



The following questions were asked during two public meetings held on Texada Island in mid-September 2007. Additional questions that we have received via phone or email before or after the public meetings are also included at the end of this publication.

We committed to respond to all questions asked and to provide accurate information on the proposed Texada LNG project, as well as future updates when more information becomes available.

If we have missed a question that was asked, please bring it to our attention, and we will respond in a future publication or on our website. You can reach us by email at

[info@westpaclng.com](mailto:info@westpaclng.com) or call us at 1-800-975-2409.

## **Questions Raised at Texada Public Meetings**

These questions are organized by the following themes:

- gas supply;
- shipping;
- location of facilities and power lines;
- power and natural gas markets;
- renewable power;
- safety and security;
- environment and environmental effects;
- BC and community benefits;
- environmental assessment and regulatory process;
- public participation and input; and
- general questions.

## **Gas Supply**

### **1. Where will the LNG come from?**

WestPac anticipates the LNG will come primarily from producers in Australia, southeast Asia, and possibly the Middle East.

### **2. What type of gas is it?**

We propose to import Liquefied Natural Gas. This is natural gas that has been cooled to minus 160 degrees Celsius to convert it into a liquid form. At a temperature of minus 160 degrees Celsius, natural gas becomes a liquid and remains in a liquid state without the need for any pressure. As a liquid, natural gas occupies only 1/600th the volume of its gaseous state, so it can be stored more effectively in less space and is more readily transported.

When LNG is warmed, it returns to a vapour or gaseous state. The natural gas that WestPac proposes to import will consist of at least 99% methane and will meet North American standards and specifications. This is the same kind of natural gas that is currently delivered to households and businesses throughout North America, for heating, cooking, and power generation.

### **3. Will you be importing gas for sale to the US? What percentage of the gas imported will be sold to the US?**

It is important to clarify that WestPac itself would neither own nor sell the LNG or re-vaporized natural gas passing through its facility.

WestPac would be the owner and operator of the import facility, and would earn revenue by charging a toll for the use of its import facility. The LNG and re-vaporized natural gas will be owned by the users – or customers – of our terminal.

Having clarified that, WestPac anticipates that approximately two-thirds of the LNG that would arrive at the Texada Island import facility would be sold directly to Terasen Gas and other domestic (i.e., Canadian) natural gas consumers. The remaining 1/3 would be used as a fuel source for the proposed power generation facility.

Of the gas that would be used by Terasen, some would be used to supply the natural gas needs on Vancouver Island and the remaining volume would be used to supply the existing natural gas delivery commitments of Terasen in the Lower Mainland.

There is sufficient current and future demand in Canada – on Vancouver Island and in the Lower Mainland of British Columbia – for natural gas and power to justify the proposed facility.

### **4. Why don't we have natural gas on Texada as promised by Terasen? Will you provide natural gas for Texada residents?**

WestPac proposes to be the owner and operator of an LNG import and re-gasification facility, and would earn revenue by charging a toll for the use of its import facility. WestPac itself does not propose to be a local provider of gas, either on Texada Island or at other locations.

The LNG and re-vaporized natural gas will be owned by the users – or customers – of our terminal. When WestPac became aware of the concern of residents of Texada Island that there was no local distribution of natural gas on Texada Island, WestPac raised this issue directly with Terasen Gas. Depending upon the response time from Terasen, WestPac will provide additional information to the residents of Texada some time over the coming months.

### **5. Does the existing Terasen pipeline run at capacity?**

No. For the better part of 11 months each year, the existing Terasen natural gas pipeline runs at significantly less than capacity.

### **6. A BC government document says WestPac has had discussions with Terasen about plans to export natural gas to the US at Huntingdon or Sumas Washington along the BC border. Is this true? Why do these documents say that?**

Prior to selecting Texada Island as the proposed location of our facility, WestPac examined points along the west coast where the existing

natural gas pipeline grid could be accessed to supply current and future natural gas demands. As the project concept was further developed, it became clear that a project that delivered natural gas to meet the current and forecast domestic (i.e., Canadian) demand for natural gas on Vancouver Island and in the Lower Mainland and which took best advantage of existing energy infrastructure could be feasibly located at Texada Island.

In light of this project concept, WestPac has had preliminary discussions with Terasen Gas regarding access to Terasen's existing pipeline at Texada and the ability of Terasen's existing pipeline infrastructure to deliver natural gas volumes to both Vancouver Island and the Lower Mainland. At no time has WestPac had any discussion with Terasen regarding any plan to export natural gas to the US.

In its responses to questions during a British Columbia Utilities Commission (BCUC) hearing regarding its proposed LNG peak storage facility at Mt. Hayes on Vancouver Island, Terasen is quoted as saying "TGVI [Terasen Gas Vancouver Island] and TGI [Terasen Gas Inc.] have had preliminary discussions with WestPac regarding the Texada Island project proposal. These discussions have generally been limited to the ability of the TGVI and TGI systems to move imported LNG from Texada Island back to the market hub at Huntingdon/Sumas as a firm base load or a seasonal gas supply." This response is included in a transcript of the hearing which is available from the BCUC website at:

<http://www.bcuc.com/ApplicationView.aspx?ApplicationId=153>

Unfortunately, the representative of Terasen who made this statement mistakenly indicated that our discussions contemplated delivery of natural gas to Huntingdon/Sumas. Inclusion of this erroneous statement in the transcript of a regulatory proceeding posted on a government website does not make it true. To reiterate, WestPac does not propose to deliver or sell natural gas to the US via Huntingdon or Sumas or any other point, and has had no discussion with Terasen about export to the US. There is sufficient current and future demand in Canada – on Vancouver Island and in the Lower Mainland of British Columbia – for natural gas and power to justify the proposed facility. Therefore, our discussions with Terasen have been focused on natural gas delivery to Vancouver Island and the Lower Mainland.

It may be helpful to further explain that Sumas is a recognized natural gas clearing and pricing point in the natural gas infrastructure grid on the west coast of North America, and reference is often made to the "Sumas price". This in no way implies that natural gas that is priced in reference to the "Sumas price" necessarily will go to or through Sumas. This jargon of the natural gas industry may have contributed to the erroneous description by Terasen of our discussions regarding the use of Terasen's natural gas pipeline infrastructure.

## 7. What is the cost of overseas gas?

We do not anticipate the WestPac facility to be operational before 2014. It is difficult to accurately forecast the price of natural gas produced in supply areas that far ahead.

However, today, demand for natural gas in North America exceeds production of natural gas in North America. With growing demand and declining supply, the average annual North American natural gas price has risen 82% over the past four years. International prices for LNG have fallen substantially at the same time because of increased availability of supply and lower production and transportation costs, making LNG more competitive with domestic gas. This circumstance is expected to continue as domestic gas supply declines.

## 8. How can the importation of natural gas help us be self-sufficient?

It may seem like an oxymoron to import fuel to achieve self-sufficiency. However, British Columbia's goal of self-sufficiency is one that pertains specifically to electrical power generation.

Despite having a valuable legacy of large hydroelectric and other power generation facilities, today, in 2007, British Columbia has a deficit of electrical power. This electricity deficit is forecast to grow. By 2025, for example, an additional 3,450 MW of new electrical generation capacity is expected to be needed to meet the demands of British Columbians.

Until now, British Columbia has addressed this deficit by importing electricity from Alberta and the US to meet its current demands. This imported power is often generated by coal-fired or nuclear power generation facilities.

To better control the price, availability, and environmental impact of the electrical power supply in the province, the Government of British Columbia has set a goal for the province to be self-sufficient in electricity generation by 2016.

Until such time in the future that all of our electricity needs can be met with alternative renewable energy sources, WestPac's proposal can help to achieve the objective of self-sufficiency by offsetting some of the predicted generation shortfall, using a competitively priced and environmentally responsible fuel.

Demand for natural gas in North America and around the world is increasing, while North American production of natural gas is declining. For example, demand for natural gas worldwide is projected to increase by an average of 2.3% per year from 2002 to 2025 (International Energy Outlook 2005), while in North America, the natural gas supply shortage is forecast to be approximately 2.0 trillion cubic feet, or 7% of demand, by 2010, increasing by approximately 3.8 trillion feet or 12 % of total demand by 2025. This means that prices of natural gas in North America will continue to increase and the availability of natural gas will continue to decline. This will affect not only electricity prices (as natural gas is used for power generation), but also other aspects of economic growth that rely on this energy source.

By importing LNG, British Columbia can diversify its energy portfolio, which will help to ensure supply and minimize price in an increasingly competitive marketplace, while also ensuring access to the cleanest fuel option while we bridge to the renewable fuels of the future.

## 9. Will you only bring "good" LNG gas to Canada? Doesn't LNG from southeast Asia have high sulphur content?

Sulphur and other impurities must be removed from the natural gas prior to the gas being liquefied. This treating process would take place at the point of production. Therefore, the LNG that WestPac proposes to import would have no sulphur content.

## Shipping

### 10. What is the planned frequency of carriers?

WestPac expects only about 36 LNG carriers to call on the proposed LNG receipt terminal at Texada Island each year; that's about one LNG carrier every seven to ten days or so, or about three a month. This represents an increase of much less than one percent in the total vessel traffic passing through the Haro Strait – Boundary Pass area (one of the busiest reaches

on the route from sea to Texada Island), and less than one percent of total large commercial vessel traffic passing through this area. The frequency of LNG carriers calling on the terminal would depend on the size of the ship and seasonal demand. The average frequency during the summer months will likely be one carrier every two weeks with the frequency increasing during winter months.

#### **11. How large are these carriers? What is the beam and draft of these carriers?**

We anticipate that the LNG carriers will be 275 to 300 metres in length and 40 to 46 metres in width with a laden draft of 11 to 12 metres. Deadweight tonnage would be 77,000 to 83,000 tonnes.

It may be helpful to compare the size of the LNG carriers to other vessels that pass through the same waters of the Strait of Georgia and with which residents may be more familiar. The LNG carriers are similar in size to the new generation container and cruise ships that already safely navigate the route from Juan de Fuca Strait through Haro Strait and Boundary Pass to the Strait of Georgia. For example, in 2006, 50 cruise ships called at the Port of Prince Rupert en route between the Pacific Northwest and Alaska. Of these, two ships, the “Norwegian Sun” and the “Mercury” accounted for 29 arrivals or 58% of all cruise ships docking in Prince Rupert. The length of the “Norwegian Sun” is 259 metres. The length of the “Mercury” is 263 metres. These ships would have traveled much the same route through the Strait of Georgia up to Texada Island as would be traveled by the LNG carriers.

#### **12. Will there be an “exclusion zone” around these carriers as they move through Canadian waters? How far away do you need to be while shipping and while docked? Will it affect nearby fishing boats, ferries or other vessels?**

There are exhaustive standards that apply to LNG facilities and LNG vessels. The standards recommend exclusion zones, which apply to land-based facilities, and safety zones, which apply to vessels, to ensure public safety, making sure that there is adequate separation between facilities and vessels and populated areas and members of the public. These zones are conservatively based on the potential range of dispersion of LNG and re-vapourized natural gas, and the possible extent of heat radiation in the highly unlikely event that a re-vapourized spill of LNG were to be ignited. Security and safety measures also depend on local assessments of security risk and the unique characteristics of each marine area. The size of such zones therefore depends in part on local conditions (including, for example, prevailing winds).

There is no single standard “exclusion zone” that is applicable to all LNG terminals or carriers. However, given the experience of other similar facilities located in busier waterways, our preliminary estimate is that a radial (side) clearance safety zone of approximately 500 to 900 metres would be applied to LNG carriers in transit. Operation plans that have been approved for most LNG carriers to date also require that all other vessels remain clear of the main ship channel two miles (3.2 km) ahead and one mile (1.6 km) astern of the LNG carrier during transit. This is not significantly different than the best operating practices of most ship operations involving other cargo types. We do not anticipate that the kind of restrictions that are enforced on the LNG facility in Boston, which have been raised by some members of the public as a comparison to WestPac’s proposal, would be necessary, as the LNG carriers calling on WestPac’s terminal would not be passing through or under any narrow channels, bridges, or other constraints. The size of any exclusion zone around the terminal jetty and tanker while berthed would be deter-

mined on the basis of studies of local conditions, including prevailing winds, currents, and so on.

Safety zones around vessels would not be new to marine users on the west coast. It is important to recognize that all large ships, including, for example, cruise ships, have safety zones. In many instances, all that is required to ensure a safe operational environment for large ships and other marine users is to provide a common radio frequency to communicate vessel movements in advance of the arrival of a large vessel, as is already done through the existing vessel traffic management system.

The establishment of appropriately sized project-related exclusion and safety zones will be a part of the development and planning work that WestPac will be required to complete. WestPac will work with (and indeed has already begun initial consultation with) the Canadian Coast Guard, Pacific Pilotage Authority, BC Coastal Pilots, the US Coast Guard, BC Ferries, and other stakeholders to consider the potential for conflict between the LNG carriers and other marine users, and to develop appropriate measures, including exclusion and safety zones as necessary and scheduling, to avoid negative impacts or to mitigate unavoidable impacts. This information will be included in the environmental assessment of the project which will be available for public review and comment.

Our preliminary work has shown that LNG vessels can safely travel through the Gulf Islands and Strait of Georgia. The low frequency of passage of LNG carriers and the vessel traffic management system that is already in place in both Canadian and US waters will minimize any disruption to other marine users.

#### **13. Would carriers be fully escorted along the entire route?**

All LNG carriers destined for the proposed terminal would pick up BC Coastal Pilots at the Victoria Pilot Station. The carriers would then be piloted and escorted by two tugs along the entire route to and from Texada Island. The LNG carriers would operate in accordance with the existing Vessel Traffic System, by which the transit of vessel traffic in the Strait of Georgia is safely and effectively managed, and with the U.S./Canada Cooperative Vessel Traffic Services protocol while transiting the waters in the international boundary area between the State of Washington and the Province of British Columbia.

#### **14. How much vessel traffic is there at Kiddie Point? How would recreational boats be handled?**

Vessel traffic in the Strait of Georgia is monitored by the Canadian Coast Guard, Marine Communications and Traffic Services Centre, and Vessel Traffic Services (VTS). However, vessel traffic at Kiddie (Coho) Point is not specifically tracked. Further, vessels under 500 gross tons are not required to report in when entering into the VTS zone. As a result, WestPac does not currently have an accurate assessment of all vessel traffic, inclusive of recreational boats, at Kiddie Point. Nevertheless, we are aware that there is ongoing recreational activity in the waters around Kiddie Point.

WestPac will work with (and indeed has already begun initial consultation with) the Canadian Coast Guard, Pacific Pilotage Authority, BC Coastal Pilots, the US Coast Guard, BC Ferries, and other stakeholders to consider the potential for conflict between the LNG carriers and other marine users, and to develop appropriate measures, including exclusion and safety zones as necessary and scheduling, to avoid negative impacts or to mitigate unavoidable impacts. This information will be included in the environmental assessment of the project which will be available for public review and comment.

In addition, because the WestPac proposal contemplates the construction of a jetty in navigable waters, WestPac will be required to obtain an approval from Transport Canada. In the context of this permitting, existing vessel traffic, including recreational boats, at Kiddie Point will be considered and appropriate measures to avoid negative impacts or to mitigate unavoidable impacts will be developed.

### **15. What happens if there is a rupture in a ship?**

There are exhaustive standards that apply to the design of LNG vessels. LNG vessels are double-hulled to minimize the likelihood and extent of a leak in the event of damage to the containment system; this double-hull design of LNG carriers offers significant protection against rupture. In the over 40-year operating history of LNG shipping, there has never been a penetration into an LNG cargo tank and there has never been a loss of cargo. More than 33,000 ship cargoes of LNG have been safely transported over a combined distance of 60 million miles without serious incident. Annually, more than 150 ocean vessels safely transport more than 110 million tonnes of LNG.

There have been only two incidents where LNG carriers have grounded. Both occurred in 1979, and neither incident resulted in a loss of cargo or a leak. The first one involved the El Paso Paul Kayser, loaded with 125,000 cubic metres of LNG. The vessel was steaming out of the Mediterranean Sea from an Algerian port when it struck a rock outcropping off the coast of Gibraltar at a speed of 14 to 17 knots (approximately 20 miles per hour) and gouged a 750-foot long scar in its hull. This incident occurred with a fully loaded ship traveling at maximum speed and there was no loss of cargo, much less a breach of an LNG tank. Another ship was brought along side, and the cargo was pumped out and into the second ship. The El Paso Paul Kayser was righted, sent in for repair, and returned to service. The second incident involved the grounding of the LNG carrier Taurus. Again, no loss of cargo occurred.

Notwithstanding, during the environmental assessment process, an analysis of the likelihood or risk of an accidental event occurring, and the consequence of an accidental event, will be assessed.

It may be helpful to clarify some of the important attributes of LNG. LNG is not pressurized; it is stored and transported at atmospheric pressure, and, if spilled, will not burn or explode. Revaporized LNG is natural gas, mostly methane, the same fuel that is commonly used for cooking and heating. In the event that LNG were spilled, it would warm up, vaporize, and the natural gas would rise (being lighter than air) and rapidly dissipate into the atmosphere. Once LNG evaporates, it does not leave any toxic or persistent contaminating residue. If the natural gas vapour mixes with a certain amount of air and encounters an ignition source, it would burn where the gas is able to mix with the air. It would not explode if unconfined. LNG, if spilled, is less volatile than other liquid fuels commonly transported and used throughout the Gulf Islands, Lower Mainland, and coastal communities, such as diesel and gasoline – these fuels as a vapour will ignite more readily than natural gas. If natural gas vapour at the right gas-air ratio ignites over a pool of spilled LNG, it would continue to burn until the LNG is depleted.

### **16. When LNG carriers offload, do they take on ballast?**

After unloading, a small amount of LNG, called “heel”, is left in a carrier’s tanks to keep the tanks cold during the return journey. The amount of ballast required will vary depending on how much LNG is left in the carrier’s tanks.

### **17. How long does it take to unload an LNG ship?**

The time required to unload an LNG carrier depends on the design of the off-loading facilities, including: the size of the unloading arms; the size of the pumps; the size of the storage tank; and the distance from the jetty head to the storage tank.

Based on the current design concept, we anticipate that the LNG carriers would be unloaded in 12 to 14 hours.

### **18. Will the carriers have any impact on the Comox ferry?**

Vessels operating in the Strait of Georgia, including vessels operated by BC Ferries, operate under the direction of Vessel Traffic Services. Western Canada VTS zone regulations require that a report be made at least 24 hours prior to a vessel entering a VTS zone from seaward. This system, which is currently in place and operating, ensures that all vessels, including the Comox ferry, can safely move in the Strait of Georgia.

WestPac will work with (and indeed has already begun initial consultation with) the Canadian Coast Guard, Pacific Pilotage Authority, BC Coast Pilots, the US Coast Guard, BC Ferries, and other stakeholders to consider the potential for conflict between the LNG carriers and other marine users (including BC Ferries), and to develop appropriate measures, including exclusion and safety zones as necessary and scheduling, to avoid negative impacts or to mitigate unavoidable impacts.

### **19. How far out will the jetty extend?**

WestPac LNG’s engineers have not yet designed the proposed jetty; however, typically it would extend 50 to 200 metres from the foreshore, depending on the jetty design, water depth, and profile of the sea floor.

### **20. Couldn’t you use empty quarry barges to bring back LNG to Texada from the US?**

LNG can only be transported in special purpose-built LNG carriers constructed with 9% nickel alloy, stainless steel, or aluminum tanks. In addition, hull configuration is an important factor to minimize cargo slosh of the liquefied gas. As a result, it is not technically feasible to use quarry barges to transport LNG.

## **Location of Facilities and Power Lines**

### **21. Why not run the power lines underground? Why not run the power lines using marine cables like the strait crossings do?**

WestPac is actively looking at the feasibility of all options relating to power lines.

### **22. Why locate at Kiddie (Coho) Point on Texada Island? Why not locate the project closer to the power line crossing midway on Texada?**

As we studied the best possible locations for a project like ours, locating next to the existing Ash Grove quarry at Kiddie Point seemed to be an ideal location for a number of reasons. The site is on land that has already been disturbed for industrial purposes. It is located directly adjacent to lands currently used for industrial purposes and has no permanent residents. The site is large enough, relatively flat, underlain by limestone, and has a minimal depth of overburden which provide an ideal base for construction. It sits at the midway point of the Terasen natural gas line system between the Lower Mainland and Vancouver Island (which would allow natural gas send-out in both directions) and the pipeline itself routes directly through the site. The site is well served

by existing roads. The water depth close to shore is adequate for LNG carriers. The Cheekye-Dunsmuir electrical transmission lines are only 30 km away and there is an existing (pipeline) right-of-way between the site and the existing transmission lines that had previously undergone an environmental assessment, including consideration of use for traditional purposes by First Nations. In these respects, the proposed site and route met important siting criteria while minimizing new disturbance and the need for costly new infrastructure.

The public meetings we hosted on Texada Island on September 10 and 11 have helped us understand a number of key community concerns regarding the proposed location and power line route. In addition, some residents identified alternative locations on Texada that may offer comparable advantages of size, access, separation from populated areas and amenities, and proximity to existing energy infrastructure. Based on this valuable community input, we have committed to further explore and assess alternative sites for the terminal and power generation facilities and alternative routing options for the power line. We will assess identified alternatives against project requirements and the needs of the community.

### **23. What about locating the project at Davies Bay or further south? Why not locate in Squamish?**

As noted, WestPac LNG viewed the proposed location at Kiddie (Coho) Point as a preferable location because of proximity to the existing natural gas pipeline and power transmission lines, the existence of the pipeline right-of-way, the separation from populated areas, access to deep water, and constructability. These features were viewed as favourable as they minimize the need for development of significant new infrastructure and minimize disturbance. Having said this, we are open to other possibilities, such as Davies Bay. The ideal site is one that is close to an existing pipeline and existing power line, along with the other attributes noted above. Based on the community input we received at the public meetings held in September, we have committed to further explore and assess alternative sites for the terminal and power generation facilities and alternative routing options for the power line. We will assess identified alternatives against project requirements and the needs of the community.

Locating the project at Squamish is not considered to be a viable alternative as the engineering aspects of pipeline operations from that location are not as favourable as locating at the mid-point of the Vancouver Island Gas Pipeline on Texada Island. That is, it would not be possible to optimize the capacity of the existing natural gas infrastructure to the same degree as is possible with a location on Texada Island.

### **24. Why not locate the plant on the Mainland or Vancouver Island or some other point along the gas pipeline?**

The proposed location on Texada Island is midway on the pipeline between Vancouver Island and the Mainland. This midway point provides the maximum benefits in terms of optimizing natural gas pipeline capacity. At this location, we could flow 150 million cubic feet per day (MMcfd) of natural gas to Vancouver Island and an additional 150 MMcfd of natural gas back to the Lower Mainland, thus effectively doubling the capacity of the line without having to add new pipe or additional compression. The Vancouver Island pipeline gets smaller as you get closer to Victoria. If we were to site our project on Vancouver Island, we could only flow a total 130 MMcfd through the entire line.

### **25. Will you consider other locations on Texada Island?**

During our public meetings on Texada in September, some residents

identified alternative locations on Texada that may offer comparable advantages of size, access, separation from populated areas and amenities, and proximity to existing energy infrastructure. Based on this valuable community input, we have committed to further explore and assess alternative sites for the terminal and power generation facilities and alternative routing options for the power line. We will assess identified alternatives against project requirements and the needs of the community.

### **26. The Harmac Pulp Mill is being decommissioned. Have you considered it as a possible location since the site has already been degraded?**

Although an existing industrial site, the location of the Harmac Pulp Mill does not have the same strategic and proximal access to the natural gas pipeline and power transmission grid as is available on Texada Island.

### **27. Will the [pipeline] right-of-way be expanded? Can you or will you expropriate land? What if someone does not want to sell? Do you have the right to use the existing right-of-way?**

The existing pipeline right-of-way was identified as a possible route for the power line, as it was felt that this would minimize the need for new disturbance. Based on community feedback, we have committed to further explore and assess alternative routing options for the power line.

We cannot determine the size, design, or location of the power line and supporting towers or, consequently, the width of the right-of-way, until BC Hydro's power generation requirements are better defined; this may take a year or more. The power line and right-of-way specifications will then be determined in consultation with the British Columbia Transmission Corporation. Until these specifications are known, we cannot determine the width of the right-of-way or the need to widen the existing right-of-way, if in fact this is selected as the proposed route.

The identification and assessment of power line route options will consider proximity to residences and other constraints and will avoid these where possible. The environmental assessment will consider the effects of the power line and measures to mitigate any unavoidable adverse effects.

WestPac does not have the authority to expropriate land. WestPac would have to acquire the appropriate authorizations to locate the power line across private and Crown lands.

### **28. Why not upgrade Burrard?**

WestPac does not own Burrard and by itself would not have the ability to upgrade Burrard. Burrard is owned by BC Hydro. BC Hydro has stated that it plans to shut down Burrard by 2014. Burrard is a 917 MW natural gas generating station located on the north shore of Burrard Inlet and whose six 150MW units were commissioned in the years 1962, 1963, 1966, 1969 and 1976 respectively. Units 1, 2 and 3 were converted to synchronous condensers by decoupling their generators from their turbines. Units 4, 5 and 6 remain operational and in 2006, Unit 1 was re-commissioned and made operational. The Burrard plant utilizes older, conventional steam technology and is not as efficient as modern gas fired plants and its low-efficiency causes it to be largely uneconomic relative to purchasing power from Alberta or the Pacific Northwest. As a result, the plant is utilized very infrequently. BC Hydro has stated before the BCUC that it is only through its concerted effort has it been able to continue to operate Burrard and maintain its "tenuous social license", and that it plans to discontinue relying on Burrard for planning purposes at the end of 2014.

## Power and Natural Gas Markets

### 29. Will the power generated be sold to the US markets?

No; the power generated by the proposed facility would be sold to BC Hydro and is intended to supply the growing power demands of Vancouver Island and the Lower Mainland. Today, in 2007, British Columbia has a deficit of electrical power. This electricity deficit is forecast to grow. By 2025, for example, an additional 3,450 MW of new electrical generation capacity is expected to be needed to meet the demands of British Columbians.

Until now, British Columbia has addressed this deficit by importing electricity from Alberta and the US to meet its current demands. This imported power is often generated by coal-fired or nuclear power generation facilities.

To better control the price, availability, and environmental impact of the electrical power supply in the province, the Government of British Columbia has set a goal for the province to be self-sufficient in electricity generation by 2016.

Until such time in the future that all of our electricity needs can be met with alternative renewable energy sources, WestPac's proposal can help to achieve the objective of self-sufficiency by offsetting some of the predicted generation shortfall, using a competitively priced and environmentally responsible fuel.

### 30. Who will buy the LNG and the power from you?

We expect the gas to be sold to Terasen and other domestic customers, and the power to BC Hydro.

### 31. Who will own the power produced?

While the power would be generated by WestPac, it would be sold to BC Hydro and delivered into the BC Hydro power grid which is regulated by the British Columbia Utilities Commission for the benefit of residents of British Columbia. The proposed power generation facility is intended to supply the growing power demands of British Columbians on Vancouver Island and the Lower Mainland.

### 32. Why are we importing natural gas from abroad and then selling our own gas to the US market?

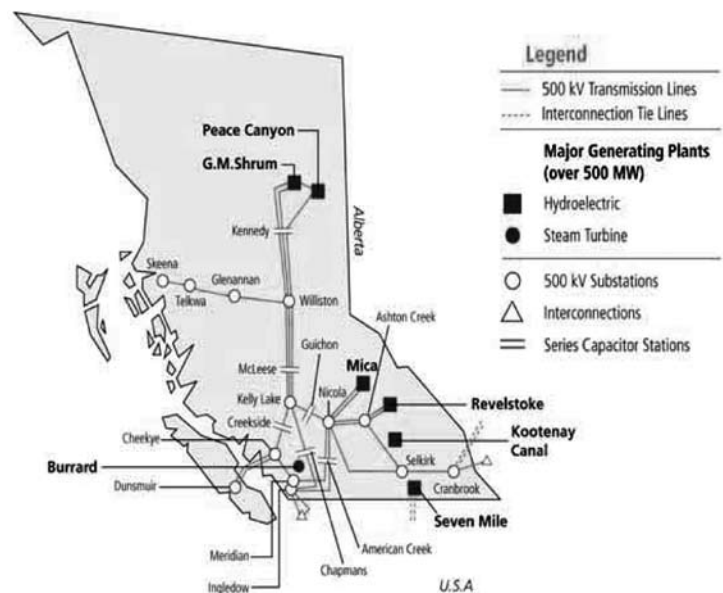
Our main gas customer, Terasen Gas, does not sell gas to the US.

With respect to the natural gas market, it is important to note that demand for natural gas in North America and around the world is increasing, while North American production of natural gas is declining. For example, demand for natural gas worldwide is projected to increase by an average of 2.3% per year from 2002 to 2025 (International Energy Outlook 2005), while in North America, the natural gas supply shortage is forecast to be approximately 2.0 trillion cubic feet, or 7% of demand, by 2010, increasing by approximately 3.8 trillion feet or 12% of total demand by 2025. This means that prices of natural gas in North America will continue to increase and the availability of natural gas will continue to decline. This will affect not only electricity prices (as natural gas is used for power generation), but also other aspects of economic growth that rely on this energy source.

By importing LNG, British Columbia can diversify its energy portfolio, which will help to ensure secure supply and minimize price in an increasingly competitive marketplace, while also ensuring access to the cleanest fuel option while we bridge to the renewable fuels of the future.

### 33. What is the spare capacity on the Cheekye-Dunsmuir transmission line?

The BCTC transmission system, as it is currently configured, transmits electricity that is generated from the Peace Canyon and G.M. Shrum power dams located in northeast BC down to Vancouver Island and to the Lower Mainland. One of the transmission lines continues to the Cheekye station where it is split and one part continues on to Dunsmuir on Vancouver Island and the other part continues on to the Lower Mainland. If a power plant were to locate on Texada Island, then the power that is currently flowing from Cheekye to Dunsmuir on Vancouver Island could be diverted directly to the Lower Mainland and the power plant on Texada could then supply power to Vancouver Island as required. Thus, just as natural gas delivered into Terasen Gas' Vancouver Island Pipeline at Texada could flow 150 MMcf in both directions, effectively doubling the capacity of the line without the need of new infrastructure, this same phenomenon could occur on the Cheekye Dunsmuir line, as and when required.



## Renewable Power

### 34. Why use natural gas to generate power when you could use wind, run-of-river, or solar power generation?

Natural gas as a fuel for power generation serves as an important – and environmentally responsible – bridge to the future when all of our electricity needs may be met by renewable energy sources.

In its Energy Plan issued earlier this year, the Government of British Columbia committed to ensure that at least 90% of its future total generation capacity continues to be met with clean or renewable power generation technologies. However, the Energy Plan also recognizes that some types of renewable power generation, like wind, run-of-river, and solar, are intermittent, meaning that power from these sources is limited or not available at all times. In other cases, like large-scale solar, technology and engineering challenges must be overcome to allow generation on the scale required to meet British Columbia's energy needs.

British Columbia requires power on demand: it is necessary to have

an adequate supply of “firm” power that is available to be dispatched whenever and wherever it is needed. Dispatchable firm power is also necessary to balance and stabilize the electricity grid. Today, the main sources of this reliable firm electricity in British Columbia include the large legacy hydroelectric dams and natural gas. However, the existing firm power supplies in British Columbia are inadequate to meet current and forecast demands in the province. Moreover, as British Columbia develops more and more intermittent renewable power sources in the future, the need for dispatchable firm power will increase.

Although the Government of British Columbia has stated that it is considering the development of another large hydroelectric power generation facility at Site C in northeastern British Columbia, it will be many years before approvals are obtained for such a project, and many more years before the facility would be in service. Even then, the facility would not fully meet the forecast power demands in the province.

In the meantime, British Columbia needs dispatchable firm power to enable additional new renewable power generation to be developed and to help meet the current and forecast power deficit.

In 2007, in its considerations of the B.C. Energy Plan, the British Columbia Utilities Commission observed the following:

“Given uncertainty over the future of Burrard and the availability of the existing non-firm (run of river/wind) the Commission Panel finds that there is a critical need for new resources based on reliability planning criteria.”

Natural gas is the cleanest hydrocarbon fuel available with a proven track record for power generation. Natural gas-fired turbines can be turned on relatively quickly to supply load when intermittent power resources are not generating. Both US environmentalist Robert Kennedy and California Governor Arnold Schwarzenegger have endorsed natural gas as a bridge for energy needs today while we develop new energy sources in the future.

Governor Schwarzenegger recently observed:

“More than 40 percent of the electricity in California is generated using natural gas as a fuel. California consciously chose natural gas as a fuel source to meet the demands of a growing population and booming economy due to its clean environmental footprint compared with coal and other fossil fuels. And while California has implemented one of the most aggressive renewable energy initiatives in the United States, natural gas serves as a critical “bridge” fuel that can provide cleaner energy while our state and nation transitions to renewable resources like solar, wind, ethanol, hydrogen and biomass.”

We believe that natural gas offers British Columbia a similar value in helping to meet both today’s energy needs while enabling cleaner solutions to be developed for tomorrow.

### **35. What do you mean by “firming” or backstopping?**

Renewable power sources like solar, wind, or run-of-river, are intermittent, meaning that power from these sources is limited or not available at all times. Such intermittent power sources must be backed up by power that is available on demand, whenever and wherever power is required. “Firm” power, sometimes also called “dispatchable” power, refers to electricity that is available at all times on demand, even in adverse conditions. Intermittent power sources must be backed up by as much as 90% equivalent firm power.

Today, the main sources of this reliable firm electricity in British Colum-

bia include the large legacy hydroelectric dams and natural gas. Other possible sources of firm power in British Columbia are coal, diesel, or oil (nuclear power has been ruled out as an option by the Government of British Columbia). Of the alternatives that rely on hydrocarbon fuels, natural gas is the cleanest burning, extremely reliable, and one of the least cost alternatives to provide the necessary firming capacity.

Although the Government of British Columbia has stated that it is considering the development of another large hydroelectric power generation facility at Site C in northeastern British Columbia, it will be many years before approvals are obtained for such a project, and many more years before the facility would be in service. Even then, the facility would not fully meet the forecast power demands in the province.

In the meantime, British Columbia needs dispatchable firm power to enable additional new renewable power generation to be developed and to help meet the current and forecast power deficit. Natural gas as a fuel for power generation serves as an important – and environmentally responsible – bridge to the future when all of our electricity needs may be met by renewable energy sources.

### **36. Would you build the LNG project without the power generation plant?**

Based upon current cost estimates for the facility, the project would not be economic without both the LNG import and the power generation components.

## **Safety and Security**

### **37. How long can the LNG sit in carriers or storage tanks before it heats up and vapourizes from liquid into gas?**

As soon as LNG is loaded onto the carrier it starts to vapourize. However, LNG carriers are designed to capture the natural gas vapour and either use it as fuel or re-liquefy it. Most of the LNG will remain in liquid form during the time that it takes to transport it from the LNG production facility to the receipt terminal. Once the gas is off-loaded from the LNG carrier into the storage tanks, it will not be stored for long. The LNG will be continuously vapourized and either delivered into the pipeline system or used as fuel gas for the power plant.

### **38. What happens if there is a gas leak, explosion or other event? What would be the impact on ferries and the ability to evacuate residents from the island? Would there ever be a time when ferries would not run?**

As we continue with project planning and environmental assessment, WestPac will complete a risk assessment and consequence analysis that will consider the likelihood of an accidental event and examine the potential impacts that could result. These studies will consider the impact on ferries and the ability to evacuate residents from the island. The results of these studies will inform the development of emergency preparedness and contingency and emergency response plans for the facilities. Such plans would be developed in consultation with emergency responders and key service providers, such as BC Ferries, and will focus on the protection of public health and safety. We anticipate that WestPac will be required to demonstrate that public health and safety in the event of any incident can and will be protected.

### **39. Has anyone tested what happens if there is a spill or a fire?**

Yes, there have been many studies and assessments done of the

consequences of LNG spills or fires. The most extensive analysis was sponsored by the US Department of Energy, Office of Scientific and Technical Information. This work, completed in December 2004, resulted in the production of a report entitled "Guidance on Risk Analysis and Safety Implications of a Large Liquefied Natural Gas (LNG) Spill over Water", prepared by Sandia National Laboratories.

On the industry side during the 1970s, Shell conducted extensive testing which involved deliberate discharge of cargos and modeling of the results. The tests resulted in an "in house" publication entitled "Accidents and Emergency Procedures – Methane Vessels" produced in 1976. As documented in the report, in 1973, Shell carried out LNG jettison trials on its new (at the time) 75,000 cubic metre LNG carrier, "Gadila". The tests were performed at sea, about 70 miles west of St. Nazaire, France. Detailed observations were made of the event. In a series of tests, a total of about 600 cubic metres of LNG were discharged. The results indicated that the vapour clouds from the gas were low-lying and within well-defined boundaries. At the sea surface, no liquid LNG pool or ice formations could be observed, nor were any vapour "explosions" detected. In all cases, the vapour clouds dispersed rapidly after completion of each discharge.

In addition, there are multiple independent laboratories that conduct independent analysis assessing the consequence of both inadvertent and deliberate LNG spills.

WestPac will be required to conduct site-specific consequence analysis for this proposed project; the results of this analysis will be made publicly available in the environmental assessment documentation.

#### **40. How will site security be handled? Isn't the plant a target for terrorists?**

Site security will be specifically developed to address issues of public safety identified in the environmental assessment process.

Concerns about security for all types of industry have heightened since the events of September 11, 2001. But this concern pre-dates those tragic events, and how security is handled is specific to location. Residents of Texada Island will recall the events of May 31, 1982, when criminals bombed the Dunsmuir Substation of BC Hydro, and the resulting fires that took 8 to 10 days to extinguish. And yet to this day, the BC Hydro substations on Texada Island are secured only by a chain link fence and video surveillance. Texada Island residents familiar with the Terasen Gas compressor station located near to the proposed location of the WestPac terminal will know that the large compressor and pipeline facility is secured only by a chain link fence and video surveillance.

It may be helpful to clarify some of the important attributes of LNG. LNG is not explosive. LNG is also not flammable and cannot burn because it does not contain oxygen or air. As LNG re-vaporizes, the vapour – natural gas – is flammable, but only when mixed with air in a narrow range of concentration (at least 5% but not more than 15% of a natural gas-to-air mixture). If the natural gas concentration is lower than 5%, it cannot burn because its concentration is not sufficient to be a flammable "fuel". If the natural gas concentration is higher than 15%, it cannot burn because there is insufficient oxygen.

Available data compiled by industry and well understood explosion dynamics indicate that it is not possible to detonate LNG vapours, even with the use of an adequately sized explosive charge on a storage tank, unless the LNG vapours contain high fractions of ethane and propane (more than 20%). However, the LNG that would be imported

into WestPac's terminal – and consequently, the natural gas vapours – would be at least 99% methane and would not contain the levels of ethane or propane necessary to enable an explosion. LNG, if spilled, is less volatile than other liquid fuels commonly transported and used throughout the Gulf Islands, Lower Mainland, and coastal communities, such as diesel and gasoline – these fuels as a vapour will ignite more readily than natural gas.

Because LNG does not explode and because it is difficult to ignite, many experts believe that LNG terminals are not attractive as terrorist targets. Recently, the head of the University of Houston's LNG policy research consortium observed:

"Speaking very broadly, from all the information we have, we believe LNG can be used safely in the United States. Generally, we don't see LNG as a likely or credible terrorist target."

In Canada, we see evidence of this in the safe operation, since the early 1970s, of Terasen's existing Tilbury LNG facility in Delta, BC, in the heart of Greater Vancouver, where perimeter security consists of a chain link fence.

#### **41. If a berm around the storage tank is used to prevent gas leaks, what happens if it burns?**

Different types of LNG tanks have different configurations and combinations of dykes or berms. Not all storage tanks are surrounded by berms.

The tanks that WestPac proposes to construct are called "full containment" tanks. They are constructed of an inner liner of cryogenic steel and an outer tank of reinforced concrete. Full containment tanks do not require the use of berms and WestPac's proposal does not currently contemplate the construction of berms surrounding the LNG tank.

Notwithstanding, in the unlikely event that a tank leak occurred, the spilled LNG would warm up, vaporize, and the natural gas would rise (being lighter than air) and rapidly dissipate into the atmosphere. If the natural gas vapour mixes with a certain amount of air and encounters an ignition source, it would burn where the gas is able to mix with the air. It would not explode if unconfined. LNG, if spilled, is less volatile than other liquid fuels commonly transported and used throughout the Gulf Islands, Lower Mainland, and coastal communities, such as diesel and gasoline – these fuels as a vapour will ignite more readily than natural gas. If natural gas vapour at the right gas-air ratio ignites over a pool of spilled LNG, it would continue to burn until the LNG is depleted.

#### **42. How does the gas stay liquid? How is it refrigerated?**

The gas is chilled to –160 degrees Celsius at the point where the LNG is manufactured. It is then loaded into insulated carriers. These carriers could be ships, trucks, rail cars, or even fuel tanks on buses. The storage vessels themselves are analogous to a Thermos bottle. They have a double-walled construction. In the case of trucks or rail cars, there is a vacuum space between the double walls. In the case of LNG carriers and tanks, the space between the interior and exterior walls is filled with an insulating material called perlite. Perlite is a naturally occurring amorphous volcanic glass that has very high insulating properties. (It is also used in potting soils, as it is highly water-absorbent and provides a good medium for hydroponics.) Once loaded onto a ship, truck, rail car, or an LNG tank, the LNG is not refrigerated. It remains liquid because of the insulating properties of the storage container.

**43. Are you aware BC Ferries has twice driven into land because the area is so difficult to navigate?**

LNG vessels calling on the LNG receipt terminal will be required to comply with the existing vessel traffic management system, as well as any other additional requirement that may be established by the regulators to ensure safe and secure navigation. In addition, the LNG carriers will pick up pilots at Victoria and will be piloted and escorted by tugs all the way to Texada Island. The route from the open ocean to and through the Strait of Georgia has a number of key attributes, which make this, in our view, both a safe and suitable route for LNG carriers.

The route from the ocean to and through the Strait of Georgia, by way of Cape Flattery, Race Rocks, Victoria Pilot Station, Haro Strait, Turn Point, and Boundary Pass, is a safely managed, deep-water route. As part of our preliminary work assessing the proposed site for the project, we reviewed marine vessel traffic data available from the Canadian Coast Guard, Marine Communications and Traffic Services Centre, for 2006. The route is predominantly used by large bulk carriers and container ships, as well as by other commercial cargo vessels. In total, commercial cargo vessels represent more than 75% of all marine traffic using this route. Other large vessels using this route include ferries, cruise ships, government vessels, and warships. The total number of vessels reporting annually along the route ranges from about 9,000 (at Turn Point) to about 12,000 (at Cape Flattery), and the frequency of marine traffic is fairly low (less than 1.5 vessels reporting per hour). These reports include both large and small vessels (such as fishing vessels, pleasure boats, tugs, and barges).

WestPac expects only about 36 LNG carriers to call on the proposed LNG receipt terminal at Texada Island each year; that's about one LNG carrier every ten days or so, or about three a month. This represents an increase of much less than one percent in the total vessel traffic passing through the Haro Strait – Boundary Pass area (one of the busiest reaches on the route from sea to Texada Island), and less than one percent of total large commercial vessel traffic passing through this area. The LNG carriers are similar in size to the new generation container and cruise ships that already safely navigate the route from Juan de Fuca Strait through Haro Strait and Boundary Pass to the Strait of Georgia.

Marine vessel traffic along the entire route is managed by the Canadian and US Coast Guards, through a comprehensive vessel traffic management system, which includes traffic routing, traffic separation schemes, and vessel traffic services, such as full radar coverage of the area and notices to mariners. This system is of international standard and comparable to other successful systems world-wide. Large vessels including laden ocean tankers, bulk carriers, container vessels, vehicle carriers, and cruise ships, are already safely guided by BC Coastal Pilots through these waters today.

WestPac has already initiated – and will continue – consultation with both the Canadian and US Coast Guards, as well as the Pacific Pilotage Authority and the BC Coast Pilots, regarding the safe transit of LNG carriers. WestPac also has solicited advice from master mariners familiar with BC coastal waters and with the handling of LNG carriers in particular. Based on our consultations to date and review of available information regarding existing marine vessel traffic and vessel traffic management, we are of the view that the route can be safely navigated by LNG carriers calling on the terminal at Texada Island.

**44. Are you aware of a big explosion in Mexico caused by sabotage of pipelines?**

Yes, we are aware of this incident that occurred in Mexico on September

10, 2007. Unlike pipelines that are under pressure, LNG facilities and tanks are at atmospheric pressure and will not explode in this manner.

We are also aware that there is an existing natural gas pipeline that currently crosses Texada Island; there has not been any terrorist or sabotage incidents on this pipeline. In fact, there has never been a reported instance of an act of sabotage on an LNG facility. Nevertheless, pipelines and other energy facilities need to be protected and it will be our practice to ensure that adequate safety and security are an integral part of our facility just like they are at thousands of plants and facilities across Canada and North America.

**45. Texada is near a fault line. What happens if there is an earthquake?**

LNG facilities are designed and built to withstand earthquakes, and have survived earthquakes and other natural events in many places in the world. Our preliminary seismic analysis of the proposed Texada Island location indicates that the facility can be constructed and operated safely, in accordance with the stringent standards that apply to such facilities in seismically active areas and around the world. As the proposal advances, significant additional analysis will take place. This analysis will be used by our engineers to design a facility that will specifically address the seismic characteristics of the proposed location.

**46. There was an LNG plant accident that killed 20 workers in Algeria some years ago? How can you claim LNG is safe and there have been no fatalities?**

The incident in question occurred at an LNG facility located at Skikda, Algeria, on January 19, 2004. It is important to note that the Skikda facility is a liquefaction plant that manufactures LNG, which is a much more complex and complicated process than the storage and re-gasification facility proposed by WestPac. The WestPac facility is much like the facility that Terasen Gas owns and has operated without incident at Tilbury Island, in the heart of Greater Vancouver, since the early 1970s.

The Skikda facility was (and is) operated by a company called Sonatrach. Subsequent analysis of the incident revealed that natural gas vapour leaked from a pipeline and was drawn, by a fan, into a high-pressure steam boiler used to power refrigeration compressors. The confined gas-air mixture in the boiler firebox ignited and resulted in a fire and explosion. It has been reported that 27 people were killed in this incident and 56 employees were admitted to hospital.

The Skikda accident triggered new, more stringent industry operating and certification requirements that LNG terminal applicants/operators must identify all combustion/ventilation air intake equipment and distances to any possible hydrocarbon release comprising LNG, flammable refrigerants, flammable liquids, and flammable gases. Hazard detection devices must be installed to shut down this equipment in the event of any release. This significantly reduces the likelihood of a similar incident recurring.

However, it is important to note that high-pressure steam boilers that power refrigeration compressors are not normally used at any LNG facility operating in North America and are not contemplated in the design proposed by WestPac.

WestPac has not claimed that there have never been fatalities at LNG facilities. WestPac has said on a number of occasions that there have not been fatalities associated with the marine transport of LNG.

Notwithstanding the unfortunate events at Skikda, Algeria, the LNG industry on a global scale continues to have an exemplary safety record.

#### 47. How close is the proposed plant to the existing quarry and ferry terminal at Blubber Bay?

WestPac has procured a lease on the northern end of Texada at Kiddie (Coho) Point. The lease location borders the northern edge of the existing Ashgrove Blubber Bay Quarry.



#### 48. What would happen if a terrorist flew a plane into the tanks or a ship?

No one knows for certain what would happen if a terrorist flew a plane into an LNG carrier or LNG tank because this has never occurred. No LNG carrier or land-based LNG facility has been attacked by terrorists.

It may be helpful to clarify some of the important attributes of LNG. LNG is not explosive. LNG is also not flammable and cannot burn because it does not contain oxygen or air. As LNG re-vaporizes, the vapour – natural gas – is flammable, but only when mixed with air in a narrow range of concentration (at least 5% but not more than 15% of a natural gas-to-air mixture). If the natural gas concentration is lower than 5%, it cannot burn because its concentration is not sufficient to be a flammable “fuel”. If the natural gas concentration is higher than 15%, it cannot burn because there is insufficient oxygen.

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Because LNG does not explode and because it is difficult to ignite, many experts believe that LNG terminals are not attractive as terrorist targets. Recently, the head of the University of Houston’s LNG policy research consortium observed:

“Speaking very broadly, from all the information we have, we believe LNG can be used safely in the United States. Generally, we don’t see LNG as a likely or credible terrorist target.”

In Canada, we see evidence of this in the safe operation, since the early 1970s, of Terases’s existing Tilbury LNG facility in Delta, BC, in the heart of Greater Vancouver, where perimeter security consists of a chain link fence.

Notwithstanding, during the environmental assessment process, an analysis of the likelihood or risk of such an event occurring, and the consequence of it, will be assessed.

#### 49. How will air cover protection be provided for tankers?

It is not anticipated that aircraft escort will be required for LNG carriers arriving at or departing from WestPac’s proposed terminal.

#### 50. Will the risk assessment and consequence analysis be made public?

Yes, the risk assessment and consequence analysis will be included in the environmental assessment.

### Environment and Environmental Effects

#### 51. Forestry and agriculture are sustainable activities. What impact will an 18-mile clear cut have on our forestry and agriculture as well as those living along the right-of-way?

In examining options for a power line route from the proposed power generation facility to the existing transmission line, one of the criteria has been, and will continue to be, minimizing the extent of disturbance caused by the power line and its right-of-way. In our initial project concept, WestPac proposed to co-locate the power line right-of-way in or along the existing pipeline right-of-way on Texada Island. The existing pipeline right-of-way has already been cleared, and its use for the power line right-of-way would minimize any additional impact of clearing.

However, the public meetings we hosted on Texada Island on September 10 and 11 have helped us understand a number of key community concerns regarding the proposed power line route. Based on this valuable community input, we have committed to further explore and assess alternative routing options for the power line. We will assess identified alternatives against project requirements and the needs of the community.

As we proceed with project planning and environmental assessment, we will carefully examine routing alternatives, design alternatives (e.g., submarine and underground cables), and potential impacts of both the power line and its right-of-way (whether a new or existing right-of-way is used) on residents and other stakeholders, and forestry and agriculture activities.

#### 52. How much water will the LNG and power plant require in a day when operating? Where will you get it? How might that impact Texada residents?

The proposed facilities will require water for fire safety and suppression, LNG re-vaporization, and domestic and potable uses. Water may also be required for cooling in the power generation facility, although air cooling also may be feasible. At this early stage of project planning, the volumes of water required have not yet been determined.

We currently anticipate that water requirements for fire safety and suppression and LNG re-vaporization could be supplied through sea water systems.

The need for cooling of the power generation facility, and the type of

cooling that will be feasible (i.e., air or water), will depend on how much firm dispatchable power may be required by BC Hydro to back up new intermittent power generation elsewhere. We will not know this until early 2009 at the earliest. However, power generation turbines of the size and type contemplated for the WestPac facility can be cooled with air and not water, so it is possible that no water will be required for cooling.

The facility will require domestic fresh water to supply drinking water, kitchen facilities, restrooms, and so on. We anticipate that this water would be obtained through the municipal water treatment facilities on Texada Island. We understand that the existing domestic water treatment systems on Texada Island may already be operating at their maximum capacity. WestPac will work with the operators of these facilities, and with Texada residents, to explore how WestPac can support the renewal and revitalization of the municipal water treatment facilities on Texada Island to better meet the needs of Texadans while also meeting the project needs.

### **53. What is the size or “footprint” of the project?**

The land area that WestPac has committed to lease is 104 acres.

### **54. What kind of emissions will the power plant have?**

Power generation facilities fueled by LNG typically emit water vapour, carbon dioxide, nitrogen oxides, and a very minute amount of particulate matter. Natural gas is the cleanest-burning hydrocarbon. The actual emissions will depend on the quality of the gas stream, design of the facility, including the type of equipment selected and its configuration and operating specifications. In any case, whatever the capacity, design, and configuration of the facility, WestPac will have to comply with all emissions standards and regulations that have been or will be established, including potential future controls on greenhouse gas emissions. Such standards and regulations are established by governments to protect air quality and human and environmental health, and will ensure that the facility will not have significant adverse environmental effects.

At this early stage of project planning, we do not yet know the specific power generation requirements of BC Hydro. Therefore, the facility has not yet been designed and actual emissions cannot yet be calculated.

### **55. How many tonnes of emissions will you be producing annually?**

Until we have clear direction from BC Hydro as to their requirements for firm dispatchable generation capacity (which will come in response to their 2007 call for renewable power generation tenders), we cannot provide a definitive answer to this question.

Nevertheless, by way of illustration, we can provide this example: given our understanding of technology which exists today, and assuming that we ran a 300 megawatt (MW) facility at all times (base load, cogeneration), and assuming that we operated with General Electric combined cycle turbines, carbon dioxide emissions from the facility would be in the range of 0.8 lbs of carbon dioxide per kilowatt-hour of generation or approximately 900,000 tonnes of carbon dioxide annually.

WestPac proposes to use heat from the power generation turbines to warm water for re-vapourizing LNG; therefore, we do not currently anticipate that any carbon dioxide would be generated by the vapourization process. This will avoid about 140,000 tonnes of carbon dioxide emissions annually, which would have been emitted if we burned natural gas to heat water to re-vapourize the proposed throughput of the facility (500 million cubic feet of natural gas per day). By re-using

waste heat for this purpose, and by using cold from the LNG to cool the turbines, WestPac anticipates that plant efficiencies of more than 70% can be achieved by the Texada Island facility. This is a significant improvement over the existing natural gas-fired Burrard Thermal power generation in the Greater Vancouver area, which operates at about 32% efficiency. The WestPac facility also would be much cleaner in terms of emissions.

It is also important to recognize that advances are being made every day in enhancing the efficiencies of natural gas power generation technologies and limiting emissions. WestPac does not expect to commence detailed engineering of the power generation aspects of this proposal, or the selection of equipment, until 2009 at the earliest. We anticipate that in response to the demonstrated need for reduced emissions from power generation, new choices for enhanced efficient generation may be developed by that time.

Please also see our answers to questions #34, 54, and 56.

### **56. What emissions will there be from carriers at berth at your facility?**

Emissions from the LNG carriers will depend on the type of engine with which the carriers are equipped. Some LNG carriers are fueled by LNG (or re-vapourized natural gas), others by diesel. Emissions from hydrocarbon combustion typically include water vapour, carbon dioxide, nitrogen oxides, sulphur dioxide, and particulate matter.

WestPac will not own or operate the LNG carriers, and will not contract directly with the carrier operators (this will be done by the owners or customers of the LNG); consequently, we cannot be sure at this time which vessels will be used, nor can we calculate what their emissions will be.

However, like many industries, the shipping industry is under pressure to reduce emissions from its equipment, and increasing regulation of ship-based emissions is expected. This means that the owners and operators of container vessels, limestone barges, car carriers, bulk carriers (wheat, coal, wood pellets), and other vessel types and configurations are actively pursuing emission reductions. Major advancements have been made to introduce clean-burning diesel into the global marine fleet (not just for LNG carriers); these will lead to reduced emissions from vessels fueled by diesel.

In addition, WestPac will explore the feasibility of providing “cold ironing”, which means providing shore-side electrical power to a ship at berth, allowing the vessel’s engines to be turned off. Cold ironing is a means to significantly reduce, and in some cases, completely eliminate vessel emissions.

### **57. Have you considered carbon sequestration?**

At this early stage of project planning, the facility has not yet been designed and actual carbon emissions cannot yet be calculated. We are aware that the Government of British Columbia has stipulated, in its Energy Plan, that new electricity generation facilities must have zero net greenhouse gas emissions, and we intend to meet this goal. We understand that the Government of British Columbia will provide further guidance with respect to greenhouse gas emission limits and offset requirements to achieve this goal, and we expect this guidance to be issued sometime in 2008 or 2009. As we proceed with project planning, the design of the facility will strive to minimize emissions, and we expect to be able to develop an acceptable offset program (for unavoidable emissions), once the government has made its expectations for implementation of the Energy Plan known. In developing an offset

program, WestPac will consider the feasibility of carbon sequestration in the future.

One potential advantage of our project is that we hope to enable the decommissioning of the existing inefficient and polluting Burrard Thermal power generation facility and replace it with a more efficient and more modern, environmentally responsible power generation facility.

#### **58. What NOx will be produced?**

Power generation facilities fueled by hydrocarbon combustion typically emit nitrogen oxides, among other things (see our answer to question #54 and #55 above). Natural gas is the cleanest-burning hydrocarbon. The average emissions rates in the United States from natural gas-fired generation are: 1135 lbs/MWh of carbon dioxide, 0.1 lbs/MWh of sulphur dioxide, and 1.7 lbs/MWh of nitrogen oxides. Compared to the average air emissions from coal-fired generation, natural gas produces half as much carbon dioxide, less than a third as much nitrogen oxides, and one percent as much sulphur oxides at the power plant (US EPA). The actual emissions will depend on the design of the facility, including the type of equipment selected and its configuration and operating specifications. In any case, whatever the capacity, design, and configuration of the facility, WestPac will have to comply with all emissions standards and regulations that have been or will be established, including potential future controls on greenhouse gas emissions. Such standards and regulations are established by governments to protect air quality and human and environmental health, and will ensure that the facility will not have significant adverse environmental effects.

At this early stage of project planning, we do not yet know the specific power generation requirements of BC Hydro. Therefore, the facility has not yet been designed and actual emissions cannot yet be calculated.

#### **59. Will there be any sulphur emissions?**

Hydrocarbon combustion typically emits sulphur dioxide, among other things (see our answer to question #54, 55 and 59 above). Natural gas is the cleanest-burning hydrocarbon. The average emissions rates in the United States from natural gas-fired generation are: 1135 lbs/MWh of carbon dioxide, 0.1 lbs/MWh of sulphur dioxide, and 1.7 lbs/MWh of nitrogen oxides. Compared to the average air emissions from coal-fired generation, natural gas produces half as much carbon dioxide, less than a third as much nitrogen oxides, and one percent as much sulphur oxides at the power plant (US EPA). The actual emissions will depend on the design of the facility, including the type of equipment selected and its configuration and operating specifications. In any case, whatever the capacity, design, and configuration of the facility, WestPac will have to comply with all emissions standards and regulations that have been or will be established, including potential future controls on greenhouse gas emissions. Such standards and regulations are established by governments to protect air quality and human and environmental health, and will ensure that the facility will not have significant adverse environmental effects.

At this early stage of project planning, we do not yet know the specific power generation requirements of BC Hydro. Therefore, the facility has not yet been designed and actual emissions cannot yet be calculated.

#### **60. Will you be using fresh water or sea water for cooling operations at the plant?**

The design of the plant has not been finalized. We will be considering fresh water, sea water, and air-cooled designs as possible design alternatives.

#### **61. At the recent meetings of the Asia-Pacific Economic Cooperation (APEC) held in Sydney, Australia, world leaders finally committed for the first time to the global objective of stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human interference with the climate system. How does your project accomplish this objective?**

Natural gas is an important – and environmentally responsible – bridge to the future when all of our electricity needs may be met by renewable energy sources. Our project can play a critical role in meeting our near-term energy needs with a fuel that creates fewer greenhouse gas emissions than other current hydrocarbon-based technologies, while also enabling the development of even cleaner alternative technologies for the future.

Natural gas-fired generation technology is viewed throughout the world as a means to build towards a greener global future. As the respected American environmentalist Robert F. Kennedy Jr. has stated:

“Natural gas is an important “bridge” fuel that can provide cleaner energy while our nation transitions to renewables like solar, wind, ethanol and hydrogen power. . . LNG is certainly not a silver bullet, but as a transition fuel, it can pave the way for greener sources of energy while replacing oil, nuclear and coal in the short term.”

Natural gas is a clean alternative for domestic uses, such as cooking and heating, as well as for industrial uses, such as power generation. In addition, LNG or natural gas can be used as a cleaner vehicle fuel.

WestPac supports and agrees with the September 9, 2007 APEC Leaders’ Declaration on Climate Change. Achieving the goal of stabilizing and ultimately reducing greenhouse gas emissions and atmospheric concentrations will require, among other things, the replacement of hydrocarbon-fueled technologies with renewable energy sources. We do not, today, have the renewable technologies to meet all of our current or future energy needs. Therefore, society must look at the cleanest available alternatives, while technological advances continue to be made. Natural gas is the cleanest-burning hydrocarbon fuel, and can make a significant contribution to reducing greenhouse gas emissions by replacing high-emission coal, oil, diesel, and gasoline technologies.

Moreover, natural gas can accelerate the development of more renewable energy sources by providing the necessary firming of these intermittent sources (see our answer to question #34 for an explanation of firming).

The APEC leaders made some very important statements of policy in their joint declaration of September 9, 2007 that are relevant to the current debate in British Columbia and the proposed project on Texada Island.

First, the APEC leaders stated:

“Fossil fuels will continue to play a major role in our regional and global energy needs. Co-operation, including joint research, development, deployment and transfer of low and zero emission technologies for their cleaner use, particularly coal, will be essential. It is also important to enhance energy efficiency and diversify energy sources and supplies, including renewable energy. For those economies which choose to do so, the use of nuclear energy, in a manner ensuring nuclear safety, security and non-proliferation in particular to its safeguards, can also contribute.”

The APEC leaders also stated:

“Enhanced uptake of low carbon energy uses will require coherent policy and regulatory settings. We therefore: . . . Welcome work underway in international partnerships involving a wide range of economies, including on methane, hydrogen, renewable energies and carbon sequestration, and the Asia Pacific Partnership on Clean Development and Climate, which are advancing key new clean technologies.”

WestPac can fulfill a key role in both of these stated declarations, by providing a cleaner alternative to current hydrocarbon-based technologies and by enabling the development of intermittent renewable alternatives.

## 62. How does having a bunch of carriers powered by diesel make things greener?

At this early stage of project planning, we don't yet know what type of LNG carriers may call on the proposed terminal or whether they will be powered by diesel, biodiesel, hydrogen, LNG, or other fuel. However, the carriers would have to comply with existing and future regulations established to protect environmental and human health.

Like many industries, the shipping industry is under pressure to reduce emissions from its equipment, and increasing regulation of ship-based emissions is expected. This means that the ship owners and operators are actively pursuing emission reductions. For example, major advancements have been made to introduce clean-burning diesel into the global marine fleet (not just for LNG carriers); these will lead to reduced emissions from vessels fueled by diesel.

In addition, WestPac will explore the feasibility of providing “cold ironing”, which means providing shore-side electrical power to a ship at berth, allowing the vessel's engines to be turned off. Cold ironing is a means to significantly reduce, and in some cases, completely eliminate vessel emissions.

## 63. What environmental studies have you done so far?

The environmental field studies that have so far been completed include a breeding bird survey, migratory bird survey, and rare plant survey. Each of these surveys are seasonally dependent – that is, they can only be successfully carried out at certain times of year. Although the need for and scope of environmental studies will be determined by the regulators, we anticipated – based on professional experience – that these studies would be required and so we carried them out in the spring of 2007, so as not to miss the seasonal window.

Once we initiate the environmental assessment process, by filing a Project Description with provincial and federal regulators, the need for and scope of additional environmental studies will be determined.

Based on the professional experience of our team and previous projects undertaken elsewhere, we anticipate that the environmental studies required for our project will include, but may not be limited to:

- air quality, including the effect of greenhouse gas emissions;
- noise;
- wildlife, including species of special management status;
- avifauna, including terrestrial, waterfowl, and seabirds, and species of special management status;
- vegetation, including rare plants and plant communities;
- freshwater and marine water quality;
- fish and fish habitat (both freshwater and marine);
- marine mammals; and
- benthic (i.e., sea bottom) organisms and habitat.

In addition to these environmental studies, we anticipate that various cultural, social, and economic studies will be required.

## 64. Why not spend \$2 billion on cleaner outcomes for power?

WestPac's business – as determined by our shareholders and directors – is focused on natural gas, specifically natural gas importation and natural gas-fired power generation. We believe that there is a role for natural gas in today's economy and society, as an important – and environmentally responsible – bridge to the future when all of our electricity needs may be met by renewable energy sources. Our project can help to meet our near-term energy needs with a fuel that creates fewer greenhouse gas emissions than other current hydrocarbon-based technologies, while also enabling the development of even cleaner alternative technologies for the future.

There are many other individuals and companies that are investing in renewable power projects in British Columbia; by providing firming power (see our answer to question #34 for an explanation of firming), our project can help these projects to be developed, allowing these investments to create cleaner outcomes, as well as social and economic benefits to British Columbians.

The Government of British Columbia is also exploring and promoting cleaner power through its Energy Plan. The specific investments to be made by the Government will be outlined in coming months.

As investments are made by WestPac and others in cleaner power outcomes, an issue that we have raised is how the current provincial electricity distribution system and existing technologies will be managed to enable new intermittent power projects to operate. This question, however, can only be answered by the Government of British Columbia.

## 65. Why don't you pollute somewhere else?

The facilities and the LNG carriers calling on the terminal will have to comply with all environmental standards and regulations that have been or will be established, including potential future controls on greenhouse gas and other air emissions. Such standards and regulations are established by governments to protect air quality and human and environmental health, and will ensure that the facility will not have significant adverse environmental effects.

WestPac is committed to employ sound environmental assessment and management practices to identify and minimize any adverse environmental effects of its activities. In its operations, WestPac will strive to make efficient use of energy and resources.

We believe that there is a role for natural gas in today's economy and society, as an important – and environmentally responsible – bridge to the future when all of our energy needs may be met by renewable sources. Our project can help to meet our near-term energy needs with a fuel that creates fewer greenhouse gas emissions than other current hydrocarbon-based technologies, while also enabling the development of even cleaner alternative technologies for the future.

Our project offers the additional advantages of new low-emission power generation which can enable the replacement of less efficient, high-emission facilities (i.e., the existing Burrard Thermal power generation station) and technologies, while also avoiding extensive new infrastructure and land disturbance.

On balance, we believe that natural gas generally, and our project in particular, is an environmentally responsible choice in today's society and economy. In every aspect of our lives, from shelter, food production, transportation, employment, recreation, and so on, we consume energy

both directly for heat and light and indirectly for the manufacture of goods and provision of services. Therefore, we must consider where that energy comes from and the impact of its production and use.

Some energy sources have a greater impact on the environment than others. For example, coal and oil sands extraction cause extensive land disturbance, have high water demands, and create effluents and tailings. Hydro developments disturb fish habitat, block fish passage, and, in the case of large-scale developments, cause extensive land disturbance, displacement, and release of gases and toxic compounds from decaying vegetation. Oil and coal-fired power generation also emit particulates, greenhouse gases, and other emissions affecting air quality. In comparison to fossil fuels, natural gas is clean-burning, and does not require extensive land disturbance.

We need to find and develop the cleanest, greenest ways to support our economy. Over time, we also need to change our way of living to reduce our environmental footprint.

Natural gas helps us do that. Natural gas, if accompanied by appropriate public and environmental safety precautions, can be a “bridge” fuel while other better long-term solutions are developed. As a transitional fuel in an energy-based economy, we believe that we can enable a greener future.

Please see our answers to questions #22 through #25 for an explanation of why Texada Island was selected as the location of the project.

#### **66. Are you LEED-certified?**

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is a benchmark for the design, construction, and operation of high performance green buildings. LEED addresses five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. To obtain LEED certification, a project (i.e., a building) must meet certain performance criteria in these areas.

LEED Professional Accreditation distinguishes building professionals with the knowledge and skills to successfully steward the integrated design and LEED certification process.

Although developed in the US, LEED is often applied in other countries, including Canada.

At this time, our staff does not include any LEED accredited professionals. We have not yet designed our facilities. However, in doing so, we will consider appropriate site development, efficient resource and energy use, environmental quality, and materials selection. We also will consider the applicability of LEED and other existing and future green building standards.

#### **67. Do you like our island? Why do you want to ruin it?**

We believe that by responsibly planning and designing our facilities to mitigate impacts and enhance benefits, and by listening to and addressing the concerns of the community, we will be able to demonstrate that our project will be safe, environmentally responsible, and deliver benefits to the people of Texada and British Columbia. Through the regulatory review processes we must follow, the potential adverse effects of the project will be identified, and the project design modified to avoid, eliminate, or reduce adverse effects to an acceptable level.

#### **68. Will we still be able to fish (at Kiddie (Coho) Point)?**

There should be no reason why people cannot fish in the area when there are no ships at dock. We contemplate ships arriving at the rate of

one every 7 to 10 days. The exact location and configuration of the jetty and other facilities at Kiddie Point have not yet been determined. Nor have we yet compiled information regarding current use of the land and waters around Kiddie Point. This information will be gathered during the environmental assessment, and potential interactions between the facilities and these activities will be identified and assessed. The assessment would consider measures to mitigate any adverse effects.

The physical presence of the jetty will preclude fishing activities where it is located and may alter patterns of vessel movement in the area. As well, exclusion or safety zones may be established around the jetty, particularly when there is an LNG carrier berthing or berthed (please see our answer to question #12 for a discussion of exclusion and safety zones).

#### **69. How flexible is the design; if new technology became available, would WestPac consider it?**

The facilities are not yet designed; it will be some time before we get the necessary clarification from BC Hydro regarding their power generation requirements and from the Government of British Columbia regarding greenhouse gas regulations and offset requirements. It will be some time before the facilities are designed, and emerging technologies will be considered at the time design is underway.

#### **70. How do you get away with doing stuff to the environment that shouldn't be done?**

We believe that by responsibly planning and designing our facilities to mitigate impacts and enhance benefits, and by listening to and addressing the concerns of the community, we will be able to demonstrate that our project will be safe, environmentally responsible, and deliver benefits to the people of Texada and British Columbia. Through the regulatory review processes we must follow, the potential adverse effects of the project will be identified, and the project design modified to avoid, eliminate, or reduce adverse effects to an acceptable level.

The facilities and the LNG carriers calling on the terminal will have to comply with all environmental standards and regulations that have been or will be established, including potential future controls on greenhouse gas and other air emissions. Such standards and regulations are established by governments to protect air quality and human and environmental health, and will ensure that the facility will not have significant adverse environmental effects.

### **BC and Community Benefits**

#### **71. How will LNG imports contribute to energy self-sufficiency?**

Please see our answer to question #8.

#### **72. What kind of real jobs will be created? How many Texada residents will get these jobs?**

Once operational, we anticipate that the project would create 80 direct full-time jobs on Texada Island. We expect that the types of jobs created could include:

- engineers;
- maintenance staff;
- security staff;
- cafeteria staff and management;
- health facility staff;

- emergency response personnel;
- information systems and technology managers;
- landscapers;
- painters;
- instrumentation technologists;
- electrical technicians;
- plumbers;
- line handlers and persons to assist with the berthing of LNG carriers and tugs;
- staff required to support the LNG carriers while at the berth;
- tugboat operators and crews;
- accounting staff and a controller;
- executive assistants and support staff; and
- human resources and training personnel.

All of these jobs are real jobs that will be located on Texada Island and will be open to residents of Texada Island.

In addition to these operational jobs, real jobs will also be created during construction. The jobs are likely to include: welders, pipefitters, electricians, insulators, painters, heavy duty equipment operators, instrumentation technologists, marine engineers, valve mechanics, and all of the types of trades ordinarily associated with the construction of a large project. To support the construction labour force, we likely will require camp staff, cooks, stewards, maintenance personnel, health service staff, and so on. Again, these jobs would be open to residents of Texada Island.

Also, additional indirect and induced employment will be created or maintained locally and regionally by the procurement of goods and services and also by the spending of individuals employed by WestPac.

It may be helpful to examine the experience of other LNG facilities constructed elsewhere. However, it is important to note that no two LNG import facilities are identical. They differ with respect to facility size, local employment base, environmental setting, local tax rate, and so on. So while we can offer comparative data, we cannot commit that the WestPac proposal will result in identical outcomes.

Developers of the Canaport LNG project, located in Saint John, New Brunswick, predict that 700 workers would be employed at the peak of the facility's construction. Once operational, the Canaport LNG import terminal would employ 40 workers and generate \$18 million (Canadian) in taxes and fees.

The Freeport LNG project is being constructed at Quintana Island, Texas. According to the project's website, an average of 500 workers would be employed during the facility's construction and, once operational, the facility would directly employ 40 people. This total does not include security and tug personnel.

The Weaver's Cove project in Fall River, Massachusetts, would support 350 jobs during the construction stage and, once operational, would directly employ 30 to 35 workers. Project developers predict that the Weaver's Cove facility would pay \$3 million in real estate taxes, and would purchase \$4 million in local goods and services with an additional \$3 million in marine services to support its operations.

University researchers at the Tulane Energy Institute analyzed the aggregate impacts of nine proposed LNG projects in Louisiana. The study estimated that the projects would directly support 9,755 person-years of employment over six years. Construction activity associated with the

facilities was estimated to directly and indirectly support 23,880 person-years of employment over six years. Once operational, each facility was estimated to employ directly and indirectly 60 workers.

The Department of Resource Economics and Policy at the Margaret Chase Smith Policy Center at the University of Maine prepared an analysis of the economic and fiscal impacts of the proposed Downeast LNG facility. The report estimates that Downeast's activities would support 1,053 jobs throughout the State of Maine in each of three years of anticipated construction and would generate employment income of \$15.3 million per year. Once operational, the facility would support an estimated 253 jobs in Maine over the lifecycle of the LNG terminal, anticipated to be 30 years or longer.

WestPac's project includes a power generation facility, and so the employment created by WestPac is expected to be greater than these other LNG facilities which do not include power generation facilities.

### 73. What benefits will Texada residents get from the project?

Once operational, the project will likely result in 80 direct full-time jobs on Texada Island with many other indirect jobs created or maintained (see our answer to question #72 for more information about the numbers and kinds of jobs created). As well, there will be several hundred construction jobs. Texada residents would be free to apply for these jobs. Local employment will result in the generation of real income and the payment of real taxes. The manner in which the residents of Texada Island choose to use the tax dollars that will result from the facility will, in part, be within the control of the residents of Texada Island and the Regional District of Powell River.

We also understand that currently the residents of Texada Island on a per capita basis pay significantly higher taxes on an individual percentage than is the case in other areas given the fact that there is a smaller industrial tax base. We have been told that the ratio of personal versus corporate contribution to the regional tax base is approximately 70% personal to 30% corporate. The proposed project will also allow this ratio to be brought into better balance (i.e., more favourable for individuals).

In addition to the benefit of having an expanded tax base on Texada Island, we also believe that the infrastructure that will be developed for the proposed facility can bolster the infrastructure of Texada Island.

For example, the project will require potable freshwater. We anticipate that this water would be obtained through the municipal water treatment facilities on Texada Island. We understand that the existing domestic water treatment systems on Texada Island may already be operating at their maximum capacity. WestPac will work with the operators of these facilities, and with Texada residents, to explore how WestPac can support the renewal and revitalization of the municipal water treatment facilities on Texada Island to better meet the needs of Texadans while also meeting the project needs.

In addition, we understand that the limited availability of medical care on Texada Island is a current concern to residents. The proposed facility will almost certainly have a health centre and staff that could be used to support the health care needs of residents of Texada Island. Also, we will have emergency services and personnel trained in emergency response, including fire suppression. These resources can bolster the existing volunteer fire departments on Texada Island, potentially improving service to Texada residents.

We are very early in our planning process and one of our objectives in commencing community consultation at this early stage is to identify

what needs exist on Texada Island that could be supported by our proposal and what opportunities can be identified that would allow the proposed facility to make a meaningful positive contribution to the residents of Texada Island.

**74. What other industries might be attracted by the power and LNG? What business opportunities will be created for Texada residents?**

The project, during both construction and operation, will require goods and services, some of which may be supplied locally by existing or new businesses. In addition, the direct employment created by WestPac's project will generate additional indirect employment and economic opportunities locally, as employees spend wages. As we move forward with project planning, we will provide additional information regarding the specific types of jobs and the kinds of goods and services that will be required, so that local communities can understand and pursue these new opportunities. Indeed, we are already tracking expressions of interest in employment and procurement from local and regional businesses and individuals.

**75. Have you thought about using the work camp facility after completion of construction for a health care or other facility for the community?**

This was a suggestion that was made to us during our presentation to the Texada Island Chamber of Commerce. We think that this is an excellent idea and we have drawn it to the attention of our design team. As our proposal moves forward, we will certainly give careful attention to whether we can create legacy projects that will benefit the residents of Texada Island after the completion of construction.

various review agencies to determine if the proposed project is one in respect of which they have a responsibility to conduct an environmental assessment. The regulatory agencies who are responsible for conducting an environmental assessment will then determine the type of review that is required and the scope of the assessment. These determinations will take public comment into account. The regulators will issue Terms of Reference for the environmental assessment. The proponent must then prepare an environmental assessment that satisfies the Terms of Reference. The environmental assessment will then be subject to a technical review by the regulators. The public also will have an opportunity to review and comment on the environmental assessment.

The EAO will prepare a report, taking into consideration the input of the public and the results of the technical review, and make recommendations regarding the project. The EAO's report and recommendations will be submitted to the Minister of Environment and the Minister of Energy, who will then decide whether or not to issue an Environmental Assessment Certificate for the project. They may also decide to impose conditions – such as required mitigation measures and follow-up programs – on the project.

At the same time, the Canadian Environmental Assessment Agency will prepare a Comprehensive Study Report and make this report available for public comment prior to submission to the federal Minister of Environment for a decision. The federal process may also result in specific conditions imposed on the project.

Only after the province issues an Environmental Assessment Certificate and federal regulatory authorities complete their environmental assessment process can all of the necessary permits and authorizations be obtained. Some permitting processes include additional public participation.

## **Environmental Assessment and Regulatory Process**

**76. What is the “process” that will be followed for planning, environmental review and approvals? Which regulatory agencies actually approve a project like this?**

The project would require various permits and authorizations from numerous provincial and federal departments and agencies, including, but not necessarily limited to, Fisheries and Oceans Canada, Transport Canada, the Ministry of Environment, the Ministry of Energy, the Ministry of Tourism, Sport and the Arts (Archaeology Branch), and the British Columbia Utilities Commission.

The project also will require environmental assessment by both the Province of British Columbia and Canada. It is likely that a single joint provincial-federal environmental assessment process would be coordinated by the British Columbia Environmental Assessment Office (EAO), pursuant to the cooperation agreement between British Columbia and Canada. The Canadian Environmental Assessment Agency would work with the EAO to coordinate the participation of the federal regulatory authorities, whom we expect to conduct a comprehensive study of the project. The EAO would establish a technical review committee comprising representatives of the many regulatory authorities with jurisdiction over the project, and including the Regional District and potentially affected First Nations. There is a clear and well-defined process that we must follow with many mandated opportunities for public participation.

The environmental assessment process formally begins when a proponent submits a “Project Description” to the regulators. This document must describe the proposed project in sufficient detail to allow the

**77. When did the Environmental Assessment process begin? How much work have you done already?**

The environmental assessment process in respect of our proposal has not yet begun. The environmental assessment process will begin when we submit a Project Description to the regulatory authorities; we do not anticipate doing this for some time. Before we initiate the environmental assessment process, we intend to continue to consult stakeholders, identify issues and concerns, and begin to address any issues and concerns in the design of the project. We must also await input from BC Hydro in particular regarding their firm power generation requirements and clarification from the Government of British Columbia regarding the implementation of the Energy Plan.

To date, we have identified potential sites and routes for the proposed facilities, assessed the feasibility of the proposal (including some on-site work to evaluate technical issues, such as constructability), undertaken seasonal bird and rare plant surveys to compile baseline data, and initiated consultation with area residents and other stakeholders.

**78. You have talked about “process” for an environmental assessment. Who has the final decision? We have had similar processes in the past regarding forestry and the natural gas pipeline and we don't trust government.**

Please see our answer to question #76 for a description of the environmental assessment process. Following a comprehensive environmental assessment process, the provincial Ministers of Environment and Energy will decide whether to issue an Environmental Assessment Certificate for the project, and the federal regulatory authorities (likely Fisheries

and Oceans Canada and Transport Canada) will decide whether to issue permits, depending on whether the project is considered likely or not to cause significant adverse environmental effects, a decision that is made by the federal Minister of Environment. After the environmental assessment process, additional permitting decisions must be made by provincial regulators (such as the Ministry of Environment and the British Columbia Utilities Commission).

It will be up to these regulatory authorities mandated to review proposals such as ours to consider public input while weighing the potential benefits to be realized against the potential impacts on environment and society, taking into consideration measures that would mitigate any significant adverse effects. The regulatory process (including environmental assessment and permitting) is designed to ensure that the interests of the public are understood and considered in decision-making. The regulatory authorities are charged with making decisions in the public interest. In doing so, they will consider local views and the broader public interest.

We cannot comment on the outcome of regulatory processes related to other projects in the past. However, we are committed to listen to and address the concerns of the community and to respect both the process and its outcome.

## **Public Participation and Input**

### **79. If 70% of residents don't want the project and 30% do, what will happen?**

The decision to allow the project to proceed will be made by the regulators that have jurisdictional authority over the project. Public input will be an important factor considered by the regulators who are responsible for making decisions on whether our project can proceed. The environmental assessment process provides many opportunities for public input regarding the appropriate level of review, the scope of the environmental assessment, the adequacy of the environmental assessment, and the significance of the potential benefits and impacts. These opportunities for public input will not be limited to the residents of Texada Island, but will also be open to any member of the public who has an interest in or may be affected by the project.

In addition to considering all public input, the regulators will weigh the need for and purpose of the project, and the potential benefits to be realized against the potential impacts on environment and society, taking into consideration measures that would mitigate any significant adverse effects.

The regulatory process (including environmental assessment and permitting) is designed to ensure that the interests of the public are understood and considered in decision-making. The regulatory authorities are charged with making decisions in the public interest. In doing so, they will consider local views and the broader public interest.

We cannot presuppose the outcome of the process, but we are committed to respect both the process and its outcome. We believe that our project offers important benefits locally and to the province of British Columbia. We are also committed to understand and address the concerns of local residents and, to this end, we have begun a dialogue with the community. We will provide full and factual information about our project to enable the public to participate meaningfully in the review of our project, and we encourage the public to participate in the environmental assessment process through the many opportunities available.

### **80. If residents oppose the project, will you withdraw it?**

We have heard feedback from people who are supportive of our proposal, people who want more information before they make a decision, and people who are not supportive of our proposal. At this very early stage, there is still much information to be developed and shared and many questions to answer before the benefits and impacts of our proposal can be fully understood and debated by all parties. We will support meaningful discussion by providing full and factual information, as it is developed, and by encouraging the public to participate through the many opportunities available. We believe that by designing our facilities to mitigate impacts and enhance benefits, and by listening to and addressing the concerns of the community, we will be able to demonstrate that our project will be safe, environmentally responsible, and deliver benefits to the people of Texada and British Columbia. We will work to earn the trust and confidence of the community in this regard. Nevertheless, as we continue through the environmental assessment process, we expect that there will be people who will continue to support the project and those who will not.

It will be up to the regulatory authorities mandated to review proposals such as ours to consider public input while weighing the potential benefits to be realized against the potential impacts on environment and society, taking into consideration measures that would mitigate any significant adverse effects. The regulatory process (including environmental assessment and permitting) is designed to ensure that the interests of the public are understood and considered in decision-making. The regulatory authorities are charged with making decisions in the public interest. In doing so, they will consider local views and the broader public interest.

We cannot presuppose the outcome of the process, but we are committed to respect both the process and its outcome.

### **81. Will you agree to hold a referendum on the project and abide by the results if the community doesn't want the project?**

WestPac – and, we expect, regulatory authorities – will consider the results of any referendum regarding our project as one aspect of public input in the broader regulatory review of our proposal.

We recognize that there are stakeholders who have an interest in or may be affected by our project who are not part of the community of Texada Island residents. These stakeholders include, but may not be limited to, residents of Powell River and the region; taxpayers of British Columbia who support the delivery of provincial services on Texada Island and in the region; taxpayers of Canada who support the delivery of federal services on Texada Island and in the region; Terasen Gas, the operator of the Vancouver Island Gas Pipeline; and others. Their voices must be heard as well. That is why we are entering into a review process that is broad, well-defined, comprehensive, and which offers the opportunity for public participation to all. The review process is designed to ensure that the interests of the public are understood and considered in decision-making, and regulatory authorities are charged with making decisions in the public interest. In doing so, they will consider local views and the broader public interest.

We cannot presuppose the outcome of the regulatory review process, but we are committed to respect both the process and its outcome.

### **82. What promises or commitments have been made to First Nations?**

We have committed to consult First Nations within whose claimed traditional territory our project is located. We have made no other promises or commitments to First Nations.

### **83. How and where do Texada residents have a say in this project?**

The environment assessment process provides many opportunities for public input regarding the appropriate level of review, the scope of the environmental assessment, the adequacy of the environmental assessment, and the significance of the potential benefits and impacts. These opportunities for public input will not be limited to the residents of Texada Island, but will also be open to any member of the public who has an interest in or may be affected by the project.

In addition, it is our understanding that the Regional District of Powell River will be invited to participate in the technical review committee that would be established by the British Columbia Environmental Assessment Office once the environmental assessment is initiated. Texadans and other regional residents will be able to bring issues forward to their elected representative for consideration in this process.

Public input will be an important factor considered by the regulators who are responsible for making decisions on whether our project can proceed.

We also encourage the public to communicate directly with WestPac. We intend to continue community consultation and dialogue, providing information about the project as it is developed and responding to questions as they are raised. We will document the input we receive and our responses to questions; we will share our responses publicly, as we are doing with this publication. Our environmental assessment documents will include a description of public input and will explain how public input has been considered in project design.

Island in the spring of 2007. WestPac engaged the services of Jacques Whitford, an environmental consulting firm, to carry out these studies. The work was performed by biologists employed by Jacques Whitford. The work was paid for by WestPac.

Prior to the bird surveys being conducted, areas of interest were identified, including areas along the existing Terasen pipeline right-of-way. WestPac engaged a company called Scott Land to work with us in identifying the landowners of areas of interest and to obtain permission for the biologists to enter onto these lands for the purpose of carrying out the studies. Scott Land was instructed to advise landowners that Jacques Whitford had been retained on behalf of Scott Land, to assist in their client's assessment of the suitability of Texada Island for a potential project location. Landowners were to be advised that Jacques Whitford would be conducting preliminary bird surveys on Texada Island to ascertain the presence and distribution of important bird species, and that this work was part of a feasibility assessment, including a preliminary characterization of the environmental setting of the area. A technical description of the work to be conducted by Jacques Whitford was provided.

When we hosted the public meetings on Texada Island on September 10 and 11, we became aware of at least two landowners who live along the pipeline right-of-way who felt that they had been misled into believing that Terasen was conducting the research. WestPac apologizes for any such misunderstanding. We had no intent to mislead residents of Texada Island concerning our activities.

## **General Questions:**

### **84. Who owns WestPac? What percentage is Canadian owned? Is it a publicly listed company?**

WestPac is a private company based in Calgary. The company is financed by a group of private investors. All Board members, investors, and management are Canadians. WestPac is not a publicly listed company and its shares do not trade on any exchange or "over the counter" market.

### **85. Are you the same company that tried to locate a project at McNabb Creek in 1998?**

No. WestPac was not involved in a project at McNabb Creek.

### **86. Has the land been acquired for the plant? What are the conditions of your lease?**

We have entered into a memorandum of understanding to negotiate a lease with the land owner. This is a private transaction and the conditions of the agreement are confidential.

### **87. Are your Board and shareholders aware of the possible negative impact of the project and the lack of support for it on Texada?**

Our Board was advised of the feedback received – both supportive and not – at the public meetings held on Texada Island on September 10 and 11. We have also circulated to them packages containing much of the media coverage generated by the proposal.

### **88. Who did this [the bird] study? Several residents were approached for approval to conduct work but they were of the belief that the study work was being done for Terasen. Were they working for you? Who paid for the study?**

A migratory bird and breeding bird survey was conducted on Texada

### **89. Isn't imported self-sufficiency an oxymoron?**

Please see our answer to question #8.

### **90. We believe the announcement of your project with its power lines and pollution will negatively impact our property values. How do you feel about that?**

In the time period since our September meetings on Texada Island, we have had discussions with real estate agents who have business in the Powell River region and on Texada Island. We understand that even prior to our announcement, real estate sales in the region were slowing and the market was slowly turning to a "buyer's market".

An academic journal article written by Clark and Nieves (1994) examined the effects of eight types of large industrial facilities, including LNG storage sites and terminal installations, on local housing values and wages. The empirical results presented by Clark and Nieves found that, other things being equal, the presence of an LNG facility results in higher housing values and wages in regions where they are located.

Nevertheless, we understand that the effect of the project on property values is a concern, and we will assess these effects and the need for and potential scope of mitigation through the environmental assessment process.

In addition, as we proceed with project planning, WestPac will examine location and design alternatives to minimize potential adverse effects of the proposed facilities. For example, we will consider the feasibility of submarine and underground power lines and will assess alternative overhead power line routings that may avoid residential properties.

We also have committed to ongoing public consultation through which we will identify and address community concerns.

**91. What is the lifespan of the project? What happens when you are finished operating in 50 or 60 years?**

We anticipate the lifespan of the project is between 50 and 60 years. The environmental assessment of the project must consider all lifecycle stages of the project, including decommissioning. We anticipate that we will be required to prepare a decommissioning plan that addresses the removal of facilities and the rehabilitation of land to an appropriate end use. Decommissioning and site restoration is also a contractual requirement for WestPac's lease of the lands for the proposed site. In any case, WestPac would have to comply with all regulations and standards in effect at the time any decommissioning is carried out.

**92. Can WestPac manage the project financing itself or will you need a partner?**

A project such as this can only be financed once approvals and permits have been issued, supply obtained, and a market secured. We anticipate that when these objectives have been achieved, the construction of the proposed project would be financed by a combination of both debt and equity. We anticipate that there would be multiple banks involved in financing the debt aspect and we anticipate additional shareholders will be required to complete the equity financing.

**93. Why have I had no response to my inquiries for more information on the project?**

We have become aware that there have been some technical problems with the feedback portal on our website. We are working to fix these problems as soon as we can. As a result of these problems, it is possible we did not receive calls or emails. We apologize for any inconvenience or concern this may have caused. We take the concerns of the public very seriously, and we are committed to respond to questions and concerns as quickly and fully as we can. We have prepared this publication to provide answers to the questions we have received so far, both at the public meetings we held on Texada Island in September and through phone calls and emails. If we have missed a question, please bring this to our attention, and we will respond as quickly and fully as we can.

We also have a large amount of background and project information on our website [www.westpaclng.com](http://www.westpaclng.com), and we encourage you to review it. We encourage questions directly to us by phone, email, or through our website, and we hope to be back in the community in the months ahead to continue the conversation.

**94. Does the Mt. Hayes LNG storage announcement impact WestPac's plans? Why put the storage facility at the wrong end of the bottleneck?**

No, Terasen's Mt. Hayes project does not affect WestPac's plans. The Mt. Hayes project is designed as a small regasification and LNG storage facility similar to one that Terasen has been operating safely on Tilbury Island in Delta, in the heart of Greater Vancouver, since the early 1970s. Both the Mt. Hayes and Tilbury facilities are intended to provide short-term supply of natural gas during times of peak demand. These facilities manufacture LNG during the summer, and regasify it over a very short period (i.e., a few days) when demand for natural gas is highest, typically in the winter. Once the LNG in these storage facilities is used up, they can only be refilled when demand drops off below the pipeline's full capacity. These facilities are called "peaking" facilities. There are currently more than 100 LNG "peaking" facilities operating in North America. In contrast, our facility would not only provide ongoing base load (for both natural gas and electricity) but would also provide

seasonal supply and can be refilled several times over the winter as the demand for gas dictates.

**95. Why not expand the Delta [Tilbury] LNG facility?**

Terasen's LNG manufacturing and storage facility on Tilbury Island in Delta is intended to provide short-term supply of natural gas during times of peak demand. This facility manufactures LNG during the summer, and re-gasifies it over a very short period (i.e., a few days) when demand for natural gas is highest, typically in the winter. This facility is not designed for the importation of LNG, delivery of base load natural gas, nor for the generation of power. In addition, the significant benefits of optimizing the capacity and use of existing energy infrastructure could not be realized by a facility located in Delta.

**96. Do you like your job? Do you like ruining people's lives?**

We enjoy our jobs because we believe that our project offers important benefits locally and to the province of British Columbia. We believe that by designing our facilities to mitigate impacts and enhance benefits, and by listening to and addressing the concerns of the community, we will be able to demonstrate that our project will be safe, environmentally responsible, and deliver benefits to the people of Texada and British Columbia. We will work to earn the trust and confidence of the community in this regard. Nevertheless, as we continue through the environmental assessment process, we expect that there will be people who will continue to support the project and those who will not. We will continue to work cooperatively and in good faith with neighbours, governments, First Nations, regulators, and other stakeholders to address issues of mutual interest. In all of our dealings with stakeholders, WestPac will be guided by the principles of candour, fairness, and respect, and we will give thoughtful regard both to our stakeholders and to the regulatory processes which we must follow.

**97. What other meetings have been held with local people? Why were these meetings secret?**

WestPac has not held any secret meetings on Texada Island. In advance of the public meetings held on September 10 and 11, WestPac met with a small number of local business people and Texada residents to identify issues that might affect the feasibility of locating a project on Texada Island. WestPac also met with representatives of the Powell River Regional District, Powell River Regional Economic Development Society, the City of Powell River, the Powell River Chamber of Commerce, and the Sliammon First Nation, again to identify issues that might affect the feasibility of the project.

**98. If you've been working on this project since 2000, why did you wait so long before telling us?**

WestPac initially proposed to locate a LNG import and transshipment facility at Ridley Island, near Prince Rupert in 2004. That proposal involved the transshipment of LNG from large ocean-going carriers to barges or small LNG carriers for transportation from the primary receipt point at Ridley Island to one or more secondary receipt terminals along the west coast. WestPac initiated the environmental assessment process for the Ridley Island facility in June 2006. Since that time, the price of many commodities, including nickel in particular, has risen significantly. Nickel is a critical component of the steel used in LNG carriers, pipes, tanks, and other equipment. Because our design concept required not only the primary receipt terminal tankage and equipment but also barges and at least one other secondary terminal and tankage, the economics of the project were particularly adversely affected by the rise

in nickel prices. Therefore, we redesigned our project to involve just a single primary receipt terminal. Having done that, we had to explore other possible locations for the terminal from where we could gain access to the existing natural gas pipeline grid. Texada Island had been identified as a possible location for a secondary receipt terminal, given the presence of Terasen's Vancouver Island Gas Pipeline on the island. As soon as we determined that locating a facility on Texada Island would be feasible and the decision was made by our Board of Directors to proceed to further advance the project, we advised the community of our proposal.

Although we have been working on a project concept for some years, our consideration of Texada Island as the primary location for our facility is relatively recent. WestPac is at the earliest stage of planning its formal proposal for an LNG terminal and associated power generation facility on Texada Island. We have chosen to begin community consultation even before we start the formal environmental assessment and regulatory review process, so that we can fully consider the knowledge and expertise, concerns and needs of stakeholders who may be interested in or affected by our proposal.

### 99. How is the LNG regasified?

We have not yet designed the facility, so the manner in which the LNG will be returned to a vapour or gaseous state is not yet known. We are exploring options for using heat from the power generation turbines to warm sea water which would then be used, in a closed-loop system, to warm the LNG. Alternatively, we may consider using submerged combustion vapourization technology, which also uses sea water in a closed-loop system, but uses natural gas-fired boilers to warm the sea water. We must await clarification from BC Hydro regarding their power generation requirements before we can assess re-gasification options.

### 100. Is this a "done deal"?

No, this project is not a done deal. We are at a very early stage of project planning, and we have not yet submitted any application for approval nor initiated the environmental assessment process. We have not yet designed the facilities, and will not do so until we obtain better definition of BC Hydro's power generation requirements and clarification of new greenhouse gas emission regulations.

We have chosen to begin community consultation as early as possible, so that we have the opportunity to identify, consider, and address the issues and concerns of the community as we proceed with project planning and design.

There will be ample opportunity for the public to learn about our proposal and to participate in the review of our project, and to make their views known. We encourage public participation, and we invite questions and comments on any aspect of our proposal.

Please see our answers to questions #14 and #18 regarding consultation with marine stakeholders, marine vessel traffic management, and mitigation, and to question #38 regarding emergency response.

### 103. How can you claim to be listening to our concerns yet arbitrarily choose to ignore the results of a democratic referendum?

WestPac will not ignore the results of any referendum regarding our proposal. In fact, WestPac – and, we expect, regulatory authorities – will consider the results of any referendum regarding our project as one aspect of public input in the broader regulatory review of our proposal.

We must recognize that there are stakeholders who have an interest in or may be affected by our project who are not part of the community of Texada Island residents. These stakeholders include, but may not be limited to, residents of Powell River and the region; taxpayers of British Columbia who support the delivery of provincial services on Texada Island and in the region; taxpayers of Canada who support the delivery of federal services on Texada Island and in the region; Terasen Gas, the operator of the Vancouver Island Gas Pipeline; and others. Their voices must be heard as well. That is why we are entering into a review process that is broad, well-defined, comprehensive, and which offers the opportunity for public participation to all. This broader review process is designed to ensure that the interests of the public are understood and considered in decision-making, and regulatory authorities are charged with making decisions in the public interest. In doing so, they will consider local views and the broader public interest.

At this very early stage, there is still much information to be developed and shared and many questions to answer before the benefits and impacts of our proposal can be fully understood and debated by all parties. We will support meaningful discussion by providing full and factual information, as it is developed, and by encouraging the public to participate through the many opportunities available. We believe that by designing our facilities to mitigate impacts and enhance benefits, and by listening to and addressing the concerns of the community, we will be able to demonstrate that our project will be safe, environmentally responsible, and deliver benefits to the people of Texada and British Columbia. We will work to earn the trust and confidence of the community in this regard. Nevertheless, as we continue through the environmental assessment process, we expect that there will be people who will continue to support the project and those who will not.

It will be up to the regulatory authorities mandated to review proposals such as ours to consider public input while weighing the potential benefits to be realized against the potential impacts on environment and society, taking into consideration measures that would mitigate any significant adverse effects. For our part, we will respect both the regulatory review process and its outcome.

### 104. I've heard that the LNG carriers use about 1,000,000 gallons of sea water a day, add chlorine to it and then put it back in the ocean. Is this true? What is the water used for? What change of temperature is there between the intake of the water from the ocean and when it is put back into the ocean? What depth is the water taken from in the ocean and what depth is it returned to the ocean? Any other information I should know about the use of the sea water?

We currently anticipate that water requirements for fire safety and suppression and LNG re-vapourization could be supplied through sea water systems. We will also consider using sea water for cooling the power

## **Additional Questions Raised (by e-mail, telephone, or other media)**

### 101. Have you consulted with BC Ferries?

WestPac management and its marine design engineers met with representatives from BC Ferry Services and BC Coast Pilots Limited earlier in 2007. This was the first of what we anticipate will be many meetings. The meeting was held to advise these stakeholders of the project and to identify issues for further examination and assessment.

### 102. Would the Comox and Texada ferries be affected when the LNG tankers are in port unloading? How? For how long? What about emergency runs? Or our school kids' run?

generation turbines, although turbines of the size and type contemplated for the WestPac facility can be cooled with air and not water, so it is possible that no water will be required for cooling. The facilities have not yet been designed, so the actual need for sea water, the manner in which sea water may be taken from and returned to the ocean (including location, depth, and type of intake, treatment, location, depth, and type of discharge), and any resulting environmental effects are not yet known.

The need for and type of cooling will not be determined until after the power generation requirements of BC Hydro have been defined. Once these matters have been determined, design options, including opportunities for optimizing the transfer of heat and cold to minimize temperature changes in sea water (if, in fact, sea water is used), would be considered. The potential environmental effects of any sea water withdrawal, treatment, and discharge, and the need for and scope of mitigation to avoid, eliminate, or reduce adverse environmental effects will be considered in the environmental assessment.

**105. What impact will this facility have on air quality?**

Please see our answers to questions #54, 55, and 56 for a description of the emissions expected from the project.

The facility has not yet been designed and actual emissions, and the resulting effects on air quality, cannot yet be calculated. The environmental assessment will include a full assessment of the effects of the project on air quality.

In addition, the facilities and the LNG carriers calling on the terminal will have to comply with all environmental standards and regulations that have been or will be established, including potential future controls on greenhouse gas and other air emissions. Such standards and regulations are established by governments to protect air quality and human and environmental health, and will ensure that the facility will not have significant adverse environmental effects.

**106. If the company was serious about consulting the community, why didn't it do so before it leased the land?**

WestPac is committed to early and meaningful consultation with the community about the project, and takes this commitment very seriously. Indeed, we are commencing community engagement well in advance of the formal consultation process that is normally required by the environmental assessment and regulatory review process to which the project will be subject. This will allow us to identify local issues and knowledge which we can then address and incorporate into our project planning process. Because we are consulting the community very early in the project design stage, it means that there are uncertainties about project design and we may not be able to provide answers to all questions yet. However, by obtaining community input and feedback, we can focus our efforts on addressing issues of concern to the community.

We have not yet secured a lease for the lands at Kiddie Point, but, rather, have entered into a memorandum of understanding with the landowner to negotiate a lease. This securing of land early in the project planning stage is a normal business practice. In fact, we took the same steps when we were considering locating a similar facility at Ridley Island, near Prince Rupert, a project which, due to economic factors, has been suspended. The securing of land does not make the project an inevitability. WestPac must still obtain many regulatory approvals, through processes which will include extensive public participation, prior to proceeding with a project.

**107. Why not post the dates for the community consultations on the website rather than suggesting that one look for dates on community notice boards?**

With respect to the dates of the September community information sessions on Texada, these dates were not confirmed at the time our first community newsletter was prepared in August. We felt that it was important to get project information out to island residents as early as possible, and so we circulated the newsletter before we were able to confirm venues and dates for the community information sessions. Once the dates and times were confirmed, this information was communicated directly to the community through local notice boards, following advice that we were given by Texada residents (including the local Regional District representative, Dave Murphy). In addition, the dates were also posted on our website, at [www.westpaclng.com](http://www.westpaclng.com).

**108. Do the opinions of our 1200 residents make a difference to whether this goes ahead or not? The Powell River Peak article headline (page 5, continuation of article) read "Community Consent Essential". Is this true?**

Public input will be an important factor considered by the regulators who are responsible for making decisions on whether our project can proceed. Please see our response to question #83 regarding how the public will have a say about the project.

**109. In your general description of the proposal, the exhaust from the gas turbines is then to go to heat recovery steam generators. What will the steam be used for?**

Our current proposal contemplates a "combined cycle" configuration in which the exhaust from the natural gas-fired turbines will be used to generate steam in heat recovery steam generators. The steam from these generators would be used to generate additional electricity, thereby increasing the overall efficiency of the plant to more than 70%. By way of comparison, the existing Burrard Thermal natural gas-fired power generation facility runs at about 32% efficiency. We are also exploring the possibility of using heat from the turbines to warm the LNG (to re-vaporize it), instead of using natural gas to fire boilers to heat the LNG; this would also reduce emissions from the facility.

**110. Could you generally describe the Nitrogen Oxide scrubbers that would be used, and what would happen to the effluent from them?**

The facility has not yet been designed, and neither the generation equipment nor the emission abatement equipment has been selected. The equipment selected, the emissions and effluents from the facility, and the environmental effects of any such emissions and effluents will be described in the environmental assessment.

**111. How many project employees will live on Texada Island, and what can be done to support the school system?**

We do not know at this time how many project employees will live on Texada Island either during construction or operation. The project will create about 80 direct full-time jobs, and these jobs will be open to Texada residents. In addition, local employment and procurement is expected to create and maintain additional employment locally. Therefore, it is possible that the project will contribute to maintaining the population and the need for municipal services, such as education. This may help to support the school system. We are very early in our planning

process and one of our objectives in commencing community consultation at this early stage is to identify what needs exist on Texada Island that could be supported by our proposal and what opportunities can be identified that would allow the proposed facility to make a meaningful positive contribution to the residents of Texada Island.

#### **112. Will the project overburden the existing medical and EMS services on Texada Island?**

We understand that the limited availability of medical care on Texada Island is a current concern to residents. The project will require medical and EMS services; however, we anticipate that we will provide our own medical and EMS services on site. The proposed facility will almost certainly have a health centre and staff that could in fact be used to support the health care needs of residents of Texada Island. Also, we will have emergency services and personnel trained in emergency response, including fire suppression. These resources can bolster the existing volunteer fire departments on Texada Island, potentially improving service to Texada residents.

#### **113. Will WestPac monopolize the ferry with work crews?**

At this early stage of project planning and design, we do not yet know how the construction workforce will be accommodated and transported to and from the site. However, we are aware of the concern of the community regarding access to the ferry service. We will explore options for workforce accommodation and transportation that do not adversely affect the ferry service available to residents of and visitors to Texada Island. Options could include on-island accommodation, increased ferry service, or the use of alternative vessels.

#### **114. What camp services and accommodations will be required to support work crews?**

At this early stage of project planning and design, we do not yet know how the construction workforce will be accommodated. We understand that there is an existing camp facility that was developed for previous industrial activity on the island; we will explore the suitability of this camp for our requirements, when these are better defined. We will also explore other options for workforce accommodation, including off-island options. In any case, the potential effects of workforce accommodation on the community will be assessed. We will also advise the community of employment and business opportunities as these are better defined.

#### **115. Is there another LNG site that produces electricity from the heat of warming up LNG like the one that is in the proposal states on Texada Island? If so, where?**

First, let us clarify some technical aspects of this design. The heat is produced from the generation of electricity. The heat is "captured", usually in the form of water that is warmed by the power generation turbines, and the heat is then used to warm the LNG so that it turns back into a gas and the gas is the fuel for the production of electricity. The electricity does not come from the heat of warming up LNG.

There are a number of integrated power plant/LNG terminal facilities, similar to what WestPac proposes, located in Japan. Japan itself is the largest importer of LNG in the world. Other existing locations of integrated plants are:

- Zebbrugge, Belgium
- Bilbao, Spain
- Dabhol, India

- Barcelona, Spain (under construction)
- Puerto Rico
- Philippines (under construction)

In addition, we are aware of one other proposed integrated facility that has been proposed for development in The Netherlands.

In Canada, Kitimat LNG announced in mid-July their intention to commence the permit process for the location of a power project alongside the LNG facility for which they received an Environmental Assessment Certificate in 2006. Kitimat LNG has not commenced construction of either the proposed LNG facility or the power facility.

The reason that developers propose co-location is that it offers multiple benefits including:

- the smallest combined footprint;
- shortest pipeline length between LNG facility and power plant thereby minimizing environmental impact; and
- shared support infrastructure and reduced utilities.

In addition, the use of waste heat from the power plant can be used for vapourizing LNG, space heating in winter, and in some instances generating power in conjunction with an intermediate fluid vapourizer, thus offsetting the energy needed to convert liquefied natural gas into warm natural gas. The use of waste heat from the power plant to vapourize LNG eliminates also the environmental impact associated with burning natural gas to vapourize LNG in conventional submerged combustion vapourizers.

Finally, LNG cold is increasingly being used to enhance the performance of gas turbines by cooling the air intake, thus increasing the air mass flow into the turbine.

#### **116. Please clarify that there are no LNG plants on the Pacific Coast of Canada and USA.**

There are currently no operating LNG receipt terminals on the Pacific Coast of either Canada or the US. There are 15 proposals currently under review.

There is currently one LNG receipt terminal under construction in Mexico and it is located at Costa Azul.

There are multiple LNG receipt terminals located in the Gulf of Mexico.

There are multiple LNG plants operating in the Pacific Northwest. Most of these are used to support "peaking" gas requirements (see our response to question #94 for an explanation of peaking). Terasen Gas currently operates a LNG plant that both manufactures and stores LNG. This facility is located on Tilbury Island, in Delta, in the heart of Greater Vancouver. Terasen also proposes to build a similar facility at Mt. Hayes, near Ladysmith, on Vancouver Island.

There is a US Pacific facility that manufactures LNG on a large scale for export and it is located in Alaska at a location called Kenai in the Cook Inlet Basin. It exports gas from Alaska, primarily to Japan. The Kenai facility was built in 1969. It employs 42 persons and is estimated to have an economic value to the region of \$35 million annually.

In the 1980s, a company called "PacRim" proposed an LNG manufacturing and export facility for construction at Kitimat on exactly the site that the current proposed import terminal is contemplated for. PacRim's proposal was never built because of two factors: (1) a dramatic fall in the value of the Japanese Yen, the currency of the anticipated purchaser of the gas; and (2) gas supply issues that resulted when the Alliance Pipeline was constructed and began to move gas from north-

east B.C. that PacRim had proposed to export to Japan, thus effectively removing PacRim's gas supply.

Dome Petroleum proposed an LNG export facility at Port Simpson, north of Prince Rupert, in the 1970s, but that project also was not built. Dome Petroleum has subsequently ceased to exist as a company.

LNG facilities, for both import and export, storage, and manufacturing, have been developed in the Pacific Northwest since the late 1960s. These facilities have operated safely and largely without incident. This is why most people are not aware of them. LNG facilities can and do make good neighbours and can be good corporate citizens. They operate over projected life spans of 50-plus years and they provide employment, on average, to 40 to 50 workers.

**117. WestPac stated that the carriers were the size of a cruise ship, 300m x 50m, yet the facility dock is only going to be 200m long. Is this correct?**

We do not expect the jetty to be more than 200 metres in length. As with cruise ships and vessels of all types, the LNG carriers will berth on "dolphins" and, in our current proposal, the dolphins will be located at the end of the jetty. Thus, when an LNG carrier is berthed at the jetty, the carrier and the jetty would have a "T" shape. That is, the LNG carriers would berth perpendicularly to the jetty and parallel to the shore.

**For more information**

We welcome - and will respond to - any questions, comments or concerns you may have about our project. For more information, view the WestPac website at [www.westpaclng.com](http://www.westpaclng.com) or contact our office:

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