

THE BURNABY REFINERY'S

# Neighbourhood News

A NEWSLETTER FOR OUR NEIGHBOURS  
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## Refining: Past, Present, Future

The early years of the Great Depression hit Burnaby hard. But there was a silver lining: several major industries moved into the city. In 1935, the newest kid on the block was Standard Oil Company, which established what is today the Parkland Refinery on the shores of Burrard Inlet.





 **Parkland**  
BURNABY REFINERY  
5201 Penzance Drive

 **Parkland**  
Employee and Visitor  
Entrance Only  
Contractors and Delivery  
Near Entrance

Just as the refinery was getting off the ground, war broke and many workers left their jobs to serve overseas. This was followed by a post-war economic boom that really took off locally after the Trans-Mountain Pipeline completed its crude oil line from Edmonton to Burnaby.

“Our refining initially took place in what we call Area 1,” said Facilities Planning Manager Chad Groves, who has worked at the Burnaby refinery since 1995. “With the discovery of crude oil in Alberta and the building of the pipeline, we no longer had to rely on California supplying our crude shipments. We purchased the land at the foot of Penzance Drive and built a new refinery in what we call Area 2. Area 1 was turned over to our blending and shipping area. That was in 1954 and we’ve been modernizing ever since.”

Milestones included the 1970s, when the refinery doubled its capacity to meet market demand, and the 1990s, when environmental concerns began demanding reductions in the sulphur content of fuels.

“We had to reduce sulphur content of diesel from 5,000 parts per million (ppm) to 500 in the early 1990s,” said Chad. “The other refineries then operating in the area (Shell, Imperial Oil, and Petro-Canada) chose not to bear the costs of the investments required to do this and they all closed. But we saw the investment as worthwhile and continued to do so when other clean fuel regulations were enacted.”

### **The Refinery Today**

In 2018 the Parkland Refinery supplies one-third of our region’s transportation needs and continues to invest in producing high quality fuels including low sulphur gasoline, ultra-low sulphur diesel, jet fuel, propane, marine fuel oil, and asphalt.

“Reliability and safety remain core operational and community values and these drive much of the investments at the refinery,” added Chad. “We are an industry leader in incident prevention and provide the region with a very reliable and top quality supply of transportation fuels.”

Chad also notes that the refinery provides several hundred local jobs to skilled trades and technical staff. The facility is the largest taxpayer in the City of Burnaby and one of the top 10 in the province. Under its new Canadian ownership with Parkland Fuels, the refinery remains committed to supporting the community and participating in many neighbourhood events such as the upcoming Hats Off Day (see this issue’s Community Corner).

“The refinery is a complex facility that makes complex products,” he noted, “and we continue to make environmental enhancements that result in both lower sulphur products and lower emissions from the refinery.”

### **Looking to the Future**

The Parkland Refinery is committed to continuing to produce new fuels to meet

the needs of a lower carbon world.

“We believe in and are actively contributing to a decrease in greenhouse gas (GHG) emissions by reducing the carbon intensity of our fuels,” said Chad. “This is an important contribution because transportation fuels produce roughly half of Canada’s GHG emissions.”

The refinery is already blending significant quantities of renewable fuels including ethanol and biodiesels into its products and is investing in equipment to enable the facility to process renewable feedstocks and to produce finished renewable fuels. (See this issue’s Tech Talk article for more information about renewable diesel and co-processing.)

“BC has significant amounts of biomass—forestry and agricultural residues—that have the potential to be converted into low carbon feedstocks,” said Chad. “There are opportunities for us to retool in order to take these renewable sources and convert them into the fuels of tomorrow. The refinery of the past relied on petroleum-based fossil fuels; the refinery in the future will be a producer of increasing amounts of fuels from renewable feedstocks. Refineries remain very relevant in a low carbon world and you can expect us to rise to the challenge of producing these fuels of the future, while continuing to lead higher standards for personal and process safety, and continuing to reduce environmental emissions within the refinery.”



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# Manager's Message

## **Alex Coles, General Manager**

It was my pleasure to join the Parkland Refinery in December. I hail from P.E.I., via various stops along the way including most recently a refinery in Oklahoma that is run by an independent company. I've been in the refining business for the last 27 years, most of which was spent at Canada's largest refinery, which is operated by Irving Oil in New Brunswick. I was drawn west by Parkland's professional perspective and entrepreneurial spirit and I was aware of the Burnaby Refinery's reputation as a high quality operator. I also knew the refinery team was a highly capable group of talented workers and this was quickly emphasized by their work during the facility's recent turnaround period.

The best refinery operators in this business focus on safety and reliability. That's the way the refinery operated under Chevron and that is the way we will continue to operate as the Parkland Refinery. We also have an additional responsibility to our community to be a good neighbour. That extends beyond operating safely and reliably and as a great environmental steward. Our goal is for you to not even notice we are here until you are looking for support for community projects. We operate with the permission of our neighbours and we will continue to be respectful of the community.

My wife, Vanessa, and I are very pleased to be making this part of the world our new home. We are great outdoor enthusiasts and are excited to be living in this incredible natural playground. We're also looking forward to exploring the region's many diverse cultures.

The Parkland Refinery and I personally welcome your feedback and input and I look forward to meeting more members of this special community over the coming months.



# Tech Talk

## Biodiesel and Renewable Diesel— What's the Difference?

Climate change is requiring refineries to change the way they do business. Federal and provincial governments have introduced regulations to reduce greenhouse gas (GHG) emissions from fuel use. To meet these low carbon fuel requirements, the Burnaby Refinery is introducing new products.

The refinery began blending biodiesels with regular diesel in 2009. Biodiesel can be made of a variety of feedstocks including seed oils and/or animal fats and greases that are blended with diesel to burn in an engine. Starting in 2019, Parkland will begin blending renewable diesel into its diesel fuels. Renewable diesel, also known as hydrogenation derived renewal diesel (HDRD), is made from the same feedstocks as biodiesel, but its chemical composition and physical properties are different due to the process by which it is made.

“Biodiesel is produced by processing seed oils or animal fats through a chemical process called transesterification, which is chemically referred to as a fatty acid methyl

ester (FAME),” said Facilities Planning Engineer Jane Bracken. “Biodiesel has different physical properties to diesel fuel and therefore has different fuel specifications. The Burnaby Refinery blends biodiesel with refinery diesel production and sells B5, which refers to a blend of five per cent biodiesel and 95 per cent petroleum diesel. In Canada, this is the common blend rate as it meets engine and equipment manufacturer’s requirements.”

### Introducing Renewable Diesel

HDRD is chemically similar to petroleum diesel as it is produced by processing biomass feedstock using hydrotreating, a process which is used in refineries. Hydrogen is introduced in the presence of a catalyst to remove sulfur, oxygen and nitrogen, resulting in a fuel that is very similar to diesel. It has the same fuel specifications as petroleum diesel fuel produced in a refinery. The common blend rate in Canada is R20: 20 per cent HDRD and 80 per cent petroleum diesel.

“In order to facilitate blending HDRD into refinery diesel production next

year, the refinery will make some piping changes and tank realignments,” added Jane. “HDRD will not replace biodiesel in the blending process; Parkland will be blending refinery diesel production with both biodiesel and HDRD to meet low carbon fuel requirements. Diesel fuel is distributed at gas stations and commercial cardlocks throughout BC.”

### Other Initiatives

Another part of the solution to GHG emission reductions is co-processing, in which crude oil feedstock is substituted with a renewable source of feedstock.

“We are also working towards being able to co-process such biomass feedstocks to produce our own renewable diesel,” said Jane.

A commercial scale proof of concept co-processing test was run at the refinery in May 2017. Additional trials are being planned to gather plant operability data.



# Safety Matters Filling Up Safely

We've all seen the signs at gas stations warning us to turn off our engines and to refrain from smoking and using our cell phones. Those signs are there to remind us that when fuel, oxygen and an ignition source come together, sparks can literally fly and cause fires.

In order to ensure you have a safe experience next time you're filling up, Parkland has put together these tips, some of which are legal requirements and others that are precautions to ensure everyone's safety.

## **1. Choose a pump that works for your car**

Make sure your vehicle is properly positioned at the pump. Don't stretch the pump nozzle over your car to reach your gas tank cap.

## **2. Turn off the engine**

Gasoline and diesel fuels are flammable, so it is common sense to turn off your engine before you start fueling. Under the National Fire Code, it is actually illegal to refuel a vehicle with its engine running. We also recommend taking your keys out of the ignition as this will further reduce opportunities for sparking.

## **3. Don't smoke, use a lighter, or light a match**

Smoking anywhere near where fuel is handled is dangerous, especially at the pump. No one—not just people filling their tanks—should smoke, use a lighter or light a match while at a service station. This includes your passengers, even if they remain in the car with the windows up. The law forbids anyone from smoking within 7.5 metres (25 feet) of a gasoline pump.

## **4. Leave your phone and other electronic devices in your car**

Cell phones send and receive radio signals that can cause ignition sparks. They can also distract you from the job of refuelling.

## **5. Don't jam the pump nozzle open**

Self-serve pumps are designed to shut off automatically when your tank is almost full. Jamming the pump to stay running is illegal and can result in your tank overflowing and causing gas to spill.

## **6. Discharge static electricity**

Static electricity is caused by friction and can create sparks. This is rare and is most likely to happen during cold, dry days. Static can build up just by sliding out of your seat. A simple solution? Touch the metal parts of your vehicle before you begin fueling.

## **7. Supervise your kids if they wish to help**

It's great to teach your teenagers responsibility, but we strongly discourage you from letting younger children fill your tank or even to stand next to you while you're fueling up. Young children who are splashed with fuel while around the pump can become dangerously flammable. Children who stay in the car are also safe from other traffic moving around the station.

## **8. Lock your car if you leave it**

If you need to go into the store before or after filling up, locking your car will guard against theft. Service stations are busy places and we wouldn't want to have your experience marred by something being stolen from your vehicle.

## **9. Motorcyclists: dismount**

Always dismount from your motorcycle when refueling. Gas spilled onto an engine or the exhaust could cause a fire. If something does go wrong, do you really want to be sitting on top of a can of gas?

## **10. Campervans: turn off pilot lights**

Pilot lights running to stoves and/or fridges are another ignition source and should be turned off when you are in a service station.

## **11. Drive safely**

There are cars coming and going from gas stations all the time. Watch out for pedestrians. Use your indicators when entering and exiting. Be patient when queuing.

## **12. Handle and store gas carefully**

Use CSA- or ULC-labelled containers for storing gasoline and always place these on the ground when filling them. (Doing this allows any static electricity accumulated in the fuel to disperse safely.) It is illegal in Canada to take gasoline away from a service station in anything but an approved container. Store containers out of reach of children and in a ventilated area.

## **13. Do not fill gas-powered gardening equipment at the pump**

Use an approved container to fill your lawn mower and/or weed trimmer. Do this outside and only when the equipment's engine and attachments are cool.

## **14. Be careful of gasoline spills**

Report any spills to station staff who will clean them up—even small ones. If you spill gas onto your clothing, avoid open flames. As soon as possible, thoroughly soak the clothing with water and remove it slowly to prevent static buildup. Clothing should be aired outside for 24 hours, after which you can wash it in soapy, lukewarm water.

"Service station staff are trained in the proper spill cleanup procedures and all the safety equipment needed for spills is kept on site," said Adrien Byrne, Parkland's Policy, Government & Public Affairs Manager. "In the unlikely event of an incident, staff will shut down the station, evacuate customers and contact emergency responders."

# Across the Fence



## Recent Traffic Concerns

The refinery has recently completed the longest turnaround event in its 83-year history. A tremendous amount of work was successfully accomplished over the six weeks that we were shut down in February and March and we are grateful to our neighbours for their patience with the large amount of traffic generated by the additional workers who were needed on site during this period.

While a new parking area was created ahead of time to help manage the

increased traffic, we did not complete the traffic calming at the Gamma and Penzance intersection in time and were disappointed that not all our contractors respected the signage. We know this became a concern for our neighbours along Gamma and especially appreciate their patience as we worked to find solutions.

At the beginning of March, a temporary traffic calming circle was installed in the intersection that immediately improved the situation. Parkland anticipates installing a permanent

traffic island here in the near future. We are also looking forward to completing the parking lot landscaping in the spring.

Feedback from our neighbours and working hand in hand with the City of Burnaby were critical to helping us find solutions and we appreciate everyone who provided input. Thank you.





# Community Corner

## All Hands on Deck for Hats Off Day

Your favourite neighbourhood festival has a distinctly maritime flavour this year. Hats Off Day's theme is Pirates and Sailors and all the fun begins on Hastings Street on Saturday, June 2 with the parade kicking things off at 9:30 am.

Many of the shiver your timbers activities are still in the planning stages but you can expect coastal-themed music, pirates climbing masts, and all your old favourites like the family fun dash and the show and shine.

Look for great family activities too at your local Chevron Station at Hastings and Willingdon. There will be live music, face painters and the ever-popular caricaturists.

Parkland is pleased to be carrying on the tradition by being a Hats Off Day sponsor.

"The refinery's been involved for well over 20 years and we see Hats Off Day as a huge community celebration," said Parkland's Community Affairs Representative Joanne Jamieson. "Parkland supports giving back to the communities where we operate and live and we hope to see lots of neighbours out supporting our local merchants."

Hats Off Day is presented by the Heights Merchants Association.

"It's a day that brings our whole community together," said the Executive Director Isabel Kolic, "and it's become a signature event for the Heights and for Burnaby. It celebrates our local culture and our common history."

To find out more, visit [hatsoffday.com](http://hatsoffday.com).



## Burnaby Blues + Roots Festival

Get set for another Saturday in the park... Deer Lake Park that is. The Burnaby Blues + Roots Festival returns August 11 with another lineup of world-class musicians for its 18th annual celebration. Parkland is pleased to be sponsoring this year's festival, carrying on the tradition begun by Chevron 18 years ago.

Mixing folk and Americana with rock and roll and vintage rhythm and blues, Nathaniel Rateliff and The Night Sweats headline this year's performance with more artists to be announced soon. Fans of the family-friendly event will enjoy a full day of music, local food vendors, and activities for people of all ages.

For tickets and information, visit [www.burnabybluesfestival.com](http://www.burnabybluesfestival.com).

## Community Contact Line

**(604) 257-4040**

Parkland Refining (B.C.) Ltd. 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 8am and 4:30pm. 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 information about the Parkland/North Burnaby Community Advisory Panel, visit [www.parklandcap.ca](http://www.parklandcap.ca)

**Neighbourhood News** is produced by Parkland Refining (B.C.) Ltd. for residents of the Heights, Capitol Hill and surrounding areas of North Burnaby.

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

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