

THE BURNABY REFINERY'S

Neighbourhood News

A NEWSLETTER FOR OUR NEIGHBOURS
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Investing in
Canada's
Energy Future

Chevron Canada's Kitimat LNG Project

Today's global economy depends on affordable, reliable energy. Experts predict energy demand will continue to grow as the global middle-class population increases. A major portion of that energy growth will come from natural gas – much of it delivered to market as Liquid Natural Gas or LNG.

Here in British Columbia, Chevron Canada and its co-venturer Woodside Energy International Limited (Woodside) are developing the Kitimat LNG project to provide natural gas to overseas customers in a safe and environmentally responsible way. The project consists of developing natural gas resources found in shale formations in the Liard and Horn River Basins in northeastern British Columbia; transportation of that gas across northern BC via the Pacific Trail Pipeline to Kitimat on the west coast of BC where it will be cooled from a gas into a liquid for shipping to overseas markets.

When completed, the proposed Kitimat LNG project will provide a safe and reliable energy while delivering significant benefits to British Columbians and all Canadians for decades to come.

“The Kitimat LNG project has the potential to be one of the largest resource projects in Canadian history,” said the project’s Communications Manager Ray Lord - a former Burnaby refinery employee who served as the refinery’s Public Affairs Manager for many years. “Our vision is to establish a safe and environmentally responsible project that will also provide significant revenues to the province of British Columbia - revenues that will fund important public services such as education, healthcare, and transportation.”

Economic Impact

Chevron has already made major investments in the planning and early site preparation for the proposed LNG facility near Kitimat BC and along the Pacific Trail Pipeline route, as well as in the development of the prolific

natural gas resources in northeastern BC. Construction of the Kitimat LNG facility and the Pacific Trail Pipeline will create an estimated 4,500 jobs that will be filled by British Columbians first. Additional jobs will also be created in the development of the natural gas from northeastern BC.

Benefits including employment, investment in skills training, and revenues to First Nations, local, BC, and Canadian business have already begun. These will increase significantly once a positive final investment decision by the project co-venturers is reached.

Environmental Stewardship

The Kitimat LNG project will be designed and built in a way that reduces emissions, conserves natural resources, and minimizes environmental impacts.

“Chevron is an industry leader and has decades of experience in developing systems that support a culture of protecting people and the environment,” said Ray. “Chevron’s other LNG projects in Australia are recognized as being among the cleanest in the world and similar engineering, design and technologies used in those projects are being incorporated into this project.

The natural gas that will be supplied by the Kitimat LNG project is the same natural gas that is safely delivered every day to homes around the world for cooking and heating. Cooling natural gas until it becomes a liquid allows it to be safely transported to customers in specially built LNG carriers. Over the past 50 years, the industry has established an enviable safety record. In the event of a spill, LNG would not damage the ground or leave any residue as it evaporates.

If spilled onto water, it would disperse into the air making cleanup on bodies of water unnecessary. LNG is not stored under high pressure and is not explosive.

Partnering with First Nations

The Kitimat LNG Project is being developed in partnership with First Nations to ensure all communities in BC have the opportunity to benefit from the development of BC’s significant natural gas resources. The liquefaction facility at Bish Cove is being built on land leased from the Haisla Nation under a unique benefits agreement and the Pacific Trail Pipeline is the only proposed natural gas pipeline for an LNG project to have an agreement with all 16 First Nations whose traditional territories are along the Pacific Trail Pipeline route. These agreements ensure skills training, jobs and contracts with First Nations businesses and suppliers as well as financial benefits throughout the lifetime of the Kitimat LNG project.

Project Status

“Our current focus is on advancing the Project towards the requirements for a Final Investment Decision (FID)” added Ray. “Project teams are working on completing engineering and design, conducting additional appraisal of the natural gas resource in the Liard region of Northeastern British Columbia, gaining additional First Nations support for the project, establishing a clear, stable and competitive fiscal framework with government, and executing firm LNG sales agreements with LNG customers.”

To learn more about the Kitimat LNG project visit www.chevron.ca/KitimatLNG

Manager's Message

Steve Parker, General Manager

Chevron Canada is growing and diversifying. We have been a significant presence in western Canada for 80 years with our service stations and the Burnaby Refinery. Our footprint now extends well beyond these areas and runs from the Atlantic to Pacific coasts. This strategic growth represents major investments with some exciting developments in BC including the Kitimat LNG project which is the focus of this issue's cover story. Exploration and development of reserves in the northeastern part of our province, along with the exportation of gas, means Chevron Canada will be playing a bigger part in our economy, both provincially and federally.

Also in this issue, you can read more about our sulphur recovery unit (SRU) and how it works to remove sulphur from crude oil. There has been a great deal of interest expressed by Community Advisory Panel members about sulphur dioxide and the health risks it might pose to those living near the refinery. Independent investigations conclude there is no cause for significant concern. The SRU converts H₂S and SO₂ into elemental sulphur, rather than discharging it into the air. How it does that is explained further in our Tech Talk article.

Here at the refinery, we have a safety culture that extends well beyond the workplace. We are driven by a value system where we care for one another and the community because it is the right thing to do. With that in mind, we have included some propane safety tips from the BC Safety Authority in this issue. Please review them and be careful when working around propane while barbecuing and camping this summer.

Another way we try to be a good neighbour is by sponsoring events around town... ones that our neighbours have told us they appreciate us supporting. I recently enjoyed the great music and atmosphere at the Burnaby Blues and Roots Festival and my family is now making plans to attend Chevron's Movie in the Park. This is fast becoming one of our town's favourite summer events and it is such a pleasure for us to be involved. I hope to see many of you in Confederation Park on August 30 and hope you enjoy the show.



We care for
one another
and the
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Safety Matters

How to Handle Propane Properly

Whether you use it with your barbecue, in your RV or when you go camping, it's important to take care when handling propane. Here are some safety tips courtesy of the BC Safety Authority.

Your gas equipment can be the outdoor enthusiast's best friend - as long as you treat it with respect. By taking these simple safety precautions, your outdoor adventures will be safe as well as fun.

Check your Propane Tank

- During transportation, ensure that it is secured in an upright position, with the cylinder valve closed and plugged or capped, in a well-ventilated space in your vehicle.
- Ensure that your propane supplier checks the tank for dents, damage, rust or leaks before refilling it.
- Never leave your propane tank in your vehicle.
- When you reconnect your refilled propane tank, conduct a leak test on all connections before firing up.

When Using Propane to Power your Barbecue:

- Inspect hoses for cracks, wear and possible leaks.
- Clear burners, air openings and regulator vents of rust, spiders or other insects that may cause blockages.
- Replace corroded or cracked burners.
- Test your barbecue for gas leaks, following the instructions in the BCSA's "Barbecue Safety" flyer.
- Follow proper lighting procedures.

When you set up, place your gas equipment outside your tent or recreational vehicle and well away from windows and combustible materials.

Follow all the guidelines for safe use of propane when camping, as outlined on the BC Safety Authority's "Camp Safely with Propane" flyer.

Most importantly, when you want to get away from it all without leaving all the creature comforts behind, remember that outdoor gas equipment is designed only for outdoor use. It may be tempting to bring your propane stove inside your tent to keep warm when you get caught in a rainstorm, or bring your outdoor propane space heater into the ski cabin when lighting the fire seems like too much trouble, but resist the temptation. Using outdoor

gas equipment in confined spaces can create a serious safety hazard like carbon monoxide poisoning for you and your family.

Keeping your propane equipment in good working order, using them outdoors in well ventilated areas, and using them for what they are meant for are the best ways to ensure a safe and enjoyable camping experience.

Contact your local BCSA office for more Information about camping safely with propane.

BCSA has lots of safety tips to offer on a wide variety of topics. Check them out here:



Tech Talk The Sulphur Recovery Unit



The job of the refinery is to turn crude oil into gasoline, jet fuel, and other useful products. In order to do this, sulphur (which is a naturally occurring contaminant in the crude) needs to be safely removed. It is the job of the facility's sulphur recovery unit to do this.

Environmental Regulations on Sulphur Content in Gasoline

Federal guidelines limit the sulphur content in gasoline as it is a contributor to SO₂ emissions. The sulphur in crude oil must be treated and removed in order to reach these specifications.

During processing, the sulphur bonds with hydrogen that is also present to create hydrogen sulphide. H₂S is a gas and it cannot be released to the atmosphere. Therefore, product streams rich in H₂S are fed into the sulphur recovery unit and transformed into water vapour and elemental sulphur. By recovering this sulphur, the SRU works to minimize the SO₂ emissions to the atmosphere.

How the SRU Works

"Once H₂S is fed into the SRU, we transform it first thermally and then catalytically into liquid sulphur," said the refinery's Lead Process Engineer Oswaldo Garcia. "It's a multistage process using a furnace and then a series of catalytic converters or reactors: Claus, Euroclaus and SuperClaus reactors."

As Oswaldo noted, reactions in the SRU occur in two stages: the thermal stage and the catalytic reaction stage. The former consists of a high-performance burner, mixing chamber, and heat-removing boiler, while the latter has four catalytic stages.

"The Claus reactors have certain limitations and can only convert so much SO₂," said Oswaldo. "Feeding this into the Euroclaus and SuperClaus reactors is what allows us to change the remaining H₂S into elemental sulphur."

With the SuperClaus reactor, the SRU is able to recover between 99.6 and 99.8 per cent of the feed H₂S into elemental sulphur. It is state-of-the-art technology which is thoroughly inspected every five years during the unit's major shutdown.

What Happens to the Recovered Sulphur?

The SRU creates up to 20 tonnes of sulphur every day. It is stored in an underground pit and sold to third parties which use it in multiple ways, including fertilizer production. The sulphur produced safely leaves the Burnaby refinery in trucks.

Across the Fence



We welcome Jessica Wolford to Chevron



Chris Boys leads the CAP tour of the Foreshore Site

New Face in Public Affairs

The refinery was pleased to welcome Jessica Wolford, our new Policy, Government and Public Affairs Representative, recently. Jessica joined our team May 19 and has spent her first months on the job getting up to speed on her various responsibilities. These include community relations, media relations, stakeholder management, and policy files.

Jessica has several years' experience working with the provincial government including roles in the Ministry of Transportation and Infrastructure and the Ministry of Justice and Attorney General. She left Victoria to take on this new and challenging opportunity and is enjoying every moment.

Jessica will have plenty of interaction with our neighbours. She is working

with members of the Chevron/North Burnaby Community Advisory Panel and speaks with neighbours who call with questions. She is also helping out at our various community events and is looking forward to meeting more Heights folks at the Movie in the Park later this month.

CAP Tours Foreshore Site

Several members of the Chevron/North Burnaby Community Advisory Panel visited the site where the refinery is successfully containing seepage of an oily substance. The refinery's environmental specialist, Chris Boys, led the tour on June 5 and noted that the interim seep barrier is effectively capturing oil and no odours were present.

"Natural processes (biodegradation) are causing any remaining oil to break down into harmless by-products", said

Chris. "We're planning a final remedy in which the existing barriers will likely be removed and replaced with a similar, permanent barrier(s). This is currently planned to happen next summer."

Updates and reports on the seepage are provided to various regulators every quarter and are posted on the CAP website (www.chevroncap.com).

Confederation Park Pipeline Maintenance Update

Chevron's routine assessment and related maintenance for our pipelines located in Confederation Park is ongoing. We conducted some limited brush clearing in order to gain access to parts of the pipeline. While the work continues, access to some of the trails will be restricted and we apologize for any inconvenience this may cause. Thank you for your patience as we continue this work.

Community Corner



Movie in the Park Sunday, August 30

Who's your hero? If you answered Hiro Hamada, you are probably already a Big Hero 6 fan. This acclaimed animated movie, which won all the big awards including an Oscar and a Golden Globe, is our selection for this year's Movie in the Park. Wrap up the summer with this fun-loving superhero film Sunday, August 30 in Confederation Park. The plot follows Hiro, a young robotics prodigy, and his superhero team as they battle a masked villain.

The fun starts at 5 pm with the movie underway at sundown. Activities include bouncy castles, face painting, crazy caricaturists, as well as lots of great food including food trucks, popcorn, ice cream and snacks. Bring a blanket and arrive early; the best places go fast at one of Burnaby's favourite summer events.

Development Manager Resh Pono speaks for Burnaby Community Services. "Our staff and volunteers run the snacks, popcorn and candy concessions for the evening," he said. "It's a really fun family event that shows the power of how partnerships with Chevron benefit our community. The proceeds we make from the evening support our camping program for low-income kids as well as the Burnaby Christmas Bureau. Chevron is very active in our community and they bring a lot to our and other organizations."

The Heights Merchants Association executive director agrees. "It's a really nice gathering of community members as well as a fundraiser for Burnaby Community Services," said Isabel Kolic. "Most of our staff attend; we offer special activities for the kids based on the movie's theme. We'll be there throughout the event until the movie

starts. The movie has become a staple in our community and we're really looking forward to it."



Community Corner



Burnaby Blues and Roots Festival

Chevron was proud to once again be a sponsor of this important Burnaby event, which has provided us with great entertainment now for 16 years. Music filled the air in Deer Lake Park on August 8 as people came from all over Metro Vancouver to enjoy an eclectic mix of local

and international artists including The Sheepdogs, Lee Fields & The Expressions, Ruthie Foster, and Nathan & The Zydeco Cha. As always, it was a full day of amazing music in a picturesque family-friendly environment.

Looking Back Chevron Burnaby Refinery: Circa 1935



Community Contact Line

(604) 257-4040

Chevron's Burnaby Refinery welcomes your calls and feedback. If you have any comments or concerns, please do not hesitate to call our Community Contact Line: 604-257-4040.

This line is staffed on weekdays between 8 am and 4:30 pm. Your call will be directed to the most appropriate person who can respond quickly. In the event of an emergency, or significant maintenance work underway that may contribute to unusual operating conditions, information and regular updates for the public are made available.

If you are calling after hours or on a weekend, please follow the paging instructions. Your call will be forwarded to our on-duty shift supervisors. If you would like to report an odour or if you notice anything that you think is unusual, please let us know. Your calls are very important to us and we will respond as quickly as possible.

To contact the Metro Vancouver air quality officer **604-436-6777**

For the refinery website, visit **www.chevron.ca/operations/refining**

For information about the Chevron/ North Burnaby Community Advisory Panel, visit **www.chevroncap.com**



Neighbourhood News is a quarterly newsletter produced by Chevron's Burnaby Refinery for residents of the Heights, Capitol Hill and surrounding areas of North Burnaby.

We invite your comments, questions or suggestions for future articles.

Please contact us at Neighbourhood News, Chevron Canada Limited, Burnaby Refinery, 355 North Willingdon Avenue, Burnaby, BC, V5C 1X4.

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