

THE PARKLAND BURNABY REFINERY'S Community Connection

KEEPING OUR NEIGHBOURHOOD AND STAKEHOLDERS INFORMED
JULY 2022



PARKLAND

IN THIS ISSUE

- ② Burnaby Refinery Steps up its Low-Carbon Fuel Commitment
- ② Setting the Stage for Further Air Quality Improvement
- ② Feature Focus on Parkland Community Partners

Building on Long-Standing Leadership

The first few months of 2022 have been very busy and productive at the Parkland Burnaby Refinery.

With the support received from the government of British Columbia, we were excited to announce our plans to expand Parkland's low-carbon fuel production here in Burnaby, including construction of a new renewable diesel facility within our Refinery. This project will build on and expand the scope of our long-standing efforts to commercialize and advance the production of low-carbon fuels using renewable feedstocks. The renewable fuels that we currently produce with these feedstocks have one-eighth the carbon intensity of conventional fuels.

This represents a crucial step forward in broadening our efforts to combat climate change. In fact, this \$600M project is expected to directly create up to 1,000 jobs during the construction phase, and will further reduce greenhouse gas emissions by two megatonnes per year, the equivalent of removing about 700,000 or one-quarter of all of British Columbia's passenger vehicles off the roads.

At the Burnaby Refinery, we are committed to leveraging diverse resources and technologies to arrive at lower-impact solutions to achieve our carbon-reduction goals. One area of focus in our plans is to ensure that the launch of renewable diesel production

will not result in increases to various other air emissions from the Refinery. We look forward to reaching out to the community, in the near future, with more details.

At the time of publication, Metro Vancouver has issued Parkland a draft version of our amended air permit, which we are reviewing. We anticipate a conclusion to this process prior to the July 31 expiry of our existing permit. We are pleased with the rigorous process which we have followed to get to this stage, and with the significant performance improvements we expect to see over the life of the new permit. Similarly, we have just released our second annual sustainability report which works in conjunction with Parkland's corporate commitment to sustainability and our *Drive to Zero*.

I would like to take this opportunity to extend my personal welcome and gratitude to Enda Brophy, Dominic Flanagan and Stanis Smith, who joined our Community Advisory Panel this spring. The ongoing commitment of time and expertise on the part of all CAP members is greatly appreciated.

In closing, I would also like to commend our various community-partner organizations who are actively working in diverse ways to make Burnaby an even better place to live, work and play. We are proud to support their work.



Alex

Alex Coles,
Vice President & General Manager
Parkland Burnaby Refinery

ABOUT THE FRONT COVER: Parkland is a proud Canadian company that plays a key role in powering journeys here in BC and well beyond through our coast-to-coast retail network. This July 1, we demonstrated that pride by being a presenting sponsor of the City of Burnaby's "StreetFest on Central" at Civic Square. This was part of the community's Canada Day celebrations.

Burnaby Refinery Steps up its Low-Carbon Fuel Commitment

The Parkland Burnaby Refinery has seen a lot of changes in its well over 85 years in operation, and our May announcement signals the next major stage in its ongoing evolution. Parkland President and Chief Executive Officer Bob Espey and provincial government representatives were on hand to announce plans for a significant expansion of existing renewable and low-carbon fuel production here in Burnaby.

Building on our past success and learnings, Parkland is planning a portfolio of low carbon products and services that will help our customers meet their low carbon goals. This approach

includes expanding our existing co-processing volumes to 5,500 barrels per day and building a stand-alone renewable diesel facility that would produce 6,500 barrels per day of renewable diesel.

The renewable diesel plant will be built within the existing site and designed to ensure it does not result in emissions increases from the Refinery as a whole.

"This announcement advances our decarbonization strategy and our commitment to provide customers with low carbon choices," said Espey at the on-site announcement. The renewable fuels produced will have one-eighth the carbon

intensity of conventional fuels, and are expected to result in greenhouse gas reductions of two megatonnes per year.

Next Steps and Consultations

As we move closer to a final investment decision, we will ensure that more details on the project scope and construction plan are shared with the local community. We will also collaborate with residents, the City and other stakeholders to mitigate traffic-related and other construction-phase concerns.

QUICK FACTS



Project will have equivalent benefit to taking over
700,000
cars off the road – or about
one in four
of all BC's passenger vehicles

An investment of approximately
\$600 MILLION
will be required. Parkland has received support from the Government of British Columbia for this project in the form of BC Low-Carbon Fuel Standard Compliance Credits.



Final investment decision expected in second half of **2023**, with production to commence in **2026**



Up to
1,000 high-quality jobs
are expected to be created during construction



Assessment continues with respect to possible addition of the production of sustainable aviation fuels in Burnaby

"Accelerating the production in BC of low-carbon fuels is one in a series of essential actions outlined by the CleanBC road map to 2030 to significantly reduce greenhouse gas emissions, while generating low-carbon economic opportunities for our province."

*Hon. George Heyman,
BC Minister of Environment
and Climate Change Strategy*

"Harnessing Parkland's technical expertise and infrastructure to lower the environmental impact of our transportation is something we can be proud of."

*Hon. Bruce Ralston,
BC Minister of Energy, Mines
and Low Carbon Innovation*

Renewable Diesel: 'It's an Answer for Today'

There's no single solution to a massive challenge like climate change, nor any one strategy capable of decarbonizing a sector like transportation. But renewable diesel and other low-carbon liquid fuels have an essential role to play, alongside other strategies such as electrification of light-duty vehicles.

Renewable diesel is well-suited to trucking and other longer-haul and heavier-duty forms of transportation that can't be easily electrified. Equally importantly, it can be used in existing vehicle fleets, making it "an answer for today", as Robert Pinchuk, Director of Low Carbon Strategy and Planning at the Parkland Burnaby Refinery puts it.

Renewable diesel production relies on well-established technology, and while Parkland is among several proponents with projects on the books, none of this fuel is being made in Canada today. Production at the Burnaby Refinery

will therefore displace imports and increase availability. It will also provide a new and dependable market for Canada's agricultural and forestry sectors, from which feedstocks will be sourced.

This next phase in Parkland's low-carbon fuel production further cements its reputation for decarbonization leadership. Parkland's work has proven the viability of stringent low-carbon fuel standards in BC, and is helping position the liquid fuels industry to play its part in the all-hands-on-deck effort that the climate change challenge demands.

Burnaby Refinery Receives Innovation Award and Recognized as an Energy Transition Leader

Always looking for ways to help our customers lower their environmental footprint, we have been recognized for our work on co-processing low-carbon fuels. A leader in the field, Parkland was presented with the Canadian Fuels Association's Innovation Award.

"Since 2017, the Burnaby Refinery has been co-processing low-carbon fuels using renewable feedstocks, including canola oil and tallow in our FCCU (Fluidized Catalytic Cracking Unit)," says Alex Coles, VP and GM, Burnaby Refinery. "Using the FCCU for this purpose is a first in Canada, and Parkland is seen as a global leader in this type of processing."

What makes these co-processed fuels so cutting-edge is that they have approximately one-eighth of the carbon intensity of conventional fuels and can be used in existing vehicles today, with no required modifications.

"In 2021, Parkland co-processed enough low carbon, renewable fuel that is equivalent to taking 71,000 vehicles off the road," says Coles. "By 2026, we expect



Left to right: Alex Coles, Mike Forte, Gary Lee, Priyanka Prasad, Jane Bracken, Kim Chahal, Bob Espey

this number to grow to the equivalent of 700,000 cars off the road or about 25 per cent of BC's passenger vehicles."

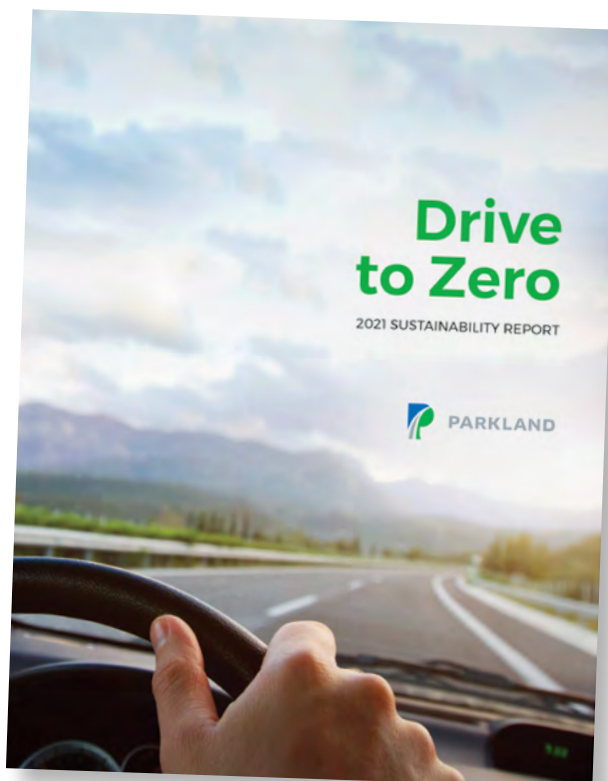
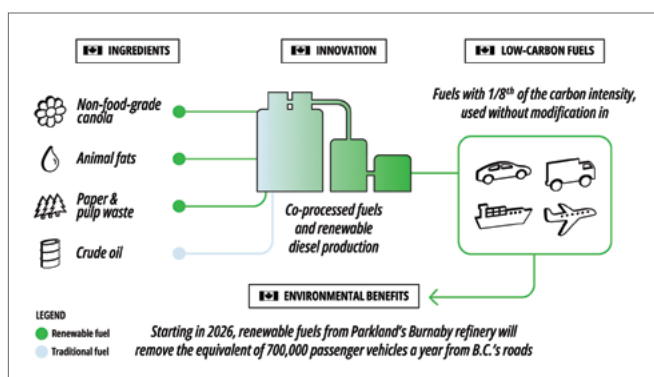
The innovation seen at the Burnaby Refinery is a great example of how Parkland is staying one step ahead of our customers' needs and giving them the essential fuels they want to power their journeys.

Drive to Zero: Parkland Releases Latest Corporate Sustainability Report

We recently released our 2021 Sustainability Report, *Drive to Zero*. The launch of our enterprise-wide Sustainability Strategy in 2021 marked a step change in how we approach sustainability. We transact with over one million customers per day and are proud to provide them with the essential fuels and services they depend on. Equally important is 'how we do what we do.' From protecting the safety of our employees, customers and environment, strengthening our diverse, inclusive culture, supporting our communities and continuing to advance our low carbon fuel capabilities while at the same time striving to minimize our impact on the environment.

Key highlights from the 2021 Report include

- In 2021, we co-processed a record 86 million litres of bio-feedstocks at our Burnaby Refinery. This had the equivalent of taking over 70,000 cars off the road in BC. Building on our track record of leadership and innovation we are planning to increase our existing co-processing activities and build a standalone renewable diesel complex within the Burnaby Refinery. Together these renewable fuels will reduce greenhouse gas emissions by approximately 2 MT per year; the equivalent of taking over 700,000 cars off the road – or approximately 25% of BC's passenger vehicles.
- Another exciting achievement is that earlier this year, we became the only refinery in the world to co-process tall oil, which takes waste from pulp mills and turns it into fuel.
- We also published our Supplier Code of Conduct in support of our target to develop sustainable supply chain standards.



The report also highlighted Parkland was also proud to take home the Emerging Clean Technologies Award at the 2022 Global Energy Show in recognition of our work on co-processing at Burnaby Refinery. This award focuses on innovative technologies or processes that improve environmental performance or decrease cost of production in the energy industry through significant energy efficiency improvements, the sustainable use of resources, or environmental protection activities.

As an essential supplier of fuel in the province, Parkland swiftly pivoted to respond to the needs of British Columbians across the province through the extreme weather events in British Columbia late last year. Working closely with all levels of government, Parkland continued delivering essential fuels and services to support the recovery and mitigation efforts throughout the province. We are proud of our team for stepping up and continuing to power journeys and energize our communities through such challenging times.

Please read the report online at: parkland.ca/en/sustainability/sustainability-report

Setting the Stage for Further Air Quality Improvement

Sometime before the end of July we expect to hit a significant milestone at the Parkland Burnaby Refinery in the form of an updated air permit from Metro Vancouver. We've worked closely with the regulator and external experts, and of course the community and other stakeholders, to craft a permit that will set high performance expectations in the years to come.

The Starting Point

While our existing permit was originally set to expire at the end of 2020, Metro Vancouver agreed to an 18-month extension to allow us to more fully explore improvement opportunities that will be reflected in the new permit. We first began discussing this process with the regulator more than five years ago.

Assessing Possible Human Health Impacts

The potential impact of emissions on air quality and human health are important considerations any time a permit amendment is contemplated.

We therefore completed a Human Health Risk Assessment (HHRA) – a rigorous scientific process through which we assessed possible negative health effects that could result from our air emissions.

The HHRA was conducted by WSP Canada, and:

- Focused on priority emissions, including sulphur dioxide, nitrogen dioxide and particulates, and
- Encompassed a 100-square kilometer study area around the Refinery.

We released a draft workplan for the HHRA last summer, and invited input from the Tsleil-Waututh Nation, City of Burnaby, Health Authorities, our Community Advisory Panel, and the public. We reported back to the community on the input we received and adjusted the final assessment design accordingly.

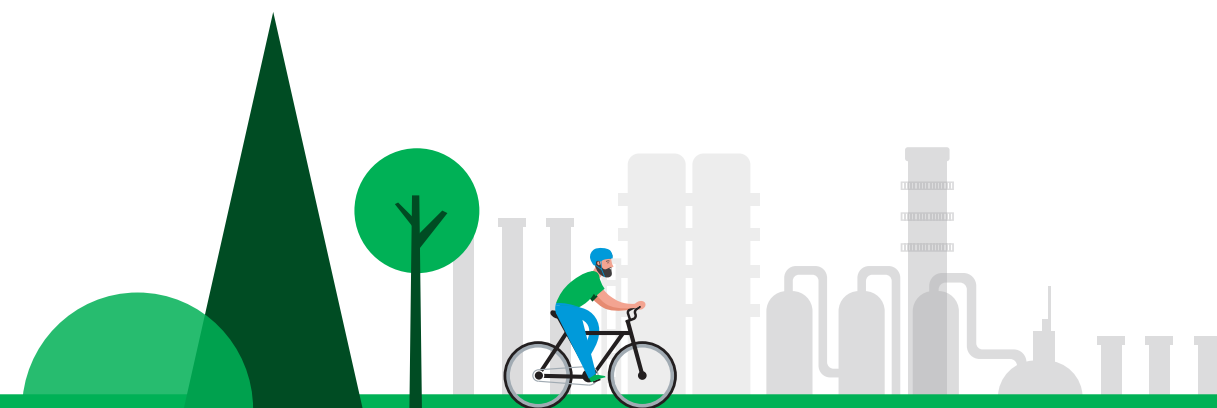
The Findings of the HHRA

We reported out to the community on the findings of the HHRA at a public session on March 10.

The study predicted that the Refinery improvements, which we have requested be incorporated into the amended permit, will result in “significant” reductions in the already-limited extent and frequency of elevated SO₂ levels; and “modest” reductions in elevated levels of NO₂ and particulates.

The study predicted that under normal Refinery operating conditions with the proposed new permit limits in place:

- SO₂ and fine particulate levels will be consistently below health risk-related thresholds; and
- While there will be periods of elevated NO₂ levels, the Refinery will contribute only 31 per cent of total NO₂ immediately beside the refinery, and less than two per cent of total NO₂ at the study boundary (5 km from the Refinery).



The Improvements We Intend to Achieve

The following improvement projects will help us achieve the stricter limits and the reduced emissions we foresee under the new permit. We have also agreed to enhance local air monitoring capacity.

Improvement Project	Emissions it Will Reduce		
	SO ₂	NO ₂	Particulates
Operational changes to the refinery's Fluid Catalytic Cracker	✓	✓	
Installation of a Tail Gas Treatment Unit on the Sulphur Recovery Unit	✓		
Installation of a Flue Gas Recirculation system on an existing boiler		✓	
Addition of a Third Stage Separator to the Fluidized Catalytic Cracker (already complete)			✓

The Final Steps

➤ JANUARY 21	➤ JAN 21 – JULY 31
We submitted our finalized permit renewal application to Metro Vancouver.	Metro Vancouver completes its technical review, considers stakeholder input, prepares draft amended permit, and liaises with Parkland as needed.
➤ FEBRUARY 1	
We submitted the results of our HHRA to Metro Vancouver and to Health Authorities.	
➤ APRIL 9	
The period for public comment on our renewal application closed.	
➤ BY JULY 31	
Metro Vancouver will issue a finalized permit. We have proposed a 10-year term for our new permit. Throughout that period, the Refinery will still have to meet any new air-quality requirements that governments at any level may put in place. The permit would also typically include continuous improvement requirements.	

For more information and complete documentation, please visit:

burnabyrefinery.ca/community/refinery-projects/human-health-risk-assessment

Emission Reduction Amounts



45% reduction in permitted SO₂ amounts



18% reduction in permitted NO₂ amounts



23% reduction in permitted particulate matter amounts

CAP Welcomes New Members

Our Community Advisory Panel (CAP) is a diverse group of Burnaby residents who meet regularly to advocate for the community's interests and provide guidance that helps the Refinery minimize its impacts.

The Parkland Burnaby Refinery Community Advisory Panel held its most recent regular quarterly meetings on March 30 and June 15. Discussion topics included the air permit-related consultation process and related Human Health Risk Assessment (see also pages 6-7). The June meeting took place on a boat, providing an opportunity for CAP members to see Refinery features from the water, and to receive a briefing from the Western Canadian Marine Response Corporation. You can read the minutes on our website. They are located at the bottom of this page: burnabyrefinery.ca/community/community-advisory-panel.

Three new members have recently joined the CAP:



Enda Brophy is an Associate Professor in the School of Communication and the Labour Studies Program at Simon Fraser University. He has lived in Burnaby Heights since 2015, where he appreciates the trails and the diverse community. He is a believer in volunteering and community involvement and can often be found coaching or playing soccer in the neighbourhood.



Dominic Flanagan and his family have lived in The Heights for approximately 20 years. He currently works with non-profits regarding governance and social enterprise opportunities. Dominic has more than 30 years experience in the housing and health sectors which includes the front-line delivery of services as well as senior executive roles; and has been responsible for the development, implementation and operation of new supportive housing programs for marginalized and vulnerable populations. At BC Housing, in partnership with the non-profit sector and the health care system, he led the development of a range of housing programs across the province.



Stanis Smith has over 35 years of experience as an architect and corporate executive. His career highlights include being CEO of Architectura, a significant Canadian design firm, and executive vice president for Stantec's Buildings Group, one of the world's largest architectural and engineering consultancies. He has led teams in the design of many award-winning airport terminals and other major projects around the world. He is currently an independent consultant providing advisory services on major projects that include the new Terminal 6 at JFK Airport, New York. He is on the board of the Rick Hansen Foundation and has lived on Capitol Hill for over 30 years.

Live Fire Training Heightens Readiness to Respond

Eight members of the Burnaby Refinery's fire specialist team recently had an invaluable opportunity to refine their emergency response skills. Training exercises were conducted at the Prince George Airport and in Jasper, Alberta, and focused on the scenarios of a train car derailment or truck rollover, and a resulting need to fight liquid-fuel or LPG fires.

Both sites were set up to allow for large-scale live fires – and since the site in Jasper was beside a recreational centre, the exercise attracted a lot of spectators. For the fire specialists, though, this was a rare opportunity to actively test and improve the skills needed to control and extinguish such fires.

"This was a huge step forward in terms of ability to manage these kinds of fires, and a type of training we haven't been able to access before," says Refinery Fire Chief Don Cameron.

The training was coordinated by the Emergency Response Assistance Corporation, with support from the Propane Association of Canada. Other participants included CN Rail, Transport Canada and the Jasper Fire Department. Cameron says consideration is being given to additional cooperative training in future, potentially including some on the Refinery site.



Opening the Refinery Doors

As part of the ongoing enhancement of our community relations program, this spring the Burnaby Refinery hosted tours for various key stakeholders. This included Mayor Mike Hurley and members of council from the City of Burnaby, and members of our Community Advisory Panel. These have proven to be well-received opportunities for direct insight into this complex operation, and the various ongoing environmental and other improvement opportunities underway.

Feedback from tour participants includes:

"Parkland Refinery is an integral member of our community and has taken a leadership role in creation of low carbon fuels. I encourage Parkland to continue working positively with the neighbouring residents to address their concerns as it aligns itself to achieve British Columbia's Climate Action Goals."

Burnaby Mayor Mike Hurley

"It was my first tour of the Refinery after living in this neighbourhood for the last nine years. I am impressed with the amount of work that goes into running the Refinery. The details provided by the Parkland team did put me at ease about the safety standards maintained by the extended team."

*Community Advisory Panel Member
Aswinee Rath*

Meet Some of our Partners and Learn How They're Making Burnaby a Better Place to Live

PARKLAND COMMUNITY PARTNER



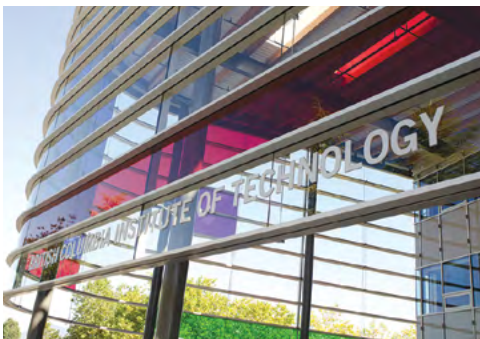
**Burnaby Neighbourhood House –
Youth Leadership Program**

www.burnabynh.ca



**Burnaby Community Services –
Christmas Bureau**

www.bbyservices.ca



**British Columbia
Institute of Technology**

www.bcit.ca



**Burnaby Firefighters
Charitable Society**

www.burnabyfirefighters.com

COMMUNITY INVESTMENT

The Parkland Burnaby Refinery is proud of its many partnerships with community groups – from the local through to the provincial levels – whose high-impact work is making the quality-of-life here in Burnaby even better. We invited four of our current community partners to tell us a bit more about themselves.

My organization is making Burnaby a stronger community and a better place to live by...	Financial support from Parkland will support my organization by...
 <p>Providing a wide range of supportive programs and services that are accessible, affordable, and available to people of all ages and diverse backgrounds, e.g. family drop-in, licensed pre-school and before- and after-school care, youth leadership, volunteer opportunities, seniors social groups, newcomers and refugee services, food justice programs, and more!</p>	<p>Creating Parkland Youth Leadership Awards, allowing 10 vulnerable Burnaby youth to be part of the BNH Leadership program. These youth (grades 8-12) will gain volunteer opportunities, career readiness and certificates for jobs such as HIGH FIVE; they will also learn life skills such as financial literacy, and have fun creating peer and community relationships.</p>
 <p>Providing a voice, resources and opportunities to people who need support. We offer a range of programs and publications to support families with low income, and isolated seniors.</p>	<p>Contributing to the Burnaby Christmas Bureau, which makes the holidays brighter for approximately 1,800 persons through our toy room, for approximately 130 Burnaby seniors who will receive hampers, and for almost 400 individuals who are homeless or at risk of homelessness.</p>
 <p>Empowering people, shaping BC, and inspiring global progress. For more than 55 years, BCIT has been delivering flexible, relevant, and future-proof education that prepares learners to provide applied solutions to industry challenges.</p>	<p>Ensuring the success of BCIT students, who will become the leaders our world needs now more than ever. This donation will help students gain the leading-edge, hands-on skills they need to tackle the world's complex problems.</p>
 <p>Directly improving the health and well-being of the citizens we serve. Each year we initiate numerous fundraising events which support many Burnaby based non-profits that have a strong and positive effect on our community.</p>	<p>Enabling us to donate \$55,000 to the Canada-Ukraine Foundation – a leadership group that coordinates, develops, organizes and delivers assistance projects generated by Canadians and directed to Ukraine. Parkland has also been a valued partner in our Nutritional Snack Food Program, which provides food security to thousands of students in our community.</p>



Left to right: Daniel Sibley, Tom Leggett, Jessica Bermudez, Rajvir Rao, Julie Ferris, Marigona Blakcori

Burnaby Hats Off Day: 'Neighbours Meeting Neighbours'

It's a signature annual community event in Burnaby and among the largest festivals in Metro Vancouver. Hats Off Day was back on June 18 this year on Hastings Street, after a pandemic-pause in the previous two years.

The long-running event is a chance for local merchants to express their appreciation to their customers, and for a range of entertainment and events along the length of this main artery.

"I was quite astounded at how many people came out," says Isabel Kolic, executive director of The Heights Merchants Association. "We got so much positive feedback about how happy people were to be together again in person."

Attendance this year is estimated at 55,000-60,000, up from a usual total of closer to 50,000, and Kolic says merchant participation was also significantly increased over past years.

Parkland was among the festival's "top hat" sponsors, and Kolic says the company's support was instrumental in particular in enabling organizers to stage an enhanced version of the event's Family Fun Dash race.

"It was a day of neighbours meeting neighbours, after in some cases not having seen each other for a while," says Kolic. "And those spontaneous meet-ups were a beautiful sight to behold."

Individual Parkland employees also supported this year's event as volunteers, among them Daniel Sibley, People and Culture Coordinator. "Community events create stronger communities, and a stronger community is a happier community. I was proud to volunteer and spread hopefully a little more joy in peoples' lives," Daniel says.

Community Connection

Community Connection helps keep Burnaby residents and other stakeholders informed on what's happening at the Parkland Burnaby Refinery. Comments, questions and content suggestions are welcome.

To subscribe to *Community Connection*, and occasional event notices and other community updates, please go to: burnabyrefinery.ca/news/subscribe-our-emailing-list

Subscribe before the end of August to be entered in a draw for a \$150 gas gift card.



Questions and feedback regarding Refinery operations are also welcome. Our phone line is monitored during regular business hours. After-hours paging instructions are available to report unusual odours, activities or noise. You may also report odours directly to Metro Vancouver Air Quality at 604.436.6777.

Community Relations
604.257.4040
CommunityBC@parkland.ca
burnabyrefinery.ca