

MEETING DETAILS	Woodfibre LNG Community Consultation Whistler Small Group Meeting June 17, 2014, 1:00 p.m. – 3:00 p.m. Delta Whistler Village Suites Whistler, B.C.
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PURPOSE	Notes from a Small Group Meeting for the Woodfibre LNG Engagement held on June 17, 2014 at the Delta Whistler Village Suites.
FACILITATOR	Judy Kirk, Kirk & Co. Consulting Ltd.
PRESENTER	Byng Giraud, Woodfibre LNG
ATTENDEES	Andrew Ross Ariel Van Brummelen Chuck Blaylock Claire Ruddy Daniella Smith Garry Watson Jim Kari Mancey Karine Le Du Kati Palethorpe Ken Kevin Sieders Star Morris
PROJECT TEAM ATTENDEES	AG Gelotti, Woodfibre LNG Alex Brigden, Woodfibre LNG Jennifer Siddon, Woodfibre LNG Marian Ngo, Woodfibre LNG Gord Addison, Woodfibre LNG Jonathan Turner, Hemmera Lara Taylor, Hemmera David Bennett, FortisBC Doris Huey, BC Hydro Bryan Corns, BC Hydro Karen Schroder, Kirk & Co. Consulting Ltd. Kai-lani Rutland, Kirk & Co. Consulting Ltd., meeting recorder
AGENDA	1. Welcome and Review Agenda 2. Discussion 3. Closing Remarks

KEY THEMES

- Some participants expressed an interest in the amount of air emissions the Project would produce

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- Some participants expressed concern about the choice to use the Woodfibre site because of its proximity to surrounding communities and questioned whether Powell River could be considered as an alternative location
- Some participants asked Woodfibre LNG whether they would invest in air quality offsets and the remediation of Howe Sound
- Some participants requested that if possible Woodfibre LNG charter ships with electric shore charging capability to reduce or avoid the use of generators
- Some participants expressed concern about the long-term effects the re-industrialization of the site would have on Howe Sound and marine mammals
- Some participants requested additional information about the ownership of the carrier ships and how liability and insurance of the LNG works once the LNG is loaded onto the ships

DISCUSSION

The record notes that the meeting was called to order at 1:00 p.m.

(Abbreviations will be used and mean – Q: Question, A: Answer, C: Comment)

Welcome and Agenda

Judy Kirk opened the meeting and round table introductions of the Woodfibre Project Team and participants were undertaken.

Discussion

C: *Byng Giraud:* Thank you for coming, we appreciate you taking time out of your day to participate. For those of you who have been to our consultation meetings before, this booklet looks similar to last time. I will start with the cover, the image on the front, is an updated layout and does differ from the February layout. Inside the document I'd like to go through those changes. This picture gives you a sense of what we anticipate the facility will look like. There are some minor changes, we have left the buildings in white, but they can be painted. Above the left side of the ships is a tower which I will discuss later but just so you're aware of it.

What are we doing here? Any Environmental Assessment process requires community consultation. But that is run by BC Environmental Assessment Office, as part of the Ministry of Environment. As a company we are trying to do more consultation than what is required to get more community input. This is our second round of consultation. We were out in the community in February and the summary of that consultation is on the second page. We are taking what we learned last time and taking the changes we have made, either through input given or other reasons, to give people a sense of what we are up to and to get more input. We are sincere about taking this input; we have made changes in response to what we heard in February. We have not filed for our Environmental Assessment certificate yet, that won't be for another several months yet. After that there will still be another round of consultation on our actual application. We are still in the preliminary stages where input is still welcome in terms of what we put into our application.

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On the second page there is a summary of the input received earlier this year in February. Just to be clear, there is also government-mandated consultation. Our consultation is a little broader or less rigid than theirs. We can take input on anything you want to talk about. Just so you know there are two processes, ours and theirs.

- C: *Judy Kirk*: I would also like to point out that there are two websites. One for the BCEAO (www.eao.gov.bc.ca) and CEA Agency (www.ceaa-acee.gc.ca), both those websites are important for this process. I would recommend you look at them both. They explain, even if complicated, those regulators are the ones who own the information about the process.
- C: *Kati Palethorpe*: Because it is complicated, my group in Squamish has broken it down into bite sized pieces and I can hand it out afterwards. The Environmental Assessment comment period has started now and only goes until July 11th. So that's our chance to give input and make comments.
- C: *Judy Kirk*: That's your first of two chances.
- C: *Byng Giraud*: That graphic is very good. At the bottom of page three there are a few aerial photos of the site as it stands today.
- C: *Judy Kirk*: The one on the right is that old building on the site.
- C: *Byng Giraud*: That's currently a small power plant that is generating some power right now. On page four we look at, what is our project? The image there with some numbers to follow, these are the main components and if you want more detail we can get into that. We chose the site because there were multiple advantages for a facility this size, this is a 2.1 million tonne export facility and it's about 1/10th size of ones from up north in terms of size such as in Prince Rupert and Kitimat. A pipeline passes through site, if you have any questions about that David from Fortis is here. There's a 138KV power line that used to service the pulp mill and a 500Kv line that services the Sunshine Coast and Vancouver Island. It's an existing deep water port and has been a port for about 100 years. It is an industrial-zoned site within the municipal city limits in Squamish and designated industrial in the Official Community Plan. The second part is the main components and Alex and AG are here to provide more detail. The factory for the liquefaction plant is identified as one and two. It will take the gas we receive from Fortis and remove certain elements from it that we can't liquefy. Then that factory will make the gas cold. We liquefy and make it cold to minus 162 degrees Celsius, condensing its volume to 600 times less, allowing you to ship it. That is why you liquefy it; it is not compressed, although there is a compression piece which Alex can explain. When it's stored on site in the transport vessels, it's not compressed, just cold. Number three is a jetty that provides a connection and access to the storage vessels. The two vessels there are the storage, not the vessels that come in and out. That's the system offload facility where the ship would come in next to that connect and take the gas from the storage. Number six are the supporting infrastructure such as minor substations, administration, an existing sewage treatment plant, storage and as Alex has described it the non-hydrocarbon side of the site. There's a heliport and barge ramps, that sort of thing.

Pages five and six, these are new pieces of the project. During the February consultation we heard some community input and we have responded to that. The engineering teams and technical teams have updated their approach. In the first place we heard that people were concerned about air emissions, there was media attention about air emissions in the facilities up north. Based on our proximity to power lines, input received and discussions with BC Hydro, we have determined we

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can run this facility on electricity which will reduce GHG emissions and NO_x significantly. That was one of the major changes that have happened since February. We also heard a major concern regarding marine acoustics and how they may impact marine life in the water if we had the factory on the water. There were concerns that perhaps people were losing out on job opportunities because of the floating facility. There was a third concern that if it were a floating facility it could avoid taxation. We found out that wasn't the case, but it was a concern that was raised. It was determined that the incremental cost of moving on land was not significant and all things being equal we could move the facility onto the land. The third element, because of our choice to go electric we found that our electricity needs would go up to 140 megawatts during operation. Because of the amount of electricity being used by the plant, we needed to select a water cooling system which means that we will be withdrawing water from deep in Howe Sound. The water won't come into contact with anything in the facility; it is simply needed in the pipes as a cooling system. Then the water is returned to Howe Sound. I encourage you to read this section and let us know if there are any questions about how the process works.

We are paying Western Forest Products as part of the purchase price to remediate the site to industrial standards. So that requires the closing of landfills, treating of contaminated soils with hydrocarbons, there's 100 years of industrial history on that site. The foreshore was denuded because of wood chips that had been dumped on the foreshore which over time compressed and was preventing any habitat from developing. Because there is a large landfill it has created ground water issues. A water treatment plant on site is discharging and treating that water right now. Hopefully the remediation will be done by the end of the year. Dredging in the foreshore took place last fall.

Last time we met with the community we heard concerns that we did not have enough details about the jobs that would be associated with the Project. We are still getting a better sense internally of what our numbers and positions will be. Initially we anticipated 300 people for 2 years of construction. Now it will be 500 people per year for 2 years of construction. We haven't changed our operation staff, earlier we were saying about 100 full time jobs. This is a conservative estimate, and we are keeping it at 100. This list doesn't include administration or back office type positions that would likely be at an office in Squamish. We have provided a list that is not exhaustive but it gives an idea here that some of these positions are quite technical and require specialized skills, and some positions are less specialized.

We had received National Energy Board approval for an export license in December, but that has to go through a process with the federal cabinet. When we came out last time, that final stage hadn't happened. This was a new step in the process that didn't exist before. The federal cabinet approved the NEB export license in March.

C: *Judy Kirk:* What I would ask is that Squamish folks who have been to other meetings just to hold back a bit to allow Whistler people to ask questions. Then I will open it up.

Q: *Karine Le Du:* I have a question about the air emissions. Have there been any studies on the proposed air emissions for entire project? In the construction, transportation and operations?

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- A: *Jonathan Turner:* Yes, we are doing baseline studies. Part of our process for the environmental assessment is to determine what the appropriate baseline study is.
- C: *Judy Kirk:* When you say baseline, you mean current conditions.
- A: *Jonathan Turner:* That's right. We work with Alex's team to look at emissions from the facility and try and understand how it may affect current conditions of the surrounding areas.
- Q: *Karine Le Du:* Has that been done?
- A: *Jonathan Turner:* It's underway.
- Q: *Karine Le Du:* How long have you been doing this work for?
- A: *Jonathan Turner:* Work for the baseline was initiated last spring.
- Q: *Karine Le Du:* So it's not necessarily new information?
- A: *Jonathan Turner:* Yes, there is new information.
- Q: *Clair Ruddy:* Is there any modeling with regards to cumulative effects?
- A: *Jonathan Turner:* Yes, cumulative effects are studied.
- C: *Judy Kirk:* For the record I want to make sure I got it. Claire's question was will you be looking at cumulative effects with respect to air quality?
- Q: *Kevin Sieders:* What kind of toxic stuff will be emitted from the liquefaction process? Because I understand you have changed to an electric site and I understand that it removes some of the GHGs, but what about the liquefaction process?
- A: *Alex Brigden:* The first important point to note is that the gas we receive to liquefy is from the same source that is burned domestically in people's homes from Fortis. There is no change or additional chemicals we get from that gas.
- Q: *Kevin Sieders:* OK. So there's nothing else emitted from that liquefaction process?
- A: *Alex Brigden:* There is nothing else emitted from that liquefaction process. When we receive the feed gas there are elements in the pipeline gas which cannot be liquefied. So we separate those elements. They include water, CO₂, sulphur and some mercury. We separate those elements and then we dispose of them in an incinerator. The mercury is disposed of and every five years we remove that to a licensed facility to dispose of.
- Q: *Kevin Sieders:* So there are zero emissions?
- A: *Alex Brigden:* There are emissions.
- Q: *Kevin Sieders:* How many emissions?
- A: *Alex Brigden:* For GHGs there's about 80,000 tonnes of CO₂ per year. In terms of NO_x there's about 20 tonnes per year. There's about 17 tonnes per year of Sulfur.
- Q: *Unidentified:* The first one was 30,000? Then 20, 000 NO_x and the last one was 17,000?
- A: *Alex Brigden:* There's 80,000 tonnes of CO₂ per year, NO_x there's about 20 tonnes per year and SO_x is 17 tonnes.
- Q: *Garry Watson:* Will it be like the pulp mill?
- Q: *Judy Kirk:* Will it smell like the pulp mill or will it feel like the pulp mill?
- A: *Alex Brigden:* No. The amount of these emissions is much less than the pulp mill.
- C: *Judy Kirk:* I think someone asked yesterday if there would be a smell and I believe you said no.
- C: *Alex Brigden:* Right, there would not be a smell that would be emitted from the plant.
- Q: *Karine Le Du:* Did you account for mercaptans? Is that the sulfur?

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- A: *Alex Brigden:* There are two sources of sulfur in the feed gas. One is sulfur which is trace contents from the feed gas itself. The other source is the mercaptans. We remove the mercaptans which have been added to the gas for the smell because natural gas doesn't have a smell. It is added to gas for safety reasons.
- Q: *Garry Watson:* I was curious to know if you made an assessment for property tax in the community of Squamish?
- A: *Byng Giraud:* We don't know what the value of it is yet and have been in discussions with the Municipality of Squamish. We provide our construction costs to the municipality, then the municipality will take the construction costs to the BC assessment authority, they will give an assessment and then the municipality will apply a mill rate. We had a councilor from Squamish, Doug Race, in our meeting yesterday and he made comments because we don't know. Until we submit the construction costs. But he said that if our capital costs are 1.7 billion, even if one-seventeenth of that was assessed that it would take us over 2 million dollars a year.
- Q: *Unidentified:* How would that equate to what they lost when the pulp mill left? Squamish took a pretty bad hit.
- A: *Byng Giraud:* In 2006, the last year of tax they paid \$1.9 million.
- Q: *Garry Watson:* Is there any potential for residential housing on site?
- A: *Byng Giraud:* No, we don't intend to house people on site. There was a community there years ago, but part of the remediation to an industrial site is that site probably wouldn't allow for human habitation overnight.
- Q: *Garry Watson:* You'll have to resurrect the ferry service?
- A: *Byng Giraud:* A marine taxi, correct.
- Q: *Kari Mancey:* What is the benefit of having the moored floating storage system instead of having storage on land?
- A: *Alex Brigden:* The technical benefit is that we are in a seismic region, the engineering and construction required to have a safe on shore tank of that size is quite challenging. The floating solution is less susceptible to that seismic activity. When we consider the end of the lifetime of the plant, we need to put the site back to the original condition. It's easier to remove a floating storage then to remove something based on land.
- Q: *Kevin Sieders:* The other day there was a presentation in Squamish and it wasn't just storage floating, it was the liquefaction plant. Did I miss something?
- A: *Byng Giraud:* We were initially going to go with a floating facility, but based on community input, based on the fact that it's probably not a significant additional cost, we are moving it on land. There were concerns about marine acoustics from the liquefaction facility, and that's the most active part of the facility. With all things being equal if the costs weren't that much greater that we will be moving it on land now. The storage is still on water, but the liquefaction factory is on land.
- Q: *Kari Mancey:* So if the factory is on land, there would be no underwater noise?
- A: *Alex Brigden:* The main concern previously with the floating unit was our large rotating equipment which is actually associated now with the on land liquefaction plant. It's where we have our main 50 megawatt refrigerant compressors. Those are now on land and on heavy concrete foundations. The transmission of vibrations or noise into the seaway is going to be very low, if not zero. We are measuring that right now. There is still a floating storage unit, some equipment will operate on that

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unit which is a source of noise, but we are studying what its continuation into the water can be. There are some other systems, such as a seawater cooling system, which takes water from Howe Sound and uses it in a heat exchange process. The water is then returned to Howe Sound. That could be a potential source of some noise but the main point is that the source of noise from the large rotating equipment would now be on land.

- Q: *Kevin Sieders*: Why wouldn't you locate this liquefaction plant in an area that is less congested and has existing industrial use? I know Woodfibre was previously industrialized, but why not Powell River? It has a huge plant. All things being equal you wouldn't have to run a pipeline. It takes away from this congested area and it addresses this concern about Howe Sound.
- A: *Byng Giraud*: Alex and I weren't here when the decisions were made, but as it was explained to me, when this company started looking in North America for an export facility because we don't produce any of the gas we weren't restricted in terms of where we went. The guys up north they need to be where they are because it's close to their gas fields. They settled on B.C. and began looking at all pulp mill sites. There's one in Alberni, Campbell River, Powell River, here and there's a couple of others. The advantages of those sites are that they are on the power grid, with deep water ports and industrial pacts. I think fundamentally it came down to, that site wasn't available at the time, and this site was. Whether that site is useful or not, given that it is further down the pipeline, is another issue. There are guys looking at the Campbell River site. But again they are on the same pipeline. Can they get access to a pipeline that they need that we are essentially at the beginning of? I don't know their business plans. We looked at all the sites; this site looked like the most conducive for us.
- C: *Alex Brigden*: What I wanted to add is for the site itself, for the application of a two million ton per annum LNG facility, the site is not considered a congested site itself. It has ample space for the liquefaction facilities.
- Q: *Karine Le Du*: Going back to the emissions, you talked about incinerators. Would that be sulfur, carbon dioxide, water vapors or just the sulfur? What would the sulfur just be going through the incinerator?
- A: *Alex Brigden*: The CO₂ and other removed non-liquefiable components will go through one of two incinerators. Our first place to put these off-gases is in a boiler that's heats the oil. We need that hot oil in the plant process. Firstly, we are not wasting that off-gas to incinerate; we are using it to generate heat in the liquefaction process. If there is additional off-gas and it is not needed for that heat generation, we have a second one that is a pure incinerator. It then becomes combustion products, and it is an emission into the atmosphere.
- Q: *Karine Le Du*: That's where your 80,000, 20 and 17 tonnes come from? Is there a scrubber on that incinerator? What are the opportunities for best practice?
- A: *Alex Brigden*: The CO₂ component which is the main component of GHGs is removed from the gas and is not a combustion product. It is not liquefiable; it would freeze before the LNG became a liquid. So the CO₂ is removed but is not a combustion product. That is why the GHGs are significantly less than if we had chosen gas turbines.
- Q: *Karine Le Du*: But you're combusting that in the incinerator?
- A: *Alex Brigden*: Yes, we are. We are combusting it through the incinerator.
- Q: *Karine Le Du*: So you're going to have emissions related to it?

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- A: *Alex Brigden:* Correct, we have emissions.
- C: *Judy Kirk:* But it's net numbers you're giving.
- Q: *Karine Le Du:* So for that incinerator process is there an opportunity to scrub the emissions off of that and clean up that as much as possible?
- A: *Alex Brigden:* We are still looking at the equipment that will be used for that and it will be the lowest emissions equipment.
- Q: *Karine Le Du:* Is carbon capture something you're considering? Or what about selling the mercaptans back to Fortis?
- A: *Jonathan Turner:* Honestly I'm not aware. That's a good question.
- C: *Judy Kirk:* That's the first time I can recall that coming up in these meetings. You can see in the feedback form that there is an air quality component. Please put your question in there, as well we have it on the record, but I would suggest putting it there too.
- A: *Jonathan Turner:* All of our discharges have to be permitted through the Oil & Gas Commission or the Ministry of Environment. There are permits and best practices in place, and for the project as part of our EA we will be required to apply.
- Q: *Karine Le Du:* There are minimum requirements and best practices. Which one will you be doing?
- A: *Jonathan Turner:* We are looking at best practices.
- Q: *Star Morris:* One of the concerns or reasons that you had about the floating facility for the liquefaction plant was the benefit of having quality control over building your facility. Now that it has changed what is needed to be able to properly assess the quality and building of the liquefaction plant?
- A: *Alex Brigden:* What we have looked at how closely we can still achieve the original aims while facilitating coming onshore for the liquefaction plant. The best distribution of work is still to have the bulk of the liquefaction plant constructed in a dedicated yard in the Far East.
- Q: *Judy Kirk:* What do you mean by Far East?
- A: *Alex Brigden:* Far East can be Singapore, Korea, China. It's the main areas where the facilities exist. What we will do is build the plant in large scale modules from 2,000 to 6,000 ton modules which gives us the best possibility to control quality and do as much testing as possible and to keep it under on facility one management and one quality system. Those individual modules are then brought to the Woodfibre site and the work that's left to be done is to place them on the concrete foundations and hook up the pipes between the modules and pull the cables between the modules. Then to do the final testing, commissioning and start up. That integration work is manageable in terms of quality in B.C. That is the balance that we have taken. We will have our quality systems and we will keep the same general contractor responsible for delivering and integrating those modules from the Far East.
- Q: *Star Morris:* Will it be the people who are building the modules in the Far East that will oversee those who put it together?
- A: *Alex Brigden:* A general contractor will put contracts out in the Far East to build the modules. The same general contractor will place orders for the equipment which goes in those modules. They will have a team which oversees the work in the Far East and ensures the quality of production. That same general contractor will place contracts with local contractors here in BC for the integration work of those modules. They will have oversight of quality and therefore be responsible. Different contracts, but the overall responsibility is with one contractor.

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- Q: *Ken*: I'm going to phrase this generally under the compensation for impacts of the operation. I see two main ones, one is the degradation of the sound or lack of contribution to the remediation of the sound and the other is the GHG emissions. Is your company prepared to commit to both those efforts? Would you invest in technologies or mechanisms that would reduce GHG emissions to less than the 80,000 tonnes? Would you contribute to the investment of remediation of Howe Sound throughout the life of the Project?
- A: *Byng Giraud*: The short answers here are yes. The longer answers are that the government will require us to purchase offsets. One of the negotiations we're having specifically in the industry as a whole is about how we turn those offsets into local benefits. You can buy offsets in the global market but what does that mean locally? It is in our interest and I believe in British Columbia's interest that if there is going to be a market for these offsets that we create opportunities for a company like mine to be able to buy local offsets. To develop that market we will need help from the government and that's a conversation we are having right now. In terms of broader remediation, the choice to move electric and on land is showing that we are serious about trying to take this Project to a better standard. There are no other purely electric facilities, with the exception of the one in Norway, although I'm not sure if it's purely electric. We are trying to take it to the next level and I think we have shown that commitment. In terms of further practices, what can we do? We are still working on the specifics of the technology. I think that's something we will take seriously. It's still something we want to deal with. In terms of remediation of Howe Sound, we have met with the stream keepers and other organizations to see what we can do. We have also talked to the Vancouver Aquarium about some of their Howe Sound monitoring systems because they have a better baseline. As a corporate citizen, yes we will be investing in those types of things in the short term. I think the \$8 million we put into the remediation of the site, shows our commitment and willingness to do this because there was no habitat in the foreshore.
- Q: *Kevin Sieders*: Going back to the jobs comment, originally you said it was going to be about 300 construction jobs for this. Where do the extra 200 jobs come from when you're talking about moving these extra storage facilities? Regarding the storage containers that are already built, the liquefaction plant will be built in Singapore. I just don't understand how 500 jobs can be created by the integration of these.
- A: *Alex Brigden*: There was already a significant amount of work that was needed on the site itself. Other infrastructure which include office buildings, buildings for utility and emergency equipment such as emergency generators, emergency fire pumps, road upgrades, control rooms that we had to place on the site. That was already there for the 300 jobs. With the floating facility, the facility would have been constructed in the Far East. Those modules for the facility would have been integrated in the Far East. The additional work is two-fold, one is additional concrete foundations that are needed for the modules now on land and the integration of those modules together that would have been done in the Far East. So before, the foundation would have been a floating barge and the integration work would have been done in the Far East. That's where we get the additional jobs from.
- Q: *Kati Palethorpe*: I asked this question yesterday on the water cooling system but I need some clarification. The amount of water that is used per hour was it 17,000?

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- A: *Alex Brigden:* Correct, 17,000 cubic meters per hour.
- Q: *Kati Palethorpe:* You are taking 17,000 cubic meters ocean water from Howe Sound per hour, 24 hours a day, seven days a week?
- A: *Alex Brigden:* Yes.
- Q: *Kati Palethorpe:* You pump it out, put it in the cooling system and at the same time take the natural compounds out of the water to make chlorine right? This chlorine is manufactured and is not the same as it is in the water. It will be used in the piping system so that other things cannot grow. But then this water that was used for cooling can be up to 10 degrees warmer going back into Howe Sound afterwards. That will be going out 24/7 as well. It is a circle right? That will go down through a T-pipe?
- A: *Alex Brigden:* It is a diffuser with many holes, it's not necessarily a T.
- C: *Kati Palethorpe:* Because yesterday someone said it's a T.
- C: *Alex Brigden:* It's a pipe which at a certain depth opens up to many holes.
- C: *Kati Palethorpe:* You said 25 meters in depth yesterday.
- C: *Alex Brigden:* Below 25 meters.
- C: *Kati Palethorpe:* Below 25 meters. And it's a pipe with lots of holes and that the water coming out would include the added chlorine.
- C: *Alex Brigden:* Chlorine levels would be monitored and would be kept at a concentration of less than 0.02 milligrams per litre.
- C: *Kati Palethorpe:* Right. But it's 24/7 and you want to run this plant for a minimum of 25 years.
- Q: *Judy Kirk:* But it's residual chlorine, correct?
- A: *Alex Brigden:* That's correct.
- Q: *Judy Kirk:* Is that amount considered residual?
- A: *Alex Brigden:* Yes, residual.
- Q: *Judy Kirk:* Does it get used up in the cooling?
- A: *Alex Brigden:* Yes.
- C: *Kati Palethorpe:* No, it doesn't get used up in the cooling.
- C: *Judy Kirk:* All but the residual.
- Q: *Kati Palethorpe:* If you are doing this 24/7, how can you look at the long term effects of this? If we are infusing water that's 10 degrees warmer than the ocean water originally will there not be effects?
- C: *Judy Kirk:* I think that there's one part of this that you've missed and it is what the temperature must be at the end.
- A: *Alex Brigden:* The regulation is that within 100 metres the temperature difference should be less or plus one degree of the ambient temperature of the Sound. With our diffuser design we expect that difference will be achieved within 10 meters of each of the penetrations of the diffuser.
- Q: *Kati Palethorpe:* But if I do that over time, I will probably raise the temperature around the area as well.
- A: *Alex Brigden:* That is not what the modeling done by our environmental consultants show.
- C: *Judy Kirk:* I think you need to be careful with that.
- Q: *Kati Palethorpe:* If I take a swimming pool and if I put in tiny amounts of water, over time the temperature will change.
- C: *Judy Kirk:* Jon, you should chime in here, but I believe that this will be part of the analysis. The regulators actually want to hold to that one degree.

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- A: *Alex Brigden:* To make it clear, if within 100 metres and in our case it's within 10 metres, the temperature difference is plus or minus one degree.
- C: *Unidentified:* Which is huge.
- A: *Alex Brigden:* That's on a continuous basis that cannot create a heating effect within the rest of Howe Sound because it's already within plus or minus one degree.
- C: *Unidentified:* But it does affect that area.
- A: *Jonathan Turner:* To bring this back to where we are at. As part of the environmental assessment process, we are doing studies to collect information on water temperature at various depths. We are looking at local currents and how the water moves in and around the plant. We have water temperature and water quality data at a bunch of different locations within the area. We will create a model and based on the design and engineering information we have about where the diffuser will be located, we will try and project what changes to the water temperature will look like. The initial information that we have is that within 10 metres of the diffuser we will have no net effect on that temperature. This is what we are modeling right now.
- A: *Alex Brigden:* To give you context, the volume of water of affected by that temperature change is about 125 cubic metres, which is less than an Olympic swimming pool.
- C: *Judy Kirk:* These are good questions. I'm going to ask us to move to page 12 and 13.
- Q: *Garry Watson:* Just one question. Cumulative effects to the chlorine temperature?
- C: *Judy Kirk:* So, is there a cumulative effect to residual chlorine?
- A: *Jonathan Turner:* We will not affect chlorine levels in Howe Sound.
- Q: *Judy Kirk:* Will you be studying that more and will the data and the results of that analysis be made available when the application is done?
- A: *Jonathan Turner:* Yes that will be made available through our environmental assessment.
- C: *Judy Kirk:* It's important to know that once these studies are done then the results of those and the mitigation proposed will be in the EA application for people to read, look at and ask questions about during the public comment period.
- Q: *Ken:* Just to dig one step deeper than Garry's question. The question in my mind is not is the chlorine measureable in the Sound, but, what impact, if any, will it have on native species of Howe Sound? If it's not proven today but it's proven later what are the mechanisms for the operation to address the situation? Once these things are signed the local residents have no say. We rely 100% on the province to intervene and frankly their record is questionable. That's why we're asking all these hard questions up front, we need assurances that down the road, even if we can't measure the chlorine but it's having an effect on the native species, that we have a mechanism by which we can have it addressed.
- C: *Judy Kirk:* It seems to me that you would want to see that as a condition if the project was certified. I would suggest to any of you if you think that is a good idea that you write it down under the additional comments section that you want to see that kind of condition or conditions.
- A: *Jonathan Turner:* To address your question about native species in Howe Sound, we are doing mapping of habitats and videos of what the existing conditions today are and as part of the normal everyday assessments. We would need a *Fisheries Act* authorization, which is anticipated there are up to 10 year monitoring requirements, as part of our conditions.

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- C: *Byng Giraud*: The topics are not exclusive. Page 12, Noise: This is where we discuss the broader issue of noise above and below the water and outline the mitigation measures we are developing. To mitigate noise, there are things we can do during construction with the timing of things to mitigate or protect species. There are things you can do to change your schedule to mitigate potential impacts.
- Q: *Kevin Sieders*: At the marine terminal, will the two storage containers be kept running off of generators on board or will they use electrical power from the plant?
- A: Alex Brigden: The two floating LNG storage units will use electricity supplied on land.
- C: *Karine Le Du*: There is the jetty so there will be piles going in and also the concrete compressor station pad, will any vibration isolation for the compressor be looked at? Also during construction, from listening to Kathy Heise talking about marine acoustics in Germany they have developed an innovative technology to reduce marine acoustic impacts from piling. So there are technologies and best practices there and we can refer to what Germany is doing to mitigate that aspect.
- Q: *Garry Watson*: Can you describe what alternate construction technique there may be to avoid pile driving?
- A: *Alex Brigden*: There is two main construction techniques, one is with piles and one is compacting soil and then building a concrete raft. We are looking at both, but we expect that there will be a requirement for piling.
- Q: *Kari Mancey*: What are the minimum noise requirements for disturbing of herring spawning?
- A: *Jonathan Turner*: The whole concept of underwater noise and its effect to fish is something that is very new. There is no specific guidance in current legislation that says you must meet a minimum criteria. It is part of our process both with regulators and looking at the scope of the work we are doing to understand thresholds and as part of the environmental assessment process, we will make a determination of the significance of an impact. There is no threshold that says this is minimum standard and above that this affects herring spawning.
- Q: *Judy Kirk*: I would assume Jon, that the important thing would be the effect on the herring. Will you be looking at that?
- A: *Jonathan Turner*: We will be looking at marine fish in general; herring will be a sub component of that. We are also looking at other marine mammals as well, which are a different receptor.
- Q: *Star Morris*: During the Olympics when the Mona Lisa was docked at the terminals, the observations by the stream keepers was that the herring did not lay and did not spawn. Do you factor that in?
- A: *Jonathan Turner*: I am familiar with that, why fish spawn where they do and when, there may be a number of factors which could include environmental reasons. I do know at Squamish Terminals that there is regular use of the terminal facilities with large ocean vessels, so I do know that our underwater noise signature would be similar to that.
- A: *Byng Giraud*: We have met with the stream keepers and as a responsible operator working with stream keepers if it is herring spawning season I don't think we will have a huge issue about temporarily halting things to accommodate that.
- Q: *Kati Palethorpe*: Can you, in addition to contacting the stream keepers, also contact Kathy Heise who is one of Canada's leading researchers on marine acoustics?

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- A: *Byng Giraud*: Yes and we have already contacted the Vancouver Aquarium and have had those conversations, not with her specifically.
- Q: *Clair Ruddy*: Regarding some of the wording in here and promoting vessels to use the quietest methods they can, instead of encouraging can't we mandate that kind of behavior?
- A: *Alex Brigden*: One of the equipment we will install is the ability to provide shore power to docked vessels. At this time this is not a wide spread equipment in the LNG fleet. We will provide that facility and subsequently when we are looking at chartering we will see if it is feasible to charter vessels that already have that equipment. Otherwise we will ask them to reduce the amount of generators they run if they are unable to use our shore power.
- C: *Byng Giraud*: The next topic is light and light pollution. We have had a chance to go up on the gondola and certainly over near Britannia where there is the clearest view of the site to see what kind of visual impact there is. As far as visual impact, there are things you can do. Industrial sites are getting better at this with direction lighting and systems that come on and off only when necessary and not having as lit of a site. Given the nature of the project and this type of industry, the lighting requirements are not as extensive as some of the port facilities.
- Q: *Star Morris*: Most of what I am seeing here is looking at the effects on terrestrial life but what about light effects on marine life, is that being studied?
- A: *Jonathan Turner*: Yes.
- Q: *Kati Palethorpe*: How long is the study for?
- A: *Jonathan Turner*: We are not collecting existing information on underwater light, to my knowledge there is no underwater light there; but we will be looking at light in receptors so fish, marine mammals.
- Q: *Kati Palethorpe*: Under what period of time?
- A: *Jonathan Turner*: We will be doing it as part of our assessment, we would have been collecting information on the marine environment for over a year.
- Q: *Karine Le Du*: Flaring is part of the process and that produces light right? For the Norway project that was a big surprise to the residents.
- A: *Alex Brigden*: We have a flare tower as part of our emergency system. If we need to reduce the pressure of the gases, either for maintenance or emergency situations, then we send those gases to a flare where they are ignited and burned. But this is a safety system or is used during commissioning or startup. In normal operations there is no continuous flaring.
- Q: *Karine Le Du*: How often is maintenance done that would require flaring?
- A: *Alex Brigden*: So we expect that the plant is running about 97 percent of the time. For the remaining 3 percent, there will be periods where the plant will not be running but there will be no flaring. And the reason for that is we don't immediately have to reduce or release the pressure in the plant if we stop. If we have an interruption of power from BC Hydro the plant can stop but then we go back up and running without have to flare. If the plant stops for a long time then we will flare. I can't give you the residual number but it will be less than 3 percent that we flare.
- Q: *Karine Le Du*: Is there any technology available that will allow you to recapture that methane before the flaring?

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- A: *Alex Brigden:* No, there is no technology to allow us to recapture the released methane. The reason is that we have liquefied natural gas and when we stop running the plant for some time, that gas will naturally turn back to methane and we have to have a mechanism to be able to release that pressure in a controlled way.
- C: *Byng Giraud:* Marine mammals, this is valuable to people. If you think about light or sound as a type of activity, this is thinking about the actual receiver of that activity and we are very interested in hearing your opinion on this. These are some of the things we have done to mitigate impacts on marine mammals.
- C: *Jonathan Turner:* When we look at what is important to residents of Squamish, it is something that is new to have whales and dolphins back in Howe Sound and this is very important. We look at our impacts and underwater noise and especially with the EA we are always looking at the worst case scenario. It is important to people and it has had the potential to have more of an impact but now less with the changes that have been made to the facility moving from floating to on land.
- C: *Star Morris:* I would just add the comment that it is more than just the residents of Squamish who are concerned but all of Howe Sound.
- Q: *Judy Kirk:* Jon what is the area you look at in terms of mammals?
- A: *Jonathan Turner:* We look in the Sound and at the interactions, so the shipping lane and the potential for marine mammals to interact with ships. We also look at the local area around the facility. Information from marine mammals comes from the entire Sound. Recreational and commercial operators contribute to this database of information so we have knowledge of marine mammal activity and through that knowledge we understand what marine mammals are using the Sound.
- Q: *Kati Palethorpe:* Are you also looking at what used to be there? There used to be lots of marine life, but through industrialization this disappeared. Where is the baseline going to start?
- A: *Jonathan Turner:* From the EA, the direction we have through legislation is that we are looking at existing conditions, but for marine mammals what we are seeing is that this is a new baseline we the reintroduction of marine mammals.
- Q: *Kati Palethorpe:* So are you also looking at what the projections are for the future if Woodfibre weren't going in? We are in a recovery stage right now.
- Q: *Judy Kirk:* It is a good question and I just want to make sure for the record it is clear, are you analyzing with and without the project?
- A: *Jonathan Turner:* We are trying to understand what the effect of the Project is on the area today. As a professional I could give try and give an opinion but it is hard to predict where it is going considering the recent information.
- C: *Byng Giraud:* I just want to touch upon something, we do meet with Squamish First Nations and our conversations with them do touch upon greater historical context. We don't typically bring those conversations up in these types of meetings because that is between us and them.
- Q: *Kevin Sieders:* How come no one from Squamish Nation is here to represent them?
- A: *Byng Giraud:* The First Nations are unique in the Canadian Constitution and have a specific process.
- C: *Judy Kirk:* So Kevin, they are invited, and some Squamish First Nation came to the open house last night.
- Q: *Kevin Sieders:* Do you feel that you have their support or social license?

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- A: *Byng Giraud*: Those are ongoing discussions with them.
- Q: *Kevin Sieders*: So that is a no?
- A: *Judy Kirk*: No, that is not a no.
- C: *Byng Giraud*: Page 16 and 17 brings us to visual quality and you can refer to the front page to see what the current site looks like. We have talked with a number of stakeholders in Britannia about how we can minimize the sites visual quality. We believe that by painting the buildings, hydro seeding, capping the landfills and planting vegetation along the foreshore that we can actually diminish, though not fully remove, the visual impact.
- Q: *Karine Le Du*: Has there been discussion with Sea-to-Sky gondola folks?
- A: *Byng Giraud*: Yes, we've had them out to site. We've had conversations about how we should paint the sides of the buildings. What we did do beyond that conversation is look in to what vegetation can be planted on site.
- C: *Alex Brigden*: We are expecting that along foreshore region we can plant trees to provide a shielding effect. This is part of ongoing engineering studies about flaring because the last thing we want to do is plant trees and then affect them with our flare.
- Q: *Karine Le Du*: How tall is the flare?
- A: *Alex Brigden*: At this stage of engineering development we have put in place a conservative flare design which is 115 metres tall.
- Q: *Karine Le Du*: How tall is the flame above that at the tip?
- A: *Alex Brigden*: I am not quite sure.
- Q: *Karine Le Du*: And where is this located on the site?
- A: *Byng Giraud*: You will see on the front picture.
- Q: *Karine Le Du*: That looks like it is on land.
- A: *Byng Giraud*: It is on land.
- Q: *Kati Palethorpe*: You say that number is conservative, could it be higher?
- A: *Alex Brigden*: So conservative meaning that is the highest we think it could be, it could be lower but not higher. When we do the detailed flare radiation studies it could be lower.
- Q: *Garry Watson*: Is there any potential of you being able to use a flash protector to conceal the flare? Is that possible?
- A: *Alex Brigden*: For an open flare such as this, there is not a flash protector we could install.
- C: *Byng Giraud*: I'd like to say one more thing about visual quality. Do you see the liquefaction facility and the square buildings to the left? There is a big green zone. We have decided to create this large green zone on the creek and will try and do some shore recovery around that; it is a no build zone. Hopefully if we can clean up the shore and the creek we can increase some habitat for the fish.

So page 17, marine transport. This has been a big issue. We are adding 40 ships a year, 3 ships a month typically. Because of less gas consumption in the summer we may be able to have an extra shipment so that is why we say up to 40 ships. The ships come from the Woodfibre site down through Howe Sound, following same route as ships going to Squamish Terminal. Just out passed Stanley Park they join the regular shipping route, our 40 ships will join the 140,000 ship movements that proceed from that point to the open ocean. There are some of our mitigation issues here as well. We do welcome comment on this so please do.

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- C: *AG Gelotti:* We've been working with Transport Canada and they oversee the TERMPOL process. What the process entails is looking at the shipping route and doing a qualitative risk assessment of what can happen during the transit of the ship from the open ocean to the terminal and back. What effects might they have on any recreational shipping traffic and other shipping traffic along that path. That process is now underway. We have been meeting with BC pilots. Each time a ship comes into the terminal there will be a BC pilot who boards the ship near Victoria and will be on the ship to help navigate the ship to the terminal. When the ships arrive in English Bay that is where the tugs that will be escorting the ship during its berthing join the ship. The tugs will guide the ship up through Howe Sound and will then also guide the ship to the terminal when leaving. Escorting of ships on the way in is not a requirement by Transport Canada at this time but we will be doing that. The ships will be going at a very slow speed, just 8-10 knots. One of the tugs will be tethered to the stern of the ship to allow the tug to control the ship and stop the ship if needed. The other tugs are alongside to keep the ship in the channel stopping if needed.
- Q: *Judy Kirk:* So will the pilots and tug be assisting in and out?
- A: *AG Gelotti:* yes
- Q: *Garry Watson:* What side of Bowen Island will you come from?
- A: *AG Gelotti:* We will be coming from Horseshoe Bay, east side.
- C: *Chuck Blaylock:* You have to have someone there who knows the sound.
- C: *AG Gelotti:* That is why we have the BC pilot on board. The pilot is on the bridge going up and down. The master actually hands over the ship to the BC pilot. The master is still the authority on board his ship, but the BC pilot is navigating because they are familiar with the waterway. That is why you have them take it to the terminal and back out.
- C: *Chuck Blaylock:* With all of the ferry traffic there is a lot going on. You have to have some kind of control of when they are coming in and out.
- C: *AG Gelotti:* We have been in contact with BC Ferries and will be meeting with them in the near future to go over the Project and to give them an update. We've talked with Port Metro Vancouver and have found that with Transport Canada and BC Ferries we have been able to get more and more information about pleasure boats and that type of activity in and around where the ferries are operating. These ships will be coming in about one every 10 days, and as they are transiting through the Sound they have very high tech radar systems on board and will be communicating with the ferries so that each will know that one is crossing or transiting through the Sound. It will be a lot of constant communication and clear scheduling of when these ships are coming in. These ships do run 24/7 and there will be times that ferries won't be running because it will be the middle of the night.
- Q: *Star Morris:* It is my understanding that the ballast is exchanged 200 nautical miles out?
- A: *AG Gelotti:* It can be. If you do an exchange of ballast water you have to do it at least 200 nautical miles off shore. These ships always have ballast water on board. The profile of LNG ships remains basically the same even when they are not full of cargo. The ships will have ballast water on board and if it needs to be exchanged that happens 200 miles offshore in international waters.
- Q: *Star Morris:* What is the monitoring of that because we hear from around the world that without the monitoring there is no way of telling that it is actually taking place and that the risk of introducing an invasive species is very high.

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- C: *Judy Kirk*: That is a great point to make with the BCEAO and the federal government. With this proponent, although they can be mindful of that, they do not have any jurisdiction over that. It is a very important and I am happy to have you put it in the feedback form, but that is for the regulators.
- Q: *Karine Le Du*: Can you take a minute to explain the organization, so who owns the companies, who owns the carriers, what does the insurance look like for risks at the facility and on carriers, and as far as liability, who is responsible for what?
- A: *AG Gelotti*: The owner is private individual who lives in Singapore, he has developed a conglomerate of different businesses that include palm oil, pulp and paper, as well as a small oil and gas development in Indonesia. He is now wanting to expand oil and gas business into LNG. The ships will be owned by 3rd party companies that provide LNG transportation services in the industry, and these are companies that have been doing this since the industry began. We will enter into what is called a Time-Charter Agreement which covers all of the specifics about how they will operate the ships, follow international standards with safety and the compatibility of the ships with the terminal so that we know the terminal is capable of receiving that ship. We will contract that service. There are many different companies that own LNG ships. When you operate ships the industry has what is called a P&I (Protection and Indemnity) club. There is P&I insurance, ship owners contribute a certain amount of money into a program that pools money that will cover the liability if any of these ships were to have any kind of incident. Then, as a charter you have Charter's Liability Insurance, so you take out additional insurance to cover the charter agreement that you have with the company you are chartering the ship from. Those are the two main forms of coverage.
- C: *Alex Brigden*: One of largest LNG shipping companies is based out of Vancouver, called Teekay Shipping.
- Q: *Karine Le Du*: Are there any exclusions from the insurance coverage, what things are they not covered for?
- A: *AG Gelotti*: We do not have that answer but we will take it back with us.
- Q: *Kevin Sieders*: With the ships being owned by somebody else and Woodfibre LNG being owned by someone else, how does the tax revenue work for this? How do BC residents collect tax revenue from this?
- A: *AG Gelotti*: The company is structured as such: we have an Alberta company that is going to enter into the commercial agreements with Spectra Pipeline to provide the pipeline transportation of moving natural gas from where it is produced to where it is bought and sold; we also have a transportation agreement with Fortis for the pipeline transportation of the natural gas from Spectra to the liquefaction facility, we will pay for that service; this Alberta company that is providing that service will earn a return on investment for providing that service.
- Q: *Judy Kirk*: AG, correct me if I am wrong, Woodfibre LNG is Canadian Company and will pay Canadian taxes.
- A: *AG Gelotti*: Yes. So we will have a BC facility that will pay taxes on the income that it earns for the services that it provides in transforming the natural gas to LNG.
- Q: *Kevin Sieders*: Do you know the percentage that tax rate will be?

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- A: *Byng Giraud*: Our corporate structure has to be approved by Revenue Canada. We will pay corporate tax, LNG tax, PST on all items brought into the province, municipal tax, additional fees and licenses, and whatever agreement we come to with First Nations. So there is a long list of items, we don't have numbers on all of those things but the province has promised to come back to us on with some finalized numbers in November.
- C: *David Bennett*: There are also royalties on the gas as well.
- C: *Judy Kirk*: Kevin to your question, you could also go online – although it will still only be a partial answer to your question – to CRA, what used to be called Revenue Canada, and you can see business tax rates. It would only be a partial answer because of what Byng has said.
- Q: *Kari Mancey*: Are you familiar with the Sea-to-Sky Clean Air Society Air Quality Plan? Have you used any of those indicators or goals?
- A: *Jonathan Turner*: Yes I have looked at that. It is part of the scope of our existing commissioned information.
- Q: *Kari Mancey*: Will that come out or be made public?
- A: *Jonathan Turner*: That will be documented through our air quality study. Any information we would chose to bring in as data will be reflected in that study.
- Q: *Jim*: I was just listening to the marine traffic part and would it be controlled by the Vancouver harbour like all marine traffic is?
- A: *AG Gelotti*: They only control in and out of Vancouver harbour. So it is under Transport Canada and the coast pilots. We talked to Port Metro Vancouver but they do not regulate us.
- Q: *Kari Mancey*: There has been a lot of talk on the price of LNG overseas and that there has been a current increase in price. At what point does your financial plan not become profitable if the price goes down with new markets coming in?
- A: *AG Gelotti*: Part of doing a project like this is that you are taking a price risk. What we try to do when structuring commercial arrangements, the price we are paying for natural gas is a pass-through as they say, so if the price of natural gas goes up in British Columbia the price of what the buyer pays also goes up. So the important thing when we are looking at this is: what is the price of gas, equipment, services and transportation.
- Q: *Kari Mancey*: If there are new supply markets coming in, will that decrease the cost or the demand?
- A: *AG Gelotti*: Yes. The price of natural gas in Asia and around the world is very volatile, the price of natural gas in Asia is highest on the planet. The price of natural gas in USA (\$4.50 a million BTU) as compared to Asia (\$13 a million BTU) is quite different and the price of gas varies around the world. Price of gas in Asia is linked to crude oil. Asia is wanting to diversify their energy sources and wanting to diversify the pricing they use.
- C: *Alex Brigden*: Just as a note, Woodfibre LNG have not made their final investment decisions, those considerations of the market price will be taken in to account for our final investment. Our contracts we do enter into for selling LNG are long term, so once those are fixed and the mechanisms AG described are in place, then we can continue with this mechanism whereby the price of gas and the price LNG are linked.

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- Q: *Kevin Sieders:* So what about the fact that Russia just signed a \$400 billion dollar deal with China to supply gas to them? Has that affected your thoughts on your profitability for this project?
- A: *AG Gelotti:* No. Part of the consideration in doing these projects is about timing. You want to get into certain markets at an ideal time. The deal that the Russians signed with China is equivalent to about 3.5 billion cubic feet of natural gas per day. China right now consumes about 16 billion cubic feet of natural gas per day and their expected increase in demand will go up rapidly. That 3.5 billion cubic feet per day will become pretty insignificant in the overall demand of what China will need in terms of the contract we will be providing which will go beyond 20 years. If you look at where the gas is coming from in Russia, it is coming from a very northwest part of China and there is very little development in that part of China. If you look at the population it is all along the coast, which is why they have so many LNG terminals and that is where they continue to build is along the coast. So they are trying to get the pipelines to move the gas all the way to those same markets. When you build the pipeline, it is like the field of dreams, other industries will come and build along that pipeline, which will take away from the 3.5 billion cubic feet of natural gas. There is just such a huge amount of demand to be met in China that a project providing 3.5 billion cubic feet per day is not something that satisfies their requirements.
- C: *Judy Kirk:* Also, what I have heard AG say before is that this is a relatively small project.
- C: *AG Gelotti:* Our objective is about 300 million cubic feet per day at peak. So if you are producing 2.1 million tonnes, which is 300 million cubic feet per day, China consumes 16 billion cubic feet per day. The Western part of North America is attractive to Asian buyers because the shipping distances are much closer, Canada is very friendly when it comes to international trade and export and it has natural gas that is priced off of a natural gas market driven index.
- Q: *Kati Palethorpe:* Are you planning to sell gas to China?
- A: *AG Gelotti:* We are talking to all major buyers, we have already had initial conversations with Japanese buyers, Korea, Taiwan – those are the major markets.
- Q: *Kati Palethorpe:* Are you looking at Japan? It was evident that Japan needed a lot of LNG after Fukushima, but now they are looking at powering up their nuclear stations again. Is that factored in your plan as well in terms of reducing demand?
- A: *AG Gelotti:* They import over 60% of the world's LNG, they don't have the luxury of having access to pipeline gas. There are political reason about why you want access to LNG. Pipelines tend to cross political boundaries, you have political risk associated with that. With LNG, once in international water, you reduce that kind of risk.
- C: *Alex Brigden:* One point about demand for LNG and natural gas in China, the main demand driver is not for increased industrialization, it is to replace coal fire power stations because the Chinese themselves are realizing the air pollution is unsustainable.
- Q: *Kati Palethorpe:* This is an assumption?
- A: *AG Gelotti:* No this is a fact. The majority of natural gas consumed is for power generation.
- Q: *Kati Palethorpe:* Is it to replace? Is it proven that is it to replace or just to provide additional options?
- A: *AG Gelotti:* When you compare and gas fired plant to a coal fired plant, the gas beats a coal fire plant hands down. There is no ash or particulates. There is a 80-90 percent reduction in NO_x and SO_x and those kinds of things. When it comes to building a coal plant you need a large area and a lot of water, a place to store coal and ash and you have to dispose of ash. It can take 6-7 years to

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get a coal plant up and running. With a natural gas facility you don't need to store coal anywhere or get rid of ash. A natural gas facility can be up and running in 24 months.

Q: *Kevin Sieders:* It goes back to the size of LNG plant at Woodfibre, if it is only 1/10th of size of the other projects in Northern BC, why build such a small project when it is obviously dividing the entire community? Why build a small plant here, why not build somewhere else?

A: *Byng Giraud:* There are many advantages of the facility because of the existing infrastructure, in some aspects this is more respectful to the environment because we are using an existing industrial site. We think it is a good site. Why build something because it may divide the community? This is British Columbia and there are industrial projects all across the province, we think we have support for the project but the nature of project will have opposition as well. We have these processes and meeting with the community to listen to the community and the Environmental Assessment process will add conditions for us, and we will have to decide whether we can meet those conditions. To say to the private sector, the community doesn't like you go home, we have to find a way to work together.

Q: *Claire Ruddy:* We have just come out of a huge period of recovery from the Sound, what has been done, and looking at many variables because we have seen the return of orcas and the actual potential for eco- tourism, about looking into the opportunity costs of putting this industry into the Sound? What does this mean for people who are looking at creating alternative industries such as tourism?

C: *Judy Kirk:* Jon, if I could, that sounds like a socio-economic study. Are you doing anything about that?

A: *Jonathan Turner:* Absolutely, we are looking at businesses and operators and how it will interact with those pieces. We have looked at some of the largest projects that have been contributing to the Sound negatively, you look at water quality in Britannia, Nexen Beach and with Woodfibre all of these projects are about restoration and remediation. When you look at the types of investments in an industrial site, there are a lot of things that need to be done. There is a lot of work that will contribute positively to the restoration of the Sound. From what I see in terms of impacts on water quality, what was there yesterday, you have permanent landfills, existing water treatment facility with a historic permit. This project will likely contribute positively to the existing conditions of that site. Without this project you might not get that restoration. There is no responsibility for the owner until the site is passed along to clean things up.

Q: *Claire Ruddy:* So it might take 15 years, but things change politically and maybe the site would have to have been restored regardless even if a new facility wasn't proposed.

C: *Judy Kirk:* Claire, the point you make is a good one, I would encourage you to put more about the socio-economic stuff in the additional comments section.

Q: *Karine Le Du:* How will you determine whether you have social license within the community?

A: *Judy Kirk:* That is the EA process and certification.

A: *Byng Giraud:* So why are we doing this and why are we here? We are doing this to get people's input. Will everybody accept the project? Not necessarily. Will everybody oppose the project? Not necessarily. We can make the project better and improve it from the public input. That is why we thank you all for coming here today. I think you can see that we have made significant changes

MEETING DETAILS	Woodfibre LNG Community Consultation Whistler Small Group Meeting June 17, 2014, 1:00 p.m. – 3:00 p.m. Delta Whistler Village Suites Whistler, B.C.
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from our last round of consultation in February. We are genuinely taking this input to make the project better.

Closing Remarks

Judy Kirk closed the meeting and reminded participants of the ways to give feedback.

The meeting record notes that the Small Group Meeting ended at 3:00 p.m.