

BC LNG Advantages per the Canadian Association of Petroleum Producers

1. \$500 billion in new investment

Market Outlook - Per Canada Energy Regulator report June 2023 – gas production will plateau from 2023-2026, decline to 2044, then drop out. 20-year lifespan, not 40 years as planned, resulting in stranded assets.

LNG Price – break even = \$9/Gigajoule (same as current)

Prior to Ukraine War = \$3/Gigajoule – went up, on its way down

Per Uniper (German energy giant) gas shortage in Europe will last less than 10 years due to increase in renewables. Renewables will reduce demand for fossil gas by 2030.

Gas production in BC has gone from 25 billion cubic meters (BCM) in 2000-01 to over 50 BCM in 2016-17. Revenues were \$1.7 billion in 2000-01, spiking at \$3.7 B in 2008-09 and were \$0.2 B in 2016-17. Gas production has doubled with an 8-fold decrease in revenue – effectively a 16-fold decrease in revenue per cubic meter.

Demand – Asian demand decreased 15% in 2022 -> LNG=expensive & unreliable. Japan & South Korea boosting domestic supplies (renewables & nuclear) for energy security, economic growth & reduction in GHG emissions. China reduced LNG imports by 20% in 2022 due to high prices, slower economic growth, increased renewables & piped gas from Russia.

Stock Market – share prices for oil & gas companies have declined >70% 2014-2022 (Encana, Cenovus, Husky)

Competition – as of June 2022 electricity generation cost per Mwhr

Solar \$45

Wind \$46

Coal \$74

Gas \$81

2. 100,000 jobs across Canada

LNG Canada = 5000 construction jobs, 300-450 permanent jobs

Renewable energy = 14,100 jobs in BC & 430,500 jobs in Canada

BC Tourism Industry = 84,500 jobs in 16,650 businesses with \$13.5 billion in revenue

3. \$2 billion in tax revenue & royalty payments (subsidies = \$1.9 billion in 2020-2021)

4. **Natural gas burns cleaner than coal** – true, however, considering all the venting, flaring and fugitive emissions (methane=86x CO₂) from wells, pipelines & processing, it is more environmentally damaging than coal.
5. **BC has vast resources** – so does the USA (#1) Russia (#2) Qatar (#5) & Australia (#7) (Iran #3, China #4 & Canada #6)
6. **BC is close to Asia** – further away than Russia, Qatar & Australia
7. **Political stability** – also the USA, Qatar & Australia
8. **Ambient temperature** – LNG cooled to -162 C. Canada's temperature is 7 degrees C closer – insignificant temperature difference.
9. **Benefits Indigenous communities** – stranded assets
Per Tom Green, senior climate policy advisor with the David Suzuki Foundation, "My fear for the Indigenous nations in B.C.'s north is that there's quite a risk of stranding assets on peoples' territories, and then there'll be no money to decommission them."
10. **We need the gas** – we don't. As of Jan 2023, BC domestic use is 12% of production, 65% goes to Alberta (tar sands) & 23% to USA via pipelines. Currently 30,000 wells, projected increase for LNG is 18,000 new wells (>50% increase) all for export.

Renewable Natural Gas (RNG)

RNG is methane gas produced from biological waste (landfills, industrial farms, wastewater treatment facilities & waste wood). FortisBC is promoting RNG for use in buildings as an alternative to natural gas, however, this is not feasible because:

1. The supply of bio-waste is vastly insufficient
2. RNG is expensive to produce (\$20-30/Gigajoule vs currently \$4/GJ)
3. It has the same negative indoor health effects as natural gas (24-42% increase in childhood asthma & aggravation of COPD)
4. It is prone to leakage from pipelines, stoves, water heaters, clothes dryers, furnaces & fireplaces.

Building heating and cooling is best done with electric heat pumps, saving the limited amount of RNG for back-up generators, and situations where decarbonization is more difficult like long-haul trucking, concrete production and other industrial processes.