CANADIAN HYDROKINETIC TECHNOLOGY TESTING CENTER TO DEPLOY ORPC CANADA's LEADING RIVGEN® POWER SYSTEM

By Helping Off-Grid Northern Canadian Communities Transition from Diesel, Marine Energy Will Play a Key Role in Achieving Canada's Goal for Net-Zero Emissions by 2050

Montreal, May 24, 2022 – Canada's leading hydrokinetic testing center, the Canadian Hydrokinetic Technology Testing Center (CHTTC), and ORPC Canada will deploy a RivGen renewable power system with the support of Marine Energy Group/CanmetENERGY-Ottawa this summer.

ORPC's advanced RivGen Power System harnesses energy from free-flowing rivers and tidal currents without dams or impoundments. After proving itself over three winters in real world, harsh Alaska conditions, the Igiugig-RivGen Project is the longest operating hydrokinetic project in the Americas. Working in close partnership with the host indigenous community of Igiugig, ORPC has installed an energy storage system and smart grid controls, and with the addition of a second RivGen device in summer 2022, the fully operational RivGen Power System will provide baseload power for the local microgrid and reduce the community's diesel use by 60-to-90 percent.

"ORPC's RivGen System has shown outstanding safety and reliability over the past three years in Igiugig, Alaska. We look forward to monitoring, testing and validating the system for the Canadian market at the CHTTC. We are confident that this deployment will accelerate awareness and acceptance among community leaders and policy makers," said Dr. Eric Bibeau, Associate Professor at University of Manitoba, and CHTTC Director.

Innovative technology helps off-grid communities' transition away from diesel

"River hydrokinetic energy systems provide clean and renewable energy and have the potential to provide a reliable base load solution at a competitive cost and to be an attractive option for the urgent transition away from diesel fuel reliance by remote, off-grid communities," said Ghanashyam Ranjitkar, Senior Marine Energy Engineer in Natural Resources Canada's Energy Technology Sector. Accelerating the transition of off-grid northern communities from their reliance on diesel is a critical and essential step to achieve the goals of the Canadian Net Zero Emissions Accountability Act (Net Zero 2050).

680,000 Clean jobs predicted

"Today, river current devices like RivGen can sustainably and economically address the energy needs of many northern and remote communities as they transition off diesel while creating clean jobs in Canada," said Elisa Obermann, Executive Director of Marine Renewables Canada. Marine energy could create 680,000 jobs and save 500 million tons of CO_2 emissions according to the International Energy Agency.

"ORPC's RivGen Power System is now a proven technology. Working with the CHTTC is an essential milestone in our go-to-market strategy, which relies on continuous improvement and monitoring to support the remote communities with the most appropriate solution. ORPC's RivGen product is now competing in the global marketplace estimated to be upwards of $400 billion USD," said ORPC Canada President and Chief Executive Officer, Alexandre Paris. "Like wind and solar, our costs are expected to fall dramatically as we fill anticipated orders in Canada, the U.S. and South America. As this happens, we envisage supplying this solution to the more than 2 billion people worldwide with limited or no access to electricity—700 million of them rely on diesel fuel to operate their local grids," he continued. ORPC has responded to inquiries from 40 countries in the last 24 months due to strong global interest in

aggressive climate change mitigation and development of more localized and resilient renewable energy sources.

ORPC Canada, founded in 2015 and based in Montreal, is tasked with building 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 technology, innovation and operational excellence, headquartered in Portland, Maine. Also in Maine, ORPC has an electronics and engineering laboratory in Brunswick, a marine operations center for tidal energy testing in Eastport, and a newly announced river device testing 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 a long track record of prestigious awards, including recognition among the "World's Top Ten Most Innovative Companies in Energy" by Fast Company (2013), the first marine energy company to receive the National Hydropower Association's Award for Operational Excellence (2016), and most recently "Innovator of the Year" Award presented by Quebec's Delegate General to New England on behalf of the Maine International Trade Center, and Association des Firmes de Génie-Conseil Québec's International Project Award, both in 2021.

The objective of the **Canadian Hydrokinetic Turbine Test Centre** (CHTTC) is to create a national hydrokinetic turbine testing location that allows companies to test hydrokinetic turbine systems. The center is located on the Winnipeg River in the rural community of Seven Sister Falls, Manitoba. The CHTTC assists in accelerating Canada's development of hydrokinetic turbine technologies and helps address the identified pre-commercialization needs contained in the Canadian Marine Renewable Energy Technology Roadmap. In addition to the testing of hydrokinetic turbines, the CHTTC is pushing forward with novel resource characterization techniques. Researchers at the CHTTC have developed multiple flow measurement procedures that allow for the complete assessment of the hydrokinetic resource in a particular marine environment.

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Links to images:
ORPC RivGen® device prior to installation, Igiugig, Alaska 2021
RivGen device operating in the Kvichak River, Alaska, February, 2021