

Advantages and disadvantages of LNG in BC

- plentiful supply of natural gas but: - so does Qatar, Australia, Russia, US, Indonesia
- political stability but: - so does Australia, Qatar, US, Indonesia
- closer to Asia than Gulf Coast but: - further than Qatar, Australia, Russia, Indonesia
- ambient temp (avg 7 deg C) is closer
to -162 deg C than tropical countries but: - not by much

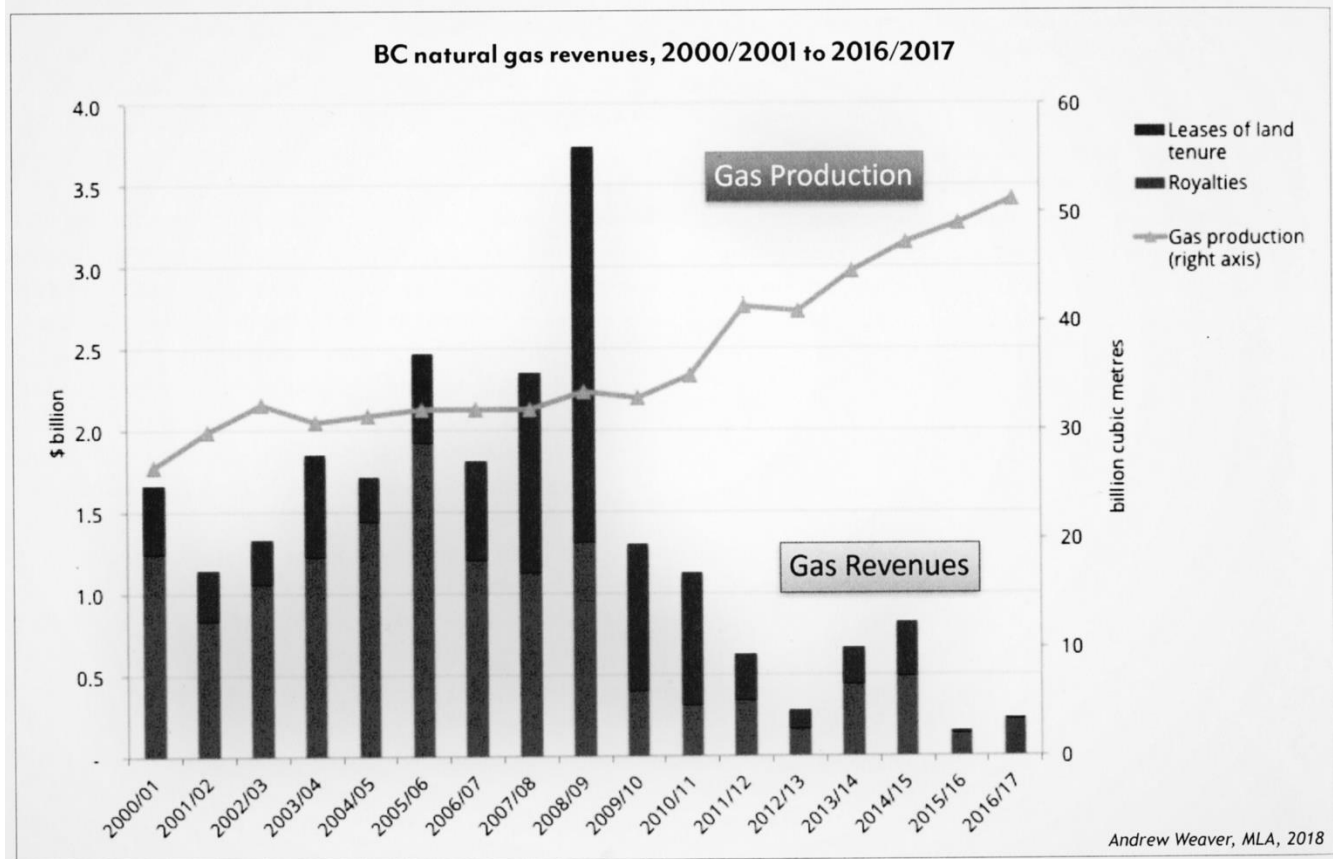
Small revenue stream, big subsidies:

- See attached graph
- Low royalty rates (second lowest in Canada; although will increase)
- Deep well royalty program to encourage fracking, no longer needed (if ever was); because of it, industry has \$3.1 billion in tax credits that they have banked against future revenue; finally revoked in 2022
- Fracking industry pays virtually nothing for vast quantities of water used, in spite of water contamination, loss of water, potential and actual groundwater contamination
- BC oil and gas subsidies increased from \$557 million in 2016-17
to \$1.9 billion in 2020-21 according to a Stand.earth analysis (reduced somewhat in 2022)

Market outlook

- Current break-even price for Asian market of BC LNG is \$9 / Gigajoule which is about current price
- Prices have been much lower 2017-2022 (as low as \$3 / Gigajoule) when the war in Ukraine caused prices to spike. Now have dropped back and are expected to drop further
- According to executive of German energy giant, Uniper at Global LNG conference in Vancouver June 2023:
 - gas shortage in Europe will last no more than 10 years as they increase renewables, other sources
 - rise of renewables will cut into demand by 2030
- According to Canada Energy Regulator report June 2023, assuming Canada meets climate targets:
 - gas production will plateau from 2023-2026 and then decline to 2044, at which point it drops out
 - this means that production will only be for 20 years not 40 years as planned, leaving stranded assets

BC is giving away the gas... almost for free



- Share prices of Oil and Gas, Gas companies have declined sharply since 2014. Examples 2014-2020
 - Suncor - 31.6%
 - Husky -74.1%
 - Cenovus -74.0%
 - Encana -79.4%
- According to a 2023 report by the Institute for Energy Economics and Financial Analysis:
 - Asia, for the first time in many years, has seen a decline of 15% for LNG demand in 2022 due to seeing LNG as expensive and unreliable
 - Japan and South Korea plan to boost domestic supplies (renewables and nuclear) to achieve energy security, economic growth and reduce GHG emissions
 - China cut LNG imports by 20% in 2022 due to high prices, slower econ growth and more reliance on piped gas from Russia

- Europe has accelerated moves to renewables because of the cutting off of Russian supply of natural gas

- Estimated Costs of new electricity generation as of June 2022:

Wind \$46 / MWhr

Solar \$45 / MWhr

Coal \$74 / MWhr

Natural Gas \$81 / MWhr

Jobs

- While LNG Canada has created over 5000 jobs for construction, only 300-450 permanent jobs

- Movement of jobs in Canada to Clean Energy sector: 297 000 jobs

vs 200 000 jobs in Mining, Quarrying and Oil& Gas Extraction (2017 data from Clean Energy Canada)

- Tourism and Agriculture, two of the most important industries in the Okanagan are being impacted increasingly not so much by LNG, but by its contribution to climate change

Our Conclusion:

BC should - issue no new fracking permits

- make a date when fracking will cease

- create a sustainable transition for workers