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Port authority, industry partners, test low and zero-emission fuels and technologies at the Port of Vancouver

December 6, 2022

At Canada's largest port, a variety of low- and zero-emission fuels and technologies are being tested in support of the Vancouver Fraser Port Authority's goal to create a zero-emission port by 2050.

Vancouver, B.C.: The Vancouver Fraser Port Authority, together with partners from across the port community, are testing various low- and zero-emission fuels and technologies at the Port of Vancouver, as part of the port authority's efforts to phase out all port-related emissions by 2050 in support of the Government of Canada's goal to achieve net-zero emissions by 2050.

Through the Low-Emission Technology Initiative, a joint initiative between the port authority and the Province of British Columbia, the port authority and the province have each committed \$1.5 million in funding to support the port community's transition to low-emission energy, including the testing of battery-electric-powered terminal tractors; 100% biodiesel on commercial ferries; a hydrogen-powered crane; and 100% renewable diesel on a terminal locomotive and one of the port authority's patrol boats.

"Charting our course towards a zero-emission port starts with collaborative efforts like these—between the port authority, the port community, and government—to test innovative new low-emission fuels and technologies that reduce emissions while keeping trade moving through the Port of Vancouver," said Robin Silvester, president and chief executive officer of the Vancouver Fraser Port Authority. "We plan to continue taking tangible steps, in close collaboration with our partners across the port, towards our goal of phasing out all port-related emissions by 2050."

Efforts to test low-emission fuels include a 6-month trial of 100% renewable diesel on one of the port authority's patrol boats, the Takaya, making the port authority the first federal agency in Canada to run a vessel on 100% renewable diesel. Renewable diesel is a non-fossil fuel energy source derived from a range of organic sources such as vegetable oils, animal fats and food waste. Using renewable diesel can result in up to 80% less net greenhouse gas emissions than regular diesel on a life-cycle basis. Shell Canada, a partner on this project, supplied the renewable diesel and provided significant technical expertise.

Port authority and partners test low- and zero-emission fuels and technologies at the Port of Vancouver



100% Renewable diesel-powered patrol boat (Port authority)



Electric-powered terminal tractor (Seaspan Ferries)



100% Biodiesel powered ferry (Seaspan Ferries)



100% Renewable diesel-powered locomotive (Viterra)



Electric-powered cranes (DP World)

Across the Port of Vancouver, many other low-emission fuels and technologies are being tested by members of the port community, such as:

- **Viterra**, which operates two grain terminals on the south shore of Burrard Inlet, recently began a 6-month trial of 100% renewable diesel on one of its locomotives at its Pacific Terminal. The trial, which is funded in part by the port authority and the province, is intended to test the use of low-emission renewable diesel as a replacement for regular diesel. Shell Canada supplied the renewable diesel.
- **DP World**, which operates four container terminals across British Columbia, recently installed five zero-emission electric rail-mounted gantry cranes at its Centerm container terminal on the south shore of Burrard Inlet and is also in the final planning stages of retrofitting a hydrogen fuel cell-powered rubber-tired gantry crane. This retrofit will significantly reduce DP World's emissions and confirm a path forward to widespread decarbonization of the company's rail-mounted gantry crane fleet. At its Centerm terminal, DP World also installed additional shore power technology, which now enables two container ships at a time to turn off their engines and plug into hydroelectric power, reducing greenhouse gas emissions. At the UN Climate Change Conference (COP 27) earlier this month, DP World announced plans to invest up to

\$500 million across its businesses to cut CO2 emissions by nearly 700,000 tonnes over the next five years.

- **Seaspan Ferries**, which operates a commercial ferry service between its terminals on Vancouver Island and the Lower Mainland, recently began running all six of its commercial ferries on 100% biodiesel, following the success of a pilot project launched last year with the support of the port authority and the province. On Seaspan's tugboat fleet, the company also recently began using 100% soy-based biofuel and expects to transition to using biofuel on all its harbour ship-docking tugs before the end of 2022. At Seaspan Ferries' Tilbury Marine Terminal on the Fraser River, the company has also introduced two battery-electric powered terminal tractors, which were procured with funding support from the port authority and the province. All three of Seaspan's shipyards have established a GHG baseline for emissions.

"We applaud our partners across the port community for their leadership in creating a more sustainable future at the Port of Vancouver. It's fantastic to see so many efforts underway by industry to test and adopt new fuels and technologies that, together, will help pave the way towards creating a zero-emission port by 2050 while supporting our vision for the Port of Vancouver to be the world's most sustainable port," said Silvester.

Partner quotes:

- **Seaspan Ferries** -- "At Seaspan Ferries, we are proud to be recognized as a leader in the utilization of advanced technology to reduce emissions. It is thanks to the support from the Port of Vancouver, that we were able to expand our use of 100% biofuel on our entire fleet, leading to a significant reduction in lifecycle CO2 emissions," said Harly Penner, General Manager, Seaspan Ferries Corporation.
- **Viterra** -- "Viterra is proud to participate in this renewable diesel testing pilot program at our Pacific port terminal as we continue to identify and implement viable ways to lower emissions in our operations. As a business with a global agriculture network, we recognize the need for collective action in order to achieve positive outcomes towards a sustainable future," said Kyle Jeworski, CEO of Viterra Canada.
- **Shell Canada** -- "Shell Canada is proud to support the Vancouver Fraser Port Authority and the port community to reduce emissions through the supply of low carbon renewable diesel. Shell sees working with partners in hard to abate sectors, such as the marine sector, as critical to enabling our target of being a net-zero emissions energy business by 2050. We are working with customers and partners in the marine industry to help accelerate decarbonization towards a net-zero emissions future for shipping," said Susannah Pierce, President and Country Chair, VP Emerging Energy Solutions Canada.

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About the Vancouver Fraser Port Authority and the Port of Vancouver

The Vancouver Fraser Port Authority is the federal agency responsible for the stewardship of the Port of Vancouver. Like all Canada Port Authorities, we are accountable to the federal minister of transport, and operate pursuant to the *Canada Marine Act* with a mandate to enable Canada's trade through the Port of Vancouver, while protecting the environment and considering local communities. The port authority is structured as a non-share corporation, is financially self-sufficient and does not rely on tax dollars for operations. Our revenues come from port terminals and tenants who lease port lands, and from port users who pay various fees such as harbour dues. Profits are reinvested in port infrastructure. The port authority has control over the use of port land and water, which includes more than 16,000 hectares of water, over 1,500 hectares of land, and approximately 350 kilometres of shoreline. Located on the southwest coast of British Columbia in Canada, the Port of Vancouver extends from Roberts Bank and the Fraser River up to and including Burrard Inlet, bordering 16 municipalities and intersecting the traditional territories and treaty lands of several Coast Salish First Nations. The Port of Vancouver is Canada's largest port, and the third largest in North America by tonnes of cargo. Enabling the trade of approximately \$240 billion in goods with more than 170 world economies, port activities sustain 115,300 jobs, \$7 billion in wages, and \$11.9 billion in GDP across Canada.

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