

For Immediate Release

Press release



Renewable energy for remote communities

ORPC Canada deploys its first hydrokinetic power system in Canada

October 25, 2022, Seven Sisters Falls – ORPC Canada today announced it is launching its first hydrokinetic power system in Canada called the RivGen® Power System which generates proven, emission-free electricity from free-flowing rivers and tidal currents. Installed in partnership with the Canadian Hydrokinetic Turbine Test Centre (CHTTC) located at Seven Sisters Falls, Manitoba, the RivGen Power System can provide baseload renewable energy to remote communities and will play a key role in supporting Canada’s goal for Net Zero Emissions by 2050.

The RivGen device was fabricated by Stace in Quebec, then shipped to Manitoba where the device was re-assembled near the CHTTC with the help of Canadian partners and local contractors: NRCan-CanmetEnergy, Hatch, University of Manitoba, Manitoba Hydro, Turtle Island Innovations, Able Crane, Dominion Divers and Griff’s Mechanical. ORPC Canada is helping Canadian suppliers that have historically worked in offshore oil and gas, to develop expertise in the marine energy sector here and internationally.

“ORPC hydrokinetic power systems are a game changer in remote regions of the world and play an important role in transitioning off-grid communities to predictable forms of renewable energy. This baseload electricity will play a strategic role in local microgrids in addition to intermittent energy sources such as wind and solar. Bringing stability and reliability to the grid, ORPC power systems will enable displacing up to 60 to 90% of diesel consumption in partner communities,” says Alexandre Paris, Chief Executive Officer, ORPC Canada. “With our proven technology, we are confident that our innovative power systems will become a permanent solution in Canada.”

Without the use of dams or impoundments, the RivGen Power System can provide baseload power for off-grid, remote and Indigenous communities, and industrial applications, and significantly reduce diesel use. Combined with energy storage and connected directly into existing grids using smart grid technology, ORPC power systems offer a cost-effective and sustainable alternative to diesel-source power generation.

ORPC power systems are built in modular fashion for easy transport, assembly, installation and retrieval. Specifically designed for reliable operation in remote and rural areas where heavy lift equipment and large marine vessels are not always available, the RivGen Power System is designed to plug into existing off-grid systems improving reliability or availability of electricity to the community.

Over the coming months, the RivGen Power System in Manitoba will be monitored, tested, and validated for further deployment in Canada. In addition, community leaders interested in adopting the RivGen Power System for use on their local microgrids will be invited to learn more through visiting the project at the CHTTC, receiving educational materials, and participating in trainings specifically for communities.

A proven baseload solution

“ORPC’s RivGen System has already shown outstanding safety and reliability in Alaska,” says Dr. Eric Bibeau, Associate Professor at University of Manitoba, and CHTTC Director. “We look forward to continuing to work with community leaders and policy makers to accelerate awareness and acceptance of this clean and renewable energy.”

ORPC’s project in partnership with the remote, tribal community of Igiugig, Alaska, set the record as the longest operating hydrokinetic project in the Americas. The RivGen Power System has proven to be successful by operating through three winters with temperatures going as low as -40 degrees C. As a result of environmental monitoring at the Igiugig project, comprising hundreds of hours of data, not a single injury or mortality to marine or aquatic life has been observed.

Key facts

- More than 2 billion people in the world have limited or no access to electricity.
- **700 million people rely exclusively on diesel power generation;**
 - **In Canada**, more than **290 remote communities** are dependent on fossil fuels to supply electricity for their basic needs.
- The potential for hydrokinetic energy in Canada is **over 57 Gigawatts**.
- **ORPC power systems can significantly reduce diesel emissions.** Over a 20-year lifecycle, a RivGen Power System can help communities to avoid up to 9,277 metric tons of CO₂eq emissions. **That’s the equivalent to saving over 3.4 million liters of diesel.**
- The RivGen Power System has had **no adverse impact on marine life**. Years of environmental monitoring over multiple projects and independent analysis of data collected have yielded no observed fish mortalities.

About ORPC Canada

Founded in 2015 and based in Montreal, ORPC Canada is responsible for developing a North American supply chain to provide marine renewable energy systems to customers in Canada and around the world. ORPC Canada is a subsidiary of ORPC, an internationally recognized leader in marine energy technologies,

innovation and operational excellence. It is headquartered in Portland, Maine. ORPC has an electronics and engineering laboratory in Brunswick, a marine operations center for tidal energy testing in Eastport, and a river systems test center in Millinocket. In addition to ORPC Canada, ORPC's international presence includes subsidiaries in Dublin (ORPC Ireland) and Punta Arenas (ORPC Chile). ORPC has enjoyed many prestigious awards over the years, including recognition as: one of the "Top Ten Most Innovative Companies in Energy" by Fast Company (2013), the first marine energy company to receive the National Hydropower Association's Operational Excellence Award (2016), "Innovator of the Year" presented by the Quebec Delegate General to New England on behalf of the Maine International Trade Center (2021), and the International Project Award from the Quebec Association of Consulting Engineering Firms, also in 2021. Visit <https://orpc-canada.ca>.

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