



FIRST THINGS FIRST
OKANAGAN

“Renewable Natural Gas”

Facts and Common Misconceptions

FAQ – “Renewable Natural Gas”

What is “RNG”?

“Renewable Natural Gas” (RNG) is a marketing term coined in North America to describe methane gas that is produced from biological waste (bio-waste). Outside North America this gas is known more accurately as “biomethane”.

Where does RNG come from?

When bio-waste decomposes without oxygen present (in anaerobic environments such as landfills, industrial farms, and wastewater systems) it releases methane, a potent greenhouse gas¹. When this methane is captured and purified, it is called RNG.

But when bio-waste decomposes with oxygen present, carbon dioxide is released, not methane. We can largely avoid the production of methane by diverting organic waste from landfills to composting facilities (where oxygen is present during decomposition), and by changing farming practices.

How can RNG be used?

Where anaerobic decomposition of bio-waste is unavoidable, the most economical and best use of RNG is as an alternative fuel for backup generators or in situations that are hard to decarbonize, such as long-haul trucking, concrete-production and other industrial processes.

FortisBC is promoting the use of RNG in buildings as an alternative to natural gas²; however, this is not feasible as the supply of bio-waste is vastly insufficient. It is also ill-advised:

- RNG is expensive to produce;
- It has the same negative health effects indoors as natural gas (see Myth 4, next page);
- Like all gases, RNG is prone to leakage from pipelines and other infrastructure.

Methane is methane whether it is obtained from fossils or from bio-waste and it is detrimental to our health, and to our atmosphere.

Electrification is by far the best alternative to natural gas for heating in buildings. As well as having no carbon emissions or noxious gases, electric heat pumps come with the added benefit of being able to provide cooling as well as heating.

FortisBC also talks about “Renewable Gases”. What are they?

FortisBC representatives sometimes conflate the terms “RNG” and “low-carbon gases” by referring to them collectively as “renewable gases”. This is inaccurate and misleading as it sounds like RNG has great potential when it doesn’t. FortisBC states that their potential production will be 25-50 petajoules by 2030 and 100-440 petajoules by 2050, however the majority of that energy would be from so-called “low-carbon gases” (hydrogen produced from methane through emissions intensive industrial processes), not from RNG whose production potential is very limited³.

¹ Methane (CH₄) is a greenhouse gas about 85 times more potent than CO₂ over 20 years.

² Virtually all ‘natural’ gas in BC is fossil gas obtained through the destructive hydraulic fracturing (fracking) process.

³ BC Renewable and Low-Carbon Gas Supply Potential Study, Jan 28 2022 - see graphs on pages 3 and 5.



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“Renewable Natural Gas” Myths Debunked

MYTH #1: RNG is a clean alternative to natural gas.

False The chemical composition of RNG and natural gas is very similar: both are comprised mainly of methane, which is a potent greenhouse gas⁴. Methane leakage from pipelines and infrastructure contributes directly to climate change, and when methane is burned, it releases carbon dioxide (CO₂)⁵.

MYTH #2: B.C. has many sources of RNG.

False The number of landfills, large farms, wastewater treatment facilities and waste wood sources in B.C. is limited. To meet its mandated targets, FortisBC plans to purchase about 70% of its RNG from the Eastern US, Alberta, and Ontario by 2030. This will be expensive for ratepayers and will not reduce emissions as it will be strictly on paper. No molecules of this RNG will enter B.C. as the pipelines are all uni-directional, flowing west to east.

MYTH #3: FortisBC can provide 100% RNG to all new homes, for free.

False There are no separate gas lines for RNG. FortisBC cannot assign RNG molecules to specific dwellings. Rather, any RNG produced or purchased by FortisBC enters the same gas line system as the rest of the natural gas burned in homes. FortisBC may wish to claim that new buildings will be supplied 100 per cent with renewable gas, but this is a deceit — under their plan, the gas that enters a new home will be no different from the gas that enters an older home next door.

Also, someone has to pay. Production costs for RNG are \$20-\$30/GJoule whereas current natural gas costs are only \$4/GJoule. Existing customers will foot the bill for the higher cost of RNG and will in effect be subsidizing the new homeowners.

MYTH #4: RNG is safe to use in homes.

False Whether it be RNG or ‘natural’ gas, burning methane indoors is a known health risk. Nitrogen dioxide and other air contaminants released when cooking with gas increase a child’s risk of developing asthma by 24-42% and are known to aggravate COPD⁶. Significant amounts of natural gas also leak from gas appliances (stoves, furnaces, fireplaces, etc) even when they are off. SwitchItUp-BC states, “Natural gas furnaces, water heaters, clothes dryers, fireplaces, and cooking appliances generate a staggering amount of British Columbia’s climate pollution.”⁷

In conclusion, there is no need to use RNG in homes. Safe, clean alternatives to natural gas already exist. RNG is a limited resource that is best saved for industries and situations where decarbonization is more difficult.

⁴ Methane (CH₄) is a greenhouse gas about 85 times more potent than CO₂ over 20 years.

⁵ CO₂ is the main greenhouse gas causing global warming.

⁶ Canadian Association of Physicians for the Environment (CAPE)

⁷ What’s Wrong with Gas? - Switch it Up BC