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Nexwlelexwem / Bowen Island, May 16, 2022

Mayor and Council
Bowen Island Municipality
981 Artisan Lane
Nexwlelexwem / Bowen Island BC V0N 1G2

Re: Presentation Woodfibre LNG on May 24, 2022

Dear Mayor and Council

I am contacting you regarding the Woodfibre LNG presentation that has been scheduled for the Council meeting on May 24, 2022.

You are well aware that climate change is happening. We've experienced that first hand. Yet, Woodfibre LNG wants to go ahead, even when the International Panel on Climate Change(2022), International Energy Agency(2021) and the United Nations(2022) strongly urge countries to stop allowing for the building of new fossil fuel projects.

The scientific consensus in the recent IPCC 6^{tR} Assessment Report doesn't mince words. A few examples from the full report that we were redacted from the summary:

- "Mitigation and development goals cannot be met through incremental change."
- "Estimates of committed CO2 emissions from current fossil energy infrastructure are 658 GtCO2 […] nearly double the remaining carbon budget"

Just last week the UK Met Office warned there is an almost 50-50 chance that the world will briefly overshoot its crucial 1.5°C climate change target within the next five years.

In other words: the next 20 years are going to be extraordinary critical to drastically reduce green house gas emissions.

Woodfibre LNG has claimed from its start in 2013, that its "cleaner" fossil fuel - "a bridge fuel" - will displace dirtier forms of fossil fuel in Asia. But such claims have been called into question many times, because the LNG industry only compares the burning of the two fossil fuels instead of including all the green house gas emissions emitted during the full life cycles of these two fossil fuels.

Woodfibre LNG's claim is no different, which becomes clear from its 2015 EA submission, and from a 2020 briefing note prepared for Woodfibre LNG by Mantle 314. It says: *"This briefing note is specific to the direct emissions of Woodfibre LNG's, BC LNG facility."* Both up stream and downstream emissions are excluded.

Earth scientist J. David Hughes did calculate the green house gas emissions for the life cycles of BC LNG and coal used in 46% efficient ultrasupercritical coal power plants in Asia. He did so in 2015 and again in 2020[1]. He included: Extraction, Processing, Pipeline, Liquefaction, Tanker/rail transport, LNG re-gasification and Power plant operations for both fracked methane gas from B.C., and coal used in Asian power plants.

In 2015 Hughes found: over the first 20 years, exported B.C. LNG to Asia will be 27% worse in green house gas emissions than coal used in 46% efficient ultrasupercritical coal power plants in Asia.

The "cleaner" effect of B.C. LNG. would only be noticeable after 100 years, and only marginally so. For Woodfibre LNG, since its uses electricity for the methane liquefaction, and since the gas liquefaction accounts for about 7% of total emissions, it will be 24% worse in GHG emissions.

Yet it gets worse: In 2021, estimates of fugitive emissions of methane from the upstream sources were found to be 1.6 to 2.2 higher than previously estimated and that were used in Hughes earlier analyses.[2] Which is crucial for LNG, as methane has more than 80 times the warming power of carbon dioxide (CO2) over the first 20 years after it reaches the atmosphere.

What we see a pattern here from the same company that suggested that herring spawn around Woodfibre was non existent using non-credible DFO data to make its case. This company now says that its LNG is "clean", when it is not.

As mentioned earlier: the next 20 years are going to be extraordinary critical to drastically bring down green house gas emissions. Woodfibre LNG will only add emissions and cannot be built.

Kind regards,

J.H. Anton van Walraven

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Attachment: Bar graph - David Hughes 2015.

[1] July 2020, J. David Hughes: *BC's Carbon Conundrum: Why LNG exports doom emissions-reduction targets and compromise Canada's long-term energy security*

[2] Tyner, D., 2021: Where the Methane Is Insights from Novel Airborne LiDAR Measurements Combined with Ground Survey Data:

Attachment: Bar graph - David Hughes 2015:

In the briefing note for Woodfibre LNG by Mantle 314, it is suggested that:
"Using LNG from the Woodfibre facility would result in an estimated 45% GHG emissions reduction compared to an equivalent amount of coal-fired electricity genereation."

However, this assumption is based on a comparison with other LNG facilities that use methane for the liquefaction process

GHG emissions from liquefaction make up approximately 6.5% of the total.