

Notes¹ from Information meetings of Feb. 4th, 2014

1. Executive Suites, Squamish

Attendance: ~ 30, including Woodfibre²/contractor staff, Squamish Mayor & Fire Dept., local residents, Fortis and BCHydro reps. Notably absent: First Nations representation.

- The parent company is a joint-venture minority (35%) partner in the Jiangsu Rudong LNG receiving terminal in China- an LNG import/regasification plant. Other than that, it has little experience with LNG, and has never built or operated a liquefaction/export facility. W-LNG would hire suitable expertise.
- To its knowledge, W-LNG believes the proposed floating-liquefaction and storage plant would be the first of its kind in the world.
- Most of the plant would be on 3 side-by-side floating components – the liquefaction barge, the storage tanker and the LNG tankers. There would be 3-4 tanker loadings each month – more in Summer, when the gas supply - from Fortis' proposed new 52km. 20" pipeline terminating at Woodfibre - is more plentiful. Fortis' new pipeline would get gas from the existing 12" 1991 pipeline running through the Coquitlam Lake watershed, as would the 1991 10" pipeline to Vanc. Island. Fortis has a BC environmental assessment underway for it.
- A final decision on floating v. shore-based plant design has not been taken, but the floating design is strongly preferred. Control of construction costs is a big factor, local tax assessments of the land value is not.
- LNG tankers would be ~ 300m. long, ~ 40m. wide and ~25m. tall, and capable of carrying cargoes of 140,000 – 200,000 M3 LNG. These would be contracted carriers – not owned or leased by W-LNG. They would be escorted in/out of the sound by two dedicated tugs (LNG tankers underway are required to maintain in-transit traffic separations of 2 miles ahead and 1 mile astern). At-berth turning would be tug-assisted.
- Mercury and mercaptans (sulfides) would be extracted from the FortisBC gas supply and disposed of as specified by local regulations. Nitrous Oxides and the ~2% residual carbon dioxide in the gas supply would be separated and vented. No figures were given for extracted amounts. Boil-off from the storage vessel would be captured and re-liquified.
- A flare stack would be required for emergency venting and used infrequently.
- The plant would comply with Canadian standards – especially [CSA-Z276](#) . The regulator would likely be [BC's Oil & Gas Commission](#).
- No (further – Western Forest Products have been doing some as part of its site-remediation effort) dredging would be required to berth the 3 plant floating entities. These would be tethered to the pier/each other – not to the sea-bed.
- The plant would be well lit at night –street lighting onshore, more intense lighting on the floating structures, as required for safe working conditions, especially during the day-long ship-to-ship LNG transfer operations.

¹ By Eoin Finn. Facilitator Judy Kirk (assisted by note-taker Kai-Lani Rutland) promised to distribute the notes taken at the meeting to all those who attended and left an email address.

² President A.G. (Tony) Gelotti, Gen. Mgr. Byng Giraud, Project Manager Alex Brigden and 2 others

Woodfibre LNG (W-LNG): Notes¹ from Information meetings of Feb. 4th, 2014

- W-LNG has not (yet) formulated a plan for fire/safety response to an emergency at the plant. Road access to the plant is not planned and Squamish Fire Brigade is not hazmat-trained or equipped.
- The plant floating units (liquefaction, storage) would be custom-built, likely in Asia, and floated into place. Local employment opportunities for construction and plant operations might include qualified millwrights, electricians, pipefitters, tug operators, security, water transport and food service staff. 30-40 people would work on each of 3 shifts at the plant. Discussions with 2-3 local colleges have commenced re training courses and certifications for such staff. W-LNG strongly prefers to hire locally for both on-land construction and operations jobs.
- Separate consultation with First Nations will be done (as is required by law).
- W-LNG was not aware of BC's legislated requirement for Regional Districts to reduce GHGs (18% below 2007 levels by 2016, 33% by 2020, 80% by 2050).

2. Gleneagles GC, Horseshoe Bay

Attendance: ~ 18, including Woodfibre staff, West. Van., Lions Bay and (3) Bowyer Island residents, FortisBC and BCHydro reps. Notably absent: First Nations representation.

- Currently, both Provincial and Federal environmental assessments (EA) are required. A decision by the Federal Environment Minister Aglukkaq to grant or deny BC's request to substitute BC's for the Fed. EA is expected shortly.
- Woodfibre LNG is a Canada-registered corporation. Wholly owned by Pacific Oil and Gas (<http://www.po-and-g.com/>), a privately-held Singaporean-registered company 100%- owned by the members of the Tanoto family, who are of Chinese-Indonesian origin (see http://en.wikipedia.org/wiki/Sukanto_Tanoto). W-LNG has an option to purchase the Woodfibre site from Western.
- Price, and service reliability would determine the pending decision to use either gas-turbine or electrical motors to power the liquefaction process. If the former, roughly 9% of the feed supply ~ 180,000 tonnes annually, generating ~ 500,000 tonnes CO₂ and 200,000 tonnes steam) annually into the Sound's airshed- would be burned in the turbines. A backup generator at the plant would be gas-turbine.
- Studies requested by the attendees as part of the environmental assessment would include : (i) noise, and its effects on marine mammals found in the Sound; (ii) marine traffic, especially the impact on the 6+ ferry lanes LNG tankers would have to cross in their exit to the Pacific; (iii) a plume-fire analysis (a la [Sandia Labs. Studies](#)) in the event of catastrophic failure of LNG containment on (a) a tanker in transit through Howe Sound and (b) the floating storage unit anchored at Woodfibre and (iv) (of particular concern to the Squamish Fire Department) fire/safety response to an emergency situation at the plant.
- Insurance to be carried by the plant, by carriers and (LNG) owners would be "industry-standard" P&I and other coverage. Liability for accidents would depend on the nature and location of the accident. Several attendees raised concern over the adequacy of this coverage.
- W-LNG is not overly concerned by [reports](#) cautious about the long-term economic viability of BC's LNG push. Nor could it comment on the proportion of LNG supply that would be sourced from fracking operations.