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B.C. Shale Scenario Tool: Numbers behind the infographic

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One tanker per day

- Assumes one Q-Flex tanker (217,000 m^3 of LNG, or 99,920 tonnes of LNG) per day leaving British Columbia's coast, which amounts to 36 million tonnes of LNG per year.[1]
- Environmental impacts calculated for 2030 as the difference between a scenario with 36 million tonnes of LNG and constant non-LNG demand, compared to a scenario with no LNG and constant non-LNG demand.
- 2030 environmental impacts displayed.
- Assumes current technologies and practices for the purposes of determining carbon, water and wastewater environmental impacts (i.e. no new policies).
- The number of cars equivalent is based on annual emissions for a standard personal vehicle of 4.75 tonnes of CO2e.[2]
- The water use comparator is based on annual per capita residential water consumption of 91.615 m^3/yr.[3]

Shale gas basins

- The text reads: "Not all shale gas basins are created equal. For example, gas from the Horn River releases 2.6 times as much carbon pollution and requires 7.5 times as much water as gas from the Montney Basin."
- The factors are not static and will change depending on levels of development, environmental policy outcomes and other factors.
- The factors in the infographic were calculated by comparing the 2030 carbon pollution (not including LNG terminals) and freshwater use for fracking for the following two scenarios:
    - 36 million tonnes of LNG exported per year and constant non-LNG demand. 100% of gas sourced from the Horn River by 2030 and current technologies and practices for the purposes of determining carbon, water and wastewater environmental impacts.
    - 36 million tonnes of LNG exported per year and constant non-LNG demand. 100% of gas sourced from the Montney by 2030 and current technologies and practices for the purposes of determining carbon, water and wastewater environmental impacts.

Table of three scenarios

- The assumptions and detailed outputs for the first scenario (on the left) can be found in the scenario-planning tool (June 17 version) by selecting "Option 1" in the "Simple scenario analysis" tab.
- The assumptions and detailed outputs for the second scenario (in the middle) can be found in the scenario-planning tool (June 17 version) by selecting "Option 2" in the "Simple scenario analysis" tab.
- The assumptions and detailed outputs for the third scenario (on the right) can be found in the scenario-planning tool (June 17 version) by selecting "Option 6" in the "Simple scenario analysis" tab.

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[1] Assuming the Q-flex tanker is fully loaded to 217,000 m^3, the 36 megatonnes per annum (mtpa) scenario requires 0.99 tanker trips/day or 361 tanker trips per year. In practice, tankers may store slightly less gas. With a median stated capacity of 213,500 m^3 (average of 210,000 – 217,000 m^3), the 36 mtpa scenario requires 1.00 trips per day. Based on: Q-Flex and Q-Max. Quatar Gas. https://www.qatargas.com/English/AboutUs/Pages/FutureFleet.aspx

[2] Environmental Protection Agency, "Calculations and References: Passenger vehicles per year," June 18, 2015. http://www.epa.gov/cleanenergy/energy-resources/refs.html#vehicles

[3] Environment Canada, "Residential Water Use in Canada Indicator Data," June 18, 2015: http://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=553CC57B-1