



Vancouver
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and

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Re: Revisions to the Woodfibre LNG EA certificate

Sirs/Madam:

Further to my conversation (with Michael Shepard) of last month, I seek clarity on the next steps in the process for the Woodfibre LNG project proposed for Howe Sound, BC. As you are aware, the proponent has announced¹ a change to the technology to be employed in the project – it will use air-cooling instead of a once-through seawater cooling system. The change is a significant one – not just for the physical layout of the project, but for its impacts on several value components previously identified in the EA conducted for the project.

Schedule A to Woodfibre's Environmental Certificate # E15-02 specifies that the project will use a "seawater cooling system, including an intake and diffuser with a maximum diversion rate of 17,000 m³/h is located within the Certified Project Area". Schedule A also specifies "Unless otherwise specified, all Project components are located within the areas specified on Figure 1 and Figure 2 (of the document titled "Woodfibre LNG Project Schedule A – Certified Project Description for an Environmental Assessment Certificate"²".

Section 7. (1) of the Certificate states that " the Holder may submit a written request to the Executive Director seeking a determination by the Executive Director that one or more proposed changes to the Project activities, components and/or locations described in Schedule A (Project Activities) are not material in nature". We are not

¹ 1 (<http://www.squamishchief.com/news/local-news/sea-cooling-system-out-air-cooling-system-in-1.2371049>)

²

http://a100.gov.bc.ca/appsdata/epic/documents/p408/d39486/1445878332771_1x38WnQSC5SmnvQWJhMGhQxGyZKhgbwW4g6TKHJsrqZFmLMGQ4Xk!617841696!1445875794755.pdf

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aware that such a written request has been made by or on behalf of the Proponent, though months have passed since the October 21st announcement³.

It would be well-nigh impossible to argue that the switch to air-cooled technology would be “not material in nature” – not least because, during the EA process, the proponent argued so strenuously that it would be. This will mean that several key Value Components (VCs) assessed under the previous seawater-cooling approach will need to be re-assessed. Principal among them will be physical footprint and noise, although other VCs (e.g. Avifauna, Marine Birds, Marine Benthic Habitat, Forage Fish and Other Fish (Marine), Atmospheric Environment (ground level ozone), Visual Quality (principally fog)) are also affected.

- I. **Physical footprint:** In its report on alternative cooling methods⁴, the Proponent noted the greatly expanded footprint⁵ required for the multiple cooling fans required of an air-cooled system. Measuring at least 3,250 m², it may exceed the area available for building – keeping in mind that the EA certificate specified that the concrete cap on the extensive (and leaking) toxic waste and asbestos dump area must not be disturbed.
- II. **Noise:** Noise levels from the cooling fans will be significantly higher than with seawater cooling. Electrically powered fans produce an annoying high-pitched whine, which, in the narrow valley that is Woodfibre, will be reflected and will echo loudly throughout the Sound. Based on studies from other air-cooled facilities (Cacouna, Papua New Guinea), it is likely that noise from the proposed air-cooling turbines would not comply with BC’s (or Squamish’s⁶) noise bylaws. If so, it would bring into question the original exclusion of Real Estate values as a project VC. Woodfibre’s own website claims that “seawater cooling produces less noise and visual effects than air-cooling⁷”.

⁴ “Based on vendor information, the air coolers required for cooling only the refrigerant compressor discharge of a 2.1 MMTPA liquefaction facility, would require an approximate footprint of 3,250 m² with 3.8 MW of motors installed (i.e., 42 bays (4.3 m by 19 m per bay) with three 30 kW fans per bay). To facilitate proper air flow, the minimum clearance between the fans and other equipment or structures would be 7 m (23 ft.)”

⁶ Squamish's noise regulation bylaw states that "No owner or occupier of real property shall use or permit such property to be used so that noise, sound, or vibration emanating from the property disturbs or tends to disturb the quiet, peace, rest, enjoyment, comfort, or convenience of any person or persons in the neighbourhood or vicinity."

⁷ <http://www.woodfibrelng.ca/wp-content/uploads/2015/06/Woodfibre-LNG-Information-Sheets-Seawater-Cooling.pdf>



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Concurrentl with this cooling-system change, Woodfibre LNG submitted a request to the National Energy Board for a 40-year LNG export license⁸. That request, if approved, would replace the 25-year one approved in 2014, with a 60% increase total LNG exports, hazards and environmental damage. The 2016 EA certificate granted to the facility was based on the 25-year cumulative impact on Howe Sound. The cumulative damage done to the Sound by a 40-year tenancy would be at least 60% greater than was approved in the EA certificate. That is most definitely a material change which must be considered in parallel with the change to the cooling system.

Bearing these matters in mind, we are keen on knowing what the next steps in the process of amending the Woodfibre LNG EA Certificate will be. We are especially concerned that, this time, there will be ample opportunity for participation by the public and independent experts in the re-assessment. We would appreciate you earliest confirmation of (i) the steps in the process; (ii) opportunities for public engagement in these matters and (iii) opportunities to have peer-review and cross-examine proponent-supplied technical materials.

You are no doubt aware that this project is a highly controversial one throughout the Howe Sound region, and that a full, fair and thorough engagement on these matters is both requested and required, especially in the run-up to a provincial election in which this project will be a key issue. My Sea to Sky has collected over 10,000 signatures to the Howe Sound declaration, which aims to preserve Howe Sound from further environmental damage.

Yours very truly

Eoin Finn B.Sc., Ph.D., MBA

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ccs to MP Goldsmith-Jones; MLAs Sturdy, Simons; Municipal Councils of Squamish, Lions Bay, West Vancouver, Bowen, Gibsons, Regional Districts of Sunshine Coast, Squamish-Lillooet and Powell River; Print & Social Media

⁸ <https://docs.neb-one.gc.ca/ll-eng/llisapi.dll?func=ll&objId=3071644&objAction=browse&viewType=1>