

CLEAN, PREDICTABLE, RELIABLE POWER from COOK INLET TIDES

COOK INLET: Outstanding Tidal Energy Resources

- Cook Inlet has a 12-meter tidal range, the fourth largest in the world, and tidal currents that flow at speeds up of to 10 knots.
- Tidal power is predictable, produces no greenhouse gases, and is one of the easiest renewable power sources to integrate with the grid.
- As tidal energy technologies mature and fossil fuel prices rise, power costs will become competitive with both old and new power sources.
- ORPC is developing tidal energy sites in Cook Inlet at East Foreland and Fire Island. We envision an eventual system of distributed tidal power installations in Cook Inlet that will provide a base load supply of clean, predictable electricity to the Railbelt grid.



ORPC PROJECT MILESTONES

- ORPC's Cook Inlet tidal energy project will begin with a pilot project at East Foreland, near the town of Nikiski, Alaska. ORPC is collaborating with Homer Electric Association on this pilot project, which will deliver clean tidal power to the Homer Electric grid while creating high-quality, sustainable jobs on the Kenai Peninsula. This pilot project could ultimately generate up to 5 megawatts of electricity, enough to power approximately 2,300 Kenai Peninsula homes.
- ORPC has received a preliminary permit from the Federal Energy Regulatory Commission (FERC) to assess Cook Inlet's East Foreland area and is in the initial stages of submitting an application for a pilot project license.

INNOVATION and ECONOMIC BENEFITS

- ORPC has been developing breakthrough tidal power technology and eco-conscious projects since 2004.
- ORPC's proprietary TidGen[™] Power System will be installed in East Foreland and connected to Kenai Peninsula's electric grid. The first TidGen[™] Power System will be installed and connected to the grid in Maine in the spring of 2012. In 2010, ORPC successfully deployed, operated and tested a beta version of this power system in Maine, which was the largest ocean energy device ever deployed in the United States.
- ORPC is a pioneer in advancing state-of-the-art site characterization and environmental monitoring techniques.
- ORPC has already brought more than \$3 million in public and private funding to Alaska. Company-wide, ORPC has secured more than \$40 million in public and private funding to develop tidal and river technology and energy projects. These efforts will continue to support development of the Cook Inlet tidal energy projects.
- To date, ORPC has collaborated with 37 Alaskan businesses. In addition to providing a clean, reliable and predictable source of renewable power, ORPC's Cook Inlet projects will bring sustainable, high quality local jobs and associated benefits to the local economy.
- The U.S. Department of Energy is funding a University of Alaska, Anchorage study that will help ORPC adapt its power system design to the unique environment of Cook Inlet. Funding supported the building of a laboratory flume for long term abrasion testing of key components.
- The Department of Energy also funded a multiyear ORPC study to develop monitoring technology for beluga whales in Cook Inlet, which will help assess potential interactions between the whales and ORPC's power systems.

COOK INLET TIDAL ENERGY PROJECT: Next Steps

- In the summer of 2011, ORPC collected initial data at the East Foreland site on current velocity and sea floor bathymetry. In 2012, ORPC will complete the FERC pilot project license application, continuing 2011's work and conducting a year of environmental monitoring.
- In 2013, ORPC hopes to install the first single-device TidGen[™] Power System at the East Foreland site for a full year of operation and monitoring. Under the plan, three devices will be added in 2014 to complete the 600kW demonstration phase with Homer Electric Association.
- ORPC is continuing development of a site next to Fire Island in Northern Cook Inlet that began in 2007 under a FERC preliminary permit. As the transmission line for the Fire Island wind project installation materializes, ORPC will continue project development efforts for the Fire Island tidal energy project.
- Over time, ORPC envisions a series of tidal energy installations distributed throughout Cook Inlet that will become a base load power supply, providing tens of thousands of Railbelt homes with clean, reliable, predictable power.
- Please visit our website for videos and updates on our projects in Alaska, Maine, and Canada.