# The U.S. MHK Resource

## Ocean Wave
- **2640 TWh per year**

## Tidal Current
- **445 TWh per year**

## Ocean Current
- **200 TWh per year**

### Top Early Markets

<table>
<thead>
<tr>
<th>Wave</th>
<th>Tidal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>Cook inlet (AK)</td>
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<tr>
<td>California</td>
<td>Western Passage (ME)</td>
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<tr>
<td>Oregon</td>
<td>Cape Cod (MA)</td>
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<tr>
<td>Washington</td>
<td>Puget Sound (WA)</td>
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<tr>
<td>Pacific Islands</td>
<td>Portsmouth (ME/NH)</td>
</tr>
<tr>
<td>Alaska Villages</td>
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</tbody>
</table>

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**NATIONAL RENEWABLE ENERGY LABORATORY**
Eastport and Lubec Area

High resolution tidal models enable detailed feasibility studies and assist with project design.
ORPC Mission

ORPC improves people’s lives, and their environment, through sustainable energy solutions.

Constantly pushing the boundaries of innovation, ORPC brings marine renewable energy technology and project development solutions to its community and industrial partners, specializing in microgrid to utility-scale river and tidal energy applications, and underwater mobile power supplies for offshore energy applications. With a growth-oriented business model and an engaged workforce committed to collaboration with all stakeholders and customers, ORPC delivers practical, high performing, sustainable solutions that provide clean, affordable energy while ensuring positive economic results for all.
**ORPC Background**

- Founded in 2004 to provide sustainable energy solutions from ocean and river currents
- 30 employees, numerous technology and research partners, including NREL, Sandia National Labs, Univ. of Maine, Univ. of Washington and Univ. of Alaska
  - HQ Portland, Maine; also Eastport (Maine), Seattle and Anchorage
  - Subsidiaries in Québec and Ireland (soon in Chile)
- Patented marine renewable energy (MRE) technology proven in both tidal and river applications
- Best-in-industry project development and permitting capabilities
- Continuous record of success in increasingly complex projects
- Business model acclaimed for inclusion and empowerment
ORPC’s Economic Impact in Maine

- Over 280 partners, contractors, service providers in 14 of Maine’s 16 counties
- 100 local jobs supported
- Over $37 million total spent statewide
- More than $6 million spent in Washington County alone
Community Efforts

- Informational meetings
- Marine mammal observation by UMaine and local citizens
- On-going use of local contractors
- Maine College Circle scholarships
Commercial RivGen® Device Launch
April 2019   Brunswick Landing, Maine

Maine Governor Janet Mills keynoted the celebration.
Operating RivGen Power System

Igiugig, Alaska, December 20, 2019
Igiugig microgrid - a model for coastal resilience

A smart microgrid anchored by an ORPC power system results in a high value solution for remote and coastal communities

- An ORPC powered smart microgrid can minimize the need for diesel generators.
- Provides baseload (firm) power.
- Energy storage and smart controls allow incorporation of intermittent sources like wind and solar.
Can a Small Maine Town’s Innovation Turn the Tides on Sustainable Energy?

Thank you

SBIR Program 2013 Tibbetts Award

The New York Times
The Search for Energy Takes a Turn Underwater

FAST COMPANY
MOST INNOVATIVE COMPANIES 2013
THE WORLD’S TOP 10 MOST INNOVATIVE COMPANIES IN ENERGY