flame — it [can catch fire](#) (*ie: explode*).

While Mr Ringel makes light of this risk, the world of Natural Gas extraction and transportation is not so innocent as Natural Gas developers claim, as stated in [The Economist](#):

Methane emissions come from several sources—not least the digestive systems of livestock such as cows. But the latest figures show that the biggest chunk of annual methane emissions in America, around a third, can be traced to the natural-gas industry. An estimated 2.5% of the natural gas flowing through America's ageing energy infrastructure leaks out of wells, pipelines and storage tanks. Often it seeps discreetly into the air. Sometimes it leaves a more noticeable footprint—a 2015 blowout at the Aliso Canyon storage facility in Los Angeles produced the worst leak in American history.

The related article in [The Economist](#) further states:

Recently, the Environmental Protection Agency (EPA), an American regulator, has introduced its first regulations specifically aimed at capping methane emissions, acknowledging it has underestimated the problem. It has lifted its estimate of the amount of methane that leaked out of the natural-gas and oil supply chain in America in 2013 by about 30%—a massive revision. Steve Hamburg, EDF's chief scientist, says that still leaves out the "fat-tail" super-emissions. He reckons about 2-2.5% of the gas flowing through the American supply chain leaks out, in total.

Get much higher, and that would endanger the argument that natural gas is over all time periods cleaner than coal. And if natural gas emerges as a rival to petrol as a transport fuel, as European companies such as Royal Dutch Shell strongly hope, such levels would erode the net climate benefit altogether, Mr Hamburg says.

Methane leaks, the primary component of Natural Gas, are much more frequent and of larger scale than has been previously assumed. The results of Methane leaks on climate change are not insignificant, according to this summary from the Tox Town website:

Methane is a major greenhouse gas because it absorbs heat in the atmosphere, sending some of the absorbed heat back to the surface of the earth and contributing to [climate change](#). Methane emissions represent approximately 10 percent of all greenhouse gas emission in the United States. Methane is

about 21 times more powerful than [carbon dioxide](#) in absorbing and keeping heat in the atmosphere. It stays in the atmosphere for approximately 9 to 15 years.

Source: https://toxtown.nlm.nih.gov/text_version/chemicals.php?id=92

The results can also be deadly, and the resulting explosion and fire can be difficult to fight due to the risk to first responders, according to this [Sightline Institute article](#):

Nearly two years ago, an explosion and massive gas leak at a liquid natural gas (LNG) facility in [Plymouth, Washington](#), thirty miles south of the Tri-Cities, injured five workers and forced hundreds of people to evacuate their homes. To this day, state and federal oversight agencies have not published the findings of their investigations into the accident, and the facts about what happened are almost completely unknown to the public.

Sightline's research into the Plymouth LNG explosion reveals that the LNG industry is creating a false safety record, and current regulations allow the industry to do so. Though the accident released a dangerous LNG vapor cloud into residential areas, it didn't meet the definition of "a threat to public safety," and federal rules did not classify it as an LNG spill. Furthermore, facility owner Williams Pipeline Company (Williams) is still withholding key details about the accident.

Shortly after 8:00 a.m. on March 31, 2014, gas processing equipment at Plymouth LNG exploded into a towering, [mushroom-shaped cloud](#). Nearby residents [saw flames shoot into the air](#), and people living [three to six](#) miles from the plant could feel the explosion. The blast sent [250 pounds of debris and shrapnel](#) flying as far as 300 yards, damaging buildings and equipment and puncturing one of the large LNG storage tanks.

In the hours that followed, 14.3 million cubic feet of gas spewed from [a large gash](#) in the storage tank and other damaged equipment on site.

Fumes from the facility sickened [residents and emergency responders](#) and endangered the public. The leak formed a dangerous cloud of gas vapors, which an east wind pushed [toward the town of Plymouth](#). Vapor clouds become more dangerous as they drift away from the site of the leak and mix with oxygen: at a [5 to 15 percent concentration](#), a vapor cloud that meets a spark or flame can catch fire and [burn all the way back to the source](#). To protect public safety, state officials [evacuated](#) Plymouth LNG employees as well as residents within two miles of the facility. They [shut down traffic](#) on the nearby Columbia River, parts of Highway 14, and the rail lines near the plant....

Emergency responders—there were [more than 100](#) on the scene—had to wait for the wind to dissipate the natural gas before they could safely enter the facility and address the leak. The wait was drawn out by LNG's extremely low temperature: the leak kept forming [ice blockages over the hole](#) in

the tank. External temperatures would then melt the ice, and the leak would continue. Hazardous materials experts were finally able to enter the facility eight hours after the explosion.

Why is this relevant? From the Port of Tacoma PSE LNG facility website (<https://www.portoftacoma.com/puget-sound-energy-lng-facility>):

Puget Sound Energy's LNG facility will be used to fuel ships and provide natural gas to residential and commercial customers during peak cold weather demands.

PSE is making a large investment in Natural Gas, offering financial incentives to its customers to switch to Natural Gas and expects its commercial Natural Gas segment to grow. Building a Natural Gas plant to replace Colstrip is a likely extension of their Natural Gas expansion objectives.

Unfortunately, despite the climate change damage due to significant Methane leaks from Natural Gas extraction and transportation and the safety problem of Natural Gas explosions, those chartered to protect the public don't always consider these issues.

[From the Tacoma LNG Facility Frequently Asked Questions website:](#)

Question: Why does the (LNG Tacoma export terminal) EIS not account for greenhouse gas emissions during extraction, transmission, and processing of LNG?

Answer: ... Any impacts associated with natural gas extraction, processing and transportation to the PSE natural gas system were considered too remote to the actual impacts of the project in and around the project site, and in the City of Tacoma generally, to legitimately be part of the scope of the EIS. ...the City of Tacoma determined that the greenhouse gas emissions evaluation would be limited to the Tacoma LNG facility and TOTE Marine Vessel LNG Fueling system.

Of course, the "remoteness" of the gas leak does not reduce its contribution to climate change, but does leave the problem of explosions in someone else's back yard.

In summary:

- Do not expect PSE to be self-motivated to move away from carbon based fuel
- Do not rely on PSE to accurately convey the true dangers of Natural Gas extraction and transportation, both Climate Change dangers and the risk of explosion due to gas leaks
- Do lend significant weight to the [social costs of carbon](#) pollution and the related safety issues in your assessment of PSE Colstrip 1 & 2 replacement options and
- Protect us, your constituents, from harm.

Source articles and referenced material:

Shaded text included in the testimony above.

❖ Bellevue Reporter article:

Environmental advocates call for Bellevue-based Puget Sound Energy's closure of Montana coal plant

- [Raechel Dawson](#)
- Wed Aug 2nd, 2017 3:30pm
- [News](#)

Bellevue was flushed with green on Monday.

Several state environmental groups and residents across the county packed Bellevue City Hall's council chambers during a public hearing with the Washington State Utilities and Transportation Commissioners.

Their mission? To tell the commission to put Puget Sound Energy on a debt schedule that would close a coal plant in Montana by 2025.

Back in January, Bellevue-based Puget Sound Energy filed a rate case that proposed increasing consumers' rates — 4 percent for electric rates and a 3.2 percent decrease for natural gas rates. Puget Sound Energy officials said the money would be used to help with aging businesses, the increased costs to produce electricity and the future expenses of retiring the coal plant. Monday's public hearing was the first of two hearings on the rate case before the commission is expected to make a decision this December.

But the most contentious issue wasn't on the rate increase request, which would reduce natural gas rates by \$22 million a year yet raise electricity rates by \$87 million.

It was regarding the timeline in which Puget Sound Energy would close the coal plant in Colstrip, Montana. While the energy company is in the process of shutting down half of the coal plant by 2022, environmental stewards argue the rest of the plant should be on its way out by 2025 instead of the proposed 2035 time frame.

"I think folks are looking out at the national political scene and are seeing that if we're going to make any progress on climate, it's going to have to come from the state level and the single most important thing we can do in this state to act on climate is to shutdown Colstrip," Jessica Koski, the Puget Sound organizer of Beyond Coal's Sierra Club, said. "It's the lowest hanging fruit, it's a big deal."

In 2015, the coal plant in Colstrip was the third largest climate polluter in the United States, Koski added. It's one of many Beyond Coal is working to retire. The Sierra Club, based in Seattle, is part of Beyond Coal and leads the effort to shutdown the Colstrip coal plant.

"Coal is the expensive, dirty, dangerous fuel," Koski said. "So, when you actually take into account the true cost to folks' health ... it's obvious we have better options that are available, especially in the Northwest. We have abundant wind, abundant solar, huge energy efficiency potential, so there's really no excuse in terms of the economics to still be burning coal."

Ryan Snell, a Kirkland resident whose granddaughter attends Sacred Heart School in Clyde Hill, said he worries about her future if climate change isn't brought under control.

"We need to shutdown all the coal plants in Colstrip," he said. "I'm also quite aware the longer Colstrip is open, it's going to continue to dump toxic waste into the ash ponds and, as rate payers, we're going to have to pay for that cleanup."

Sameer Ranade of the Washington Environmental Council of Seattle agrees the plant should shutter by 2025.

"Local jurisdictions, state governments have to act now that we know the federal government is not," Ranade said, adding that President Donald Trump is not going to implement the Clean Power Plan, which would have reduced emissions from coal-fired power plants.

The first target date for greenhouse gas reductions in the Paris Climate Accords, which Gov. Jay Inslee has vowed to uphold, is 2025, and King County's Strategic Climate Action Plan, which was signed by 14 King County mayors, calls on the county to phase out coal-fired electricity by 2025.

Grant Ringel, a spokesman with Puget Sound Energy, said environmental issues are also "of great concern" to the company, which has been the Pacific Northwest's largest utility owner of renewable energy since 2006.

Ringel said Puget Sound Energy is one of six owners of the Colstrip plant, which was built in the 1970-80s, and its plans to move away from coal are "aggressive," citing the request to close half of the plant by 2022.

Puget Sound Energy also has several "green" programs, such as the Green Power Program, Solar Choice and Green Direct. Puget Sound Energy officials claim to be one of the largest energy efficiency programs in the nation, which helps customers save money on their bills while conserving energy.

"This year, we requested the Utilities and Transportation Commission accelerate recovery of outstanding costs for units 3 and 4 (the second half of the coal plant) to allow for timely retirement of those units in the future," Ringel said. "Part of the current rate case deals with the future costs of decommissioning and environmental remediation related to the retirement plan for Colstrip units 1 and 2 (the first half of the coal plant) by July 2022."

Although the rate increase proposal called for a 2035 depreciation schedule for units 3 and 4, Ken Johnson with Puget Sound Energy said "further accelerating" the schedule to 2025 – per advocates' requests – could potentially increase customer rates but said it would be minimal – less than 1 percent.

"It will be determined by the commission as this rate case proceeds throughout the litigation process," Johnson said, noting that a number of rate payers at the public hearing Monday said they would pay more to accomplish a faster shutdown.

Ringel said Puget Sound Energy found a way to pay for the eventual closure of Colstrip while minimizing the impact to customers' bills through the rate increase.

However, the Sierra Club doesn't see it that way. Even though half of the plant will be closed by 2022, the club said the next generation will be paying off the debt and cleanup costs for that closure through 2036. They say part of the money that Puget Sound Energy is asking for in the rate increase includes a "reasonable amount of return," or profit, to shareholders for those depreciation costs, which, they claim, should have been wrapped up much earlier.

And they don't want the same thing to happen with the closure of the rest of the coal plant.

In June, the Utilities and Transportation Commission staff recommended Puget Sound Energy take a different approach to paying for the decommissioning of units 1 and 2 in the coal plant.

Staff recommended the commission rule Puget Sound Energy should lower its rates for natural gas by 6.6 percent (\$46 million) and decrease, not increase, electricity rates by 2.2 percent (\$54 million).

To fund costs associated with decommissioning and remediation of the first half of the Colstrip site by 2022, commission staff recommended revaluing Puget Sound Energy's share of the coal plant in Colstrip, which "would allow the company to repurpose a portion of federal treasury grants to an interest-earning account" for that purpose, according to a news release.

That recommendation, however, was made by staff and not the three commissioners who make up the Washington State Utilities and Transportation Commission.

The next public hearing for Puget Sound Energy's rate case will be at 6 p.m. Thursday, Aug. 31 at the Washington State Utilities and Transportation Commission, 1300 S. Evergreen Park Drive SW in Olympia.

Customers who would like to comment on the case can submit comment online at www.utc.wa.gov/comment, email comment@utc.wa.gov, call toll free 1-888-333-9882, or write the Washington State Utilities and Transportation Commission at: P.O. Box 47250 Olympia, Washington 98504.

❖ Bellevue Reporter Letter to The Editor – August 2017

Submit to: <http://www.bellevuereporter.com/submit-letter/>

I feel compelled to respond to your article Environmental advocates call for Bellevue-based Puget Sound Energy's closure of Montana coal plant on August 2, particularly in response to PSE spokesman Grant Ringel's statement that environmental issues "are of great concern" to PSE. This does not ring true for me.

Since December of 2016 I started calling PSE to ask a simple question "How can PSE ratepayers help you move away from coal based electricity?" I expected a simple and straightforward answer. I called almost every week, for four months – first the media department, then a community outreach department. I can assure you that PSE did not offer any concrete thoughts about how their million-person rate payer base can accelerate this transition away from coal. When a new PSE community outreach person did call me, he mainly repeated "the (Colstrip closure) settlement is the settlement", meaning the lawsuit that enforced the current schedule for PSE to shut down half the Colstrip plant was not something they planned to alter. Throughout the 20-minute conversation, despite repeated requests on my part, there was not one suggestion offered to accelerate this process.

It would be great if PSE backed up their concern for the environment with concrete plans to reduce their environmental impact. There are many reasons, cited in your fine article, that Colstrip 3 & 4 should shut

down by 2025. Personally, I have seen no evidence PSE is serious about doing this. Help us tell PSE to do the right thing – go to sc.org/CarbonFreePSE.

Kevin Jones

❖ Puyallup Tribe Opposes LNG Facility article:

Source: <http://knkx.org/post/puyallup-tribe-says-it-opposes-lng-facility-port-tacoma>

Puyallup Tribe Says It Opposes LNG Facility At Port Of Tacoma

By BELLAMY PAILTHORP · APR 18, 2017

The Puyallup Tribe says it will not go along with plans to put a liquified natural gas facility on a site at the Port of Tacoma. The site is located [on land that lies sandwiched between parcels on its reservation](#).

The tribe says its biggest concern is that its reservation lies in an urban area. And the heart of that is the Port of Tacoma.

John Weymer is a spokesman for the Puyallup. He says there have been several minor spills of fossil fuel oils coming in on trains over the past few years.

“So we’re very concerned, about the environment, oil spills. And then, on top of that, adding LNG and methanol? We just don’t want to be the fuel depot to the world,” Weymer said.

He says that’s why they have [filed suit under the Clean Water Act](#). Weymer says pipelines for liquified natural gas -- or any fracked fuel -- are too risky, especially those referenced in the suit, because they are located on the shores of Puget Sound or in the heart of their reservation.

“We don’t want to take any chances. They are slim, but there are chances of spills, explosions and so on — so, it’s just, no,” Weymer said.

[Puget Sound Energy](#) says it has done extensive environmental review and that [the project](#) is permitted correctly and [is safe](#). The utility says natural gas is cleaner than the bunker fuel it will be replacing and the [Tote shipping company](#) wants the fuel for its natural gas powered ships.

[Utility spokesman Grant Ringel](#) says Tote is replacing dirty bunker fuel with LNG on many of its ships. Bunker fuel is worse than diesel in terms of the particulate and carbon pollution it puts in the air.