

July 20, 2020

Re: City of Vancouver's Temporary Moratorium on New or Expanded Large-Scale Fossil Fuel Processing and Storage Facilities

Dear Mayor McEnerny-Ogle, Vancouver City Council, Staff,

NW Natural appreciates the opportunity to provide comments on the City of Vancouver's temporary moratorium on new or expanded large-scale fossil fuel processing and storage facilities. NW Natural is a 161-year-old local distribution company (LDC) that provides natural gas directly to customers in Oregon and Washington. We provide natural gas to more than 2.5 million people through 750,000 connections in the region.

We recognize, along with Council and the community, that there is a climate imperative and that we must work together to address this future. In addition, safety is one of NW Natural's core values. We share the Council's desire to plan for and build a resilient community and mitigate infrastructure concerns related to seismic events. It is in this light that NW Natural submits these comments to the record around the Temporary Moratorium and any possible related future moratoriums. Our goal with this letter is to help clarify the current language so that we do what we believe could lead to unintended consequences in the current language.

NW Natural is working on projects now that will flow renewable natural gas (RNG) into our pipeline system and we are working on a renewable hydrogen project as well. **Renewable natural gas^a is produced from organic materials like food, agricultural and forestry waste, landfills and wastewater. Renewable hydrogen^b is made from wind, hydro-electric, or solar energy that would otherwise go to waste.** The future of renewable energy coming onto our system to reduce greenhouse gas emissions as well as our need to maintain safe gas infrastructure for the community and our customers, indicates that:

- All forms of renewable energy should be explicitly excluded from "fossil fuel" as defined in the moratorium and any future zoning code amendments.
- The City should avoid language that could hinder investment in the production of, and storage capacity for renewable energy such as renewable natural gas, biogas, renewable hydrogen, and synthetic methane created from renewable hydrogen.
- Structures like compressed natural gas (CNG) fueling stations should be explicitly exempted from the moratorium as they are key to lowering emissions in the

transportation sector and more. These structures are akin to gas stations that are expressly exempted from the moratorium and they may blend renewable fuels and traditional natural gas.

- New temporary structures like CNG trailers (used in short-term maintenance or cold weather situations for customers) or other storage equipment used in the maintenance of gas distribution system should be explicitly allowed.

BACKGROUND:

NW Natural's Business: Throughout the region, the company owns a modern pipeline system that delivers gas to homes and businesses for water and space heating, cooking, and industrial processes.

NW Natural Environmental Values: As a 161-year-old company, NW Natural takes climate action very seriously. Environmental stewardship is one of our core values.

That is why we are committed to pursuing a carbon neutral pipeline by 2050. We see no technical barrier to achieving this and we embrace challenges that come with that change. Not only do we see no technical barriers, this will be required. Why? Simply put, the gas system delivers too much energy for our region to meet its climate goals without putting this existing reliable and safe infrastructure to use in new ways – there isn't enough money or time to meet the goals any other way.

This is a realization European countries have come to understand and why they have begun the transformation to achieve carbon neutrality in their gas system, which they now embrace rather than question.¹

Backed by studies by the Oregon Department of Energy² and ICF International³ the technical potential for RNG production is significant: respectively, the reports conclude there is enough to supply RNG to every home using natural gas in Oregon today and there is enough national supply that can be produced at a competitive cost using known technologies to meet a 95% reduction in emissions associated with natural gas use from the national residential sector. Additional analysis conducted by Washington State University and the Department of Commerce in 2018,⁴ shows additional technical potential of RNG in Washington characterized as 3-5% of total natural gas consumption consumed in the state, that includes power production (about equivalent to the direct use NW Natural provides) but does not consider forest waste or power to gas.

NW Natural is uniquely positioned to deliver RNG, renewable hydrogen, and synthetic methane created from renewable hydrogen. These forms of energy are newer than wind and solar, but offer similar climate benefits. In 2019, Washington Governor Jay Inslee signed HB 1257, which allows us to deliver RNG to our customers and have additional voluntary options for customers who would like to go above and beyond. Also, in 2019,

Oregon Governor Kate Brown signed Senate Bill 98 into law, creating a path for renewable natural gas to become an increasing part of the state’s energy supply.

We can do all this by leveraging our existing system, which is one of the newest and tightest in the country. NW Natural took early action and completed our pipeline replacement program in 2015. We can also do this with help from customers who offset their energy use through our Smart Energy carbon offset program, which was one of the first voluntary emission reduction programs offered by an LDC in the nation.

SPECIFIC COMMENTS ON THE MORATORIUM:

While the moratorium does not appear to be specifically directed at our operations within the City of Vancouver, we note several areas that could be clarified to prevent unintended consequences.

SECTION	NW NATURAL COMMENTS
<p>On Page 5 – Second full Whereas</p>	<p>Coal, petroleum and natural gas are lumped together and their nexus with climate pollution is summarized. While we agree that all of these are fossil-based resources, fossil-based natural gas has a significantly lower carbon content than coal or petroleum fuels. Please consider:</p> <ul style="list-style-type: none"> • Natural gas emits about 50% less carbon than coal⁵ • Natural gas vehicles (NGVs) run cleaner than gasoline or diesel, reducing GHGs by up to 30%, carbon monoxide by 70 to 90%, and nitrogen oxide (NO_x) emissions by 74 to 99%⁶ <p>While we understand and agree that traditional fossil-based natural gas should be defined as a fossil fuel, the City’s findings should recognize and expressly distinguish between the effects of traditional natural gas and the effects of coal and petroleum. This becomes especially needed as organizations consider the benefits of a compressed natural gas (CNG)/RNG blend for heavy-haul vehicle applications as a replacement for diesel.</p>
<p>Definition of Large-Scale Fossil Fuel Facility (LSFFF)</p>	<p>We note here that “large-scale fossil fuel facilities” (LSFFF) is defined very broadly (e.g., no actual scale limitation), and what is expressly included and excluded from this definition would benefit from clarification to avoid confusion or unintended consequences.</p>

Relating to what is excluded from the definition of LSFFF:

- “[F]acilities that solely provide direct sales or distribution to consumers (e.g., gas stations are not large-scale fossil fuel facilities)” (Sec. 2(B)(2)) – emphasis added). While NW Natural believes that this exclusion from the LSFFF definition would encompass our entire distribution system, including supporting facilities and appurtenances, within the City, we want to ensure that to avoid any parts of our system from being unintentionally outside this exclusion. For example, certain parts of our system, such as facilities used during system maintenance, support distribution to consumers but do not themselves provide that distribution. **We request that the City add “natural gas distribution systems and associated facilities and appurtenances” to the parenthetical to make it clear that the entire distribution system to consumers is excluded.**

In addition, the transportation sector is the largest and fastest growing sector for greenhouse gas emissions (GHGs). While much of this sector may consider electrifying, some heavy haul vehicle applications such as concrete and aggregates, waste haulers, or bus fleets and Pursuit Rated Vehicles, are operating on or are well positioned for CNG and RNG. As mentioned above, natural gas vehicles (NGVs) run cleaner than gasoline or diesel, reducing GHGs by up to 30%, carbon monoxide by 70 to 90%, and nitrogen oxide (NO_x) emissions by 74 to 99%. According to NGVAmerica, running NGVs on renewable natural gas derived from organic methane from dairies, landfills, wastewater treatment plants and more, has the ability to reduce GHGs by 382% over diesel.

While 100% RNG is not yet available in the pipeline, to reduce GHG emissions from transportation, **fueling infrastructure that offers CNG or a blend of CNG and RNG or renewable hydrogen) should not be prohibited.** CNG and RNG fueling infrastructure often includes a blend of fossil-based and renewable fuels and requires a certain amount of local, onsite storage much like a gas station. Accordingly, **we request that CNG fueling stations be referenced with gas stations, as both provide similar services directly to consumers,** recognizing, of course, that CNG fueling stations are the better option from a GHG




	<p>perspective.</p> <p>Relating to what is included in the definition of LSFF, unless otherwise excluded:</p> <ul style="list-style-type: none">• “Fossil fuels.” The moratorium’s definition of “fossil fuels” relies on “prehistoric organic matter” and thereby excludes RNG, renewable hydrogen, and synthetic methane, as it should. However, the moratorium should also reflect that these renewable fuels are increasingly blended within traditional natural gas and encourage or at least not hinder the development of facilities than can deliver blended fuels. We request that the definition be modified so that development of facilities that handle a blend of traditional natural gas and renewable gas are not deemed simply as “fossil fuel” facilities. <p>The structure and language of the moratorium wholly fails to consider the blended nature of natural gas – fossil and renewable derived – that is used in facilities covered by the moratorium. From a practical perspective, facilities for those non-fossil fuels and facilities for “fossil” methane are often one in the same. At a minimum, renewable natural gas in its various forms needs to be explicitly excluded from the definition of fossil fuels. Additionally, this general provision in Sec 2(B)1(a) should be clarified to exclude natural gas facilities which distribute a blend of fossil fuel-derived and renewable gas. How can the City acknowledge the need for blending and clarify this point?</p> <ul style="list-style-type: none">• “[A]ny structure, group of structures, equipment, or devices that stores or transfers natural gas for use in the production of electricity or power, or for further processing (excluding facilities that create energy from landfill gas)” (Sec. 2(B)(1)(f)) – This would seem to prohibit combined heat and power (CHP) facilities, is that intended and if not, can it be clarified? In addition, while there’s a carveout for landfill gas, it is unclear if the exception is just for power generation facilities that use landfill gas or also applies to landfill gas collection systems and facilities, such as at landfills or wastewater treatment plants, that handle and process biogas into RNG. We request that this be revised to prohibit new or expanded “structure(s), group(s) of structures, equipment, or devices that stores or transfers natural gas for use in the utility scale production of electricity or
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	<p>power, or for further processing (excluding facilities that handle biogas or create <u>electricity, power or renewable fuels from biogas</u>).</p> <ul style="list-style-type: none"> • “[A]ny facility which . . . [p]roduces natural gas suitable for transport (<i>i.e.</i>, pipeline quality dry natural gas), or . . . processes natural gas to create methanol or other chemical products.” (Sec. 2(B)(1)(e)) – Notwithstanding the exemption in the prior category for “facilities that create energy from landfill gas,” there’s no corresponding exemption here. Consequently, production of RNG in any form appears likely to be swept up in this category. Accordingly, we request that the following exclusion be added for clarity and consistency: “(excluding facilities that produces <u>renewable fuels from biogas</u>)”.
<p>Section 4</p>	<p>In order to maintain the natural gas distribution system, in addition to the currently listed exemptions for “upkeep, repair, or maintenance of existing buildings and properties”, the moratorium should also expressly include upkeep, repair or maintenance for “existing infrastructure and equipment.”</p>

We appreciate the opportunity to offer comments on this Moratorium. We’re available to answer any questions you may have. Additionally, we would appreciate the opportunity to present our Low Carbon Pathway and our vision for 2050 to you. Please let us know when a deeper briefing on this is possible.

Sincerely,



Kathryn Williams, VP of Public Affairs and Sustainability

DEFINITIONS

^a Renewable Natural Gas, as defined by the Renewable Natural Gas Coalition. www.rngcoalition.com/about-rng

Renewable Natural Gas (“RNG”) is an ultra-clean and ultra low-carbon natural gas alternative. As organic waste breaks down it emits methane gas, called biogas, that can be processed to meet natural gas pipeline quality specifications. Biogas of is a mixture of carbon dioxide and hydrocarbons, primarily methane gas, from the biological decomposition organic materials.

RNG is sometimes referred to as 'biomethane,' a related term. Biomethane is biogas-derived, high-BTU gas that is predominantly methane after the biogas is upgraded to remove most of the contaminants and majority of the carbon dioxide and nitrogen found in biogas.

Renewable natural gas is biomethane that is upgraded to natural gas pipeline quality standards such that it may blend with, or substitute for, geologic natural gas.

^b Renewable Hydrogen, as defined by Renewable Hydrogen Alliance with NWN addition of “hydroelectric.” www.renewableh2.org/

Electricity passing through water splits the water molecules into hydrogen and oxygen. Hydrogen produced from this process can be used as a fuel directly, or as a building block to make other energy-intensive products such as ammonia and methane. Using renewable electricity for this process can reduce dependence on fossil fuels and extend the reach of wind and solar [and hydroelectric] power beyond the confines of the electric grid.

REFERENCES

- ¹ Fairley, Peter (2020, February): The H₂ Solution. Scientific American, 37-43. <https://www.scientificamerican.com/article/solar-and-wind-power-could-ignite-a-hydrogen-energy-comeback/>
- ² “Biogas and Renewable Natural Gas Inventory SB 337 (2017),” 2018. <https://www.oregon.gov/energy/Data-and-Reports/Documents/2018-RNG-Inventory-Report.pdf>
- ³ “Renewable Sources of Natural Gas,” 2019. www.gasfoundation.org/2019/12/18/renewable-sources-of-natural-gas/
- ⁴ “Promoting Renewable Natural Gas in Washington State,” 2018. https://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=COMMERCE-RNG_c47500a3-7441-4998-93bb-30660473bf5c.pdf.
- ⁵ National Energy Technology Laboratory (NETL). 2019. [Cost and performance baseline for fossil energy plants, Volume 1: Bituminous coal and natural gas to electricity.](#)
- ⁶ “Ultra-Low NO_x Near-Zero Natural Gas Vehicle Evaluation ISX12N 400,” 2018. ucrtoday.ucr.edu/wp-content/uploads/2018/08/CWI-LowNOx-12L-NG_v03.pdf