



RivGen® Power System

Features

- Operates underwater with no visible surface features
- Advanced composite materials optimized for performance and component life
- Designed to be deployed by locally available vessels, equipment and contractors
- Towable pontoon support structure with “self-deploying/self-retrieving” remotely activated buoyancy system
- Low profile, advanced design cross-flow turbines
- Encapsulated generator specifically designed for leak prevention and long life in underwater operations
- Optimized drivetrain with high reliability and minimal friction losses
- Non-linear control system for operating in turbulent conditions



Videos

- [RivGen device operating in the Kvichak River, April 2020](#)
- [Sustainable, Off Grid Energy for Communities from Free Flowing Rivers--The Igiugig Project](#)



Specifications

- Rated power output:
40 kW at 2.25 m/s 80 kW at 3.5 m/s
- Max. operational water velocity: 3.5 m/s
- Total turbine capture area (two turbines):
18.0 m² (194 ft²)
- Planned maintenance interval: annual
- Major planned maintenance interval: 5 year
- Stream-wise length: 15.7 m (51.5 ft)
- Cross-stream width: 14.3 m (46.9 ft)
- Height: 3.5 m (11.5 ft)
- Assembled (dry) weight: 29,500 kg (32.5 tons)

Performance Highlights

- Operational since October 2019
- Over 15 million turbine rotations
- No observed negative effects to environment
- Survived Alaska winter (-40 C), frazil ice event and break-up of 2 ft lake ice flowing over it
- 2020 inspection and maintenance event conducted in partnership with highly trained local workforce. Re-surfaced and re-submerged device remotely, adhering to strict safety protocols amidst global pandemic. System in excellent overall condition.

ORPC, Inc. is in the business of improving people's lives and their environment through sustainable energy solutions. ORPC is one of just a few companies in the world to have built, operated and delivered power to shore from both a hydrokinetic tidal and river project. ORPC was the first marine energy company to be awarded the U.S. National Hydropower Association's Outstanding Stewards of America's Waters Award for Operational Excellence. ORPC's rise to a leadership position in the worldwide marine renewable energy industry is based on an impressive record of continuous improvement and success. For more information, visit www.orpc.co or email info@orpc.co.