

ORPC Alaska Update

House Resource Committee Renewable Energy Update

January 27, 2012



D. Douglas Johnson, Director of Business Development
Monty Worthington, Director of Project Development

Company Overview

- Ocean Renewable Power Company (ORPC) is a developer of hydrokinetic power systems and commercial projects for tidal, river and ocean current power generation.
- ORPC Alaska is a wholly owned subsidiary of Ocean Renewable Power Company.
- Business development activities are focused on the Bay of Fundy (Maine and Nova Scotia) and Alaska.
- Lead project is Maine Tidal Energy Project through which ORPC is developing power system technology and project sites. This expertise is being transferred to develop projects in Alaska.
- Founded 2004 - now 28 employees in Maine and Alaska.

Maine Tidal Energy Project Schedule

Expect to receive pilot project license from FERC (first-ever for tidal energy project in Maine, second-ever in U.S.) in February 2012.

Phase 1

Cobscook Bay
(2012-2013)

Phase 2

Kendall Head
(2014-2015)

Phase 3

Western Passage
(2015-2016)



ORPC's Economic Impact in Maine *Partners, Contractors, Service Providers & Vendors*

Androscoggin, Kennebec & Oxford Counties

Affordable Office Solutions
Connectivity Point
Northland Industrial Truck Co.
Second Street Consulting
Small Hydro East
The Barn

Cumberland & York Counties ORPC Corporate HQ

Bonney Staffing Center
Casco Bay Frames
City of Portland
Edison Press
Exhibit Source
Flotation Technologies
Writer, Camryn Hansen
Harbor Technologies
HDR/DTA Engineering
La Capra Associates
LMGi
Maine Composites Alliance
Maine Marine Composites
McAllister Towing
MER Assessment
George Monaco
Nelson & Wright
Pierce Atwood
W.B. Mason
Winter People

Penobscot, Somerset & Hancock Counties

Aerohydro Inc.
Alexander's Welding and Machine
Blue Hill Hydraulics
Burton G. Fisheries
CES, Inc.
Downeast Marine Resources
G. Drake Masonry

Land-Air Express of New England
Maine Maritime Academy
MariSources
NES Rentals
SGC Engineering
Stillwater Metalworks
University of Maine

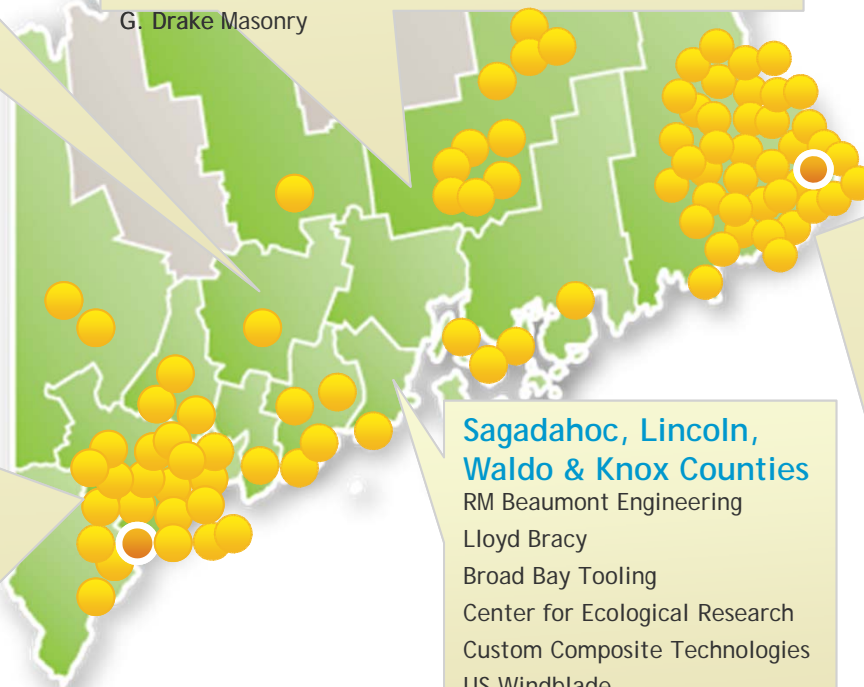
Washington County ORPC Eastport Office

AD Pottle Trucking
Archi-CHECK, LLC
Brayden's Future
Brewster Construction
Cobscook Bay Properties
Cobscook Bay Resource Center
Cooke Aquaculture
D&B Marine Salvage
DiCenzo Crane
Diving Services
Eastern Plumbing
City of Eastport
Eastport Port Authority
ECR Refrigeration
Federal Marine Terminals
Friends of the Boat School
Hamilton Marine
Captain Butch Harris

H&H Marine
Jamieson Diving
Jason Leighton
Kilby House
Town of Lubec
Maine Marine Technology Center
Milliken House
Moose Island Marine
Morrison Manufacturing
The Motel East
Murphy's Electric
Newell Construction
Perry Marine & Construction
Preston's Septic & Portables
Ricker Electric
Stanhopes Trucking
Dennis Turner
Turner Signs
Weston House B&B
Woodland Machine Works

Sagadahoc, Lincoln, Waldo & Knox Counties

RM Beaumont Engineering
Lloyd Bracy
Broad Bay Tooling
Center for Ecological Research
Custom Composite Technologies
US Windblade



Economic Impact in Maine *Job Creation and Investment*

From 2007 to 2011, ORPC has:

- Created or helped retain more than 100 jobs statewide
- Grown from 0 to 25 fulltime employees in Maine
- Spent over \$8 million on goods and services in thirteen of Maine's sixteen counties
- Created new R&D and other professional opportunities for young Mainers

In the Next 7-10 Years, the Tidal Energy Industry in Maine will:

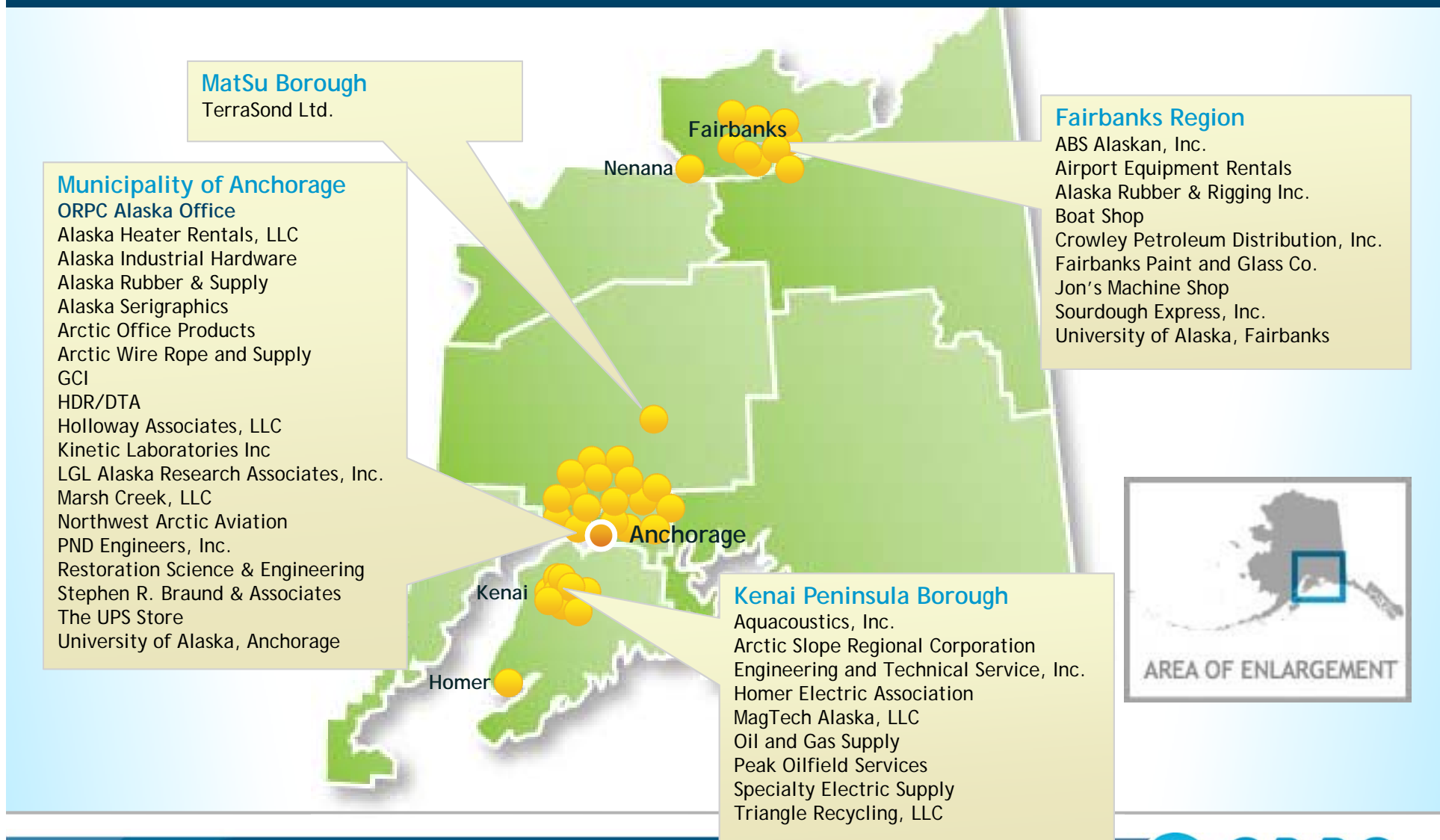
- Create 400 to 500 direct jobs, including new working waterfront jobs
- Attract investment of up to \$1 billion in Maine
- Create new, sustainable markets for Maine's world class composites industry



Impact of Tidal Energy in Alaska

- In Maine, ORPC has proven that tidal energy creates significant benefits including high quality, longterm jobs.
- With your help, ORPC is committed to bringing these same economic, environmental and energy diversity benefits of tidal and river hydrokinetic energy projects to Alaska.
- We're just getting started here, but economic benefits are already being realized in Alaska.

ORPC's Economic Impact to Date in Alaska *Partners, Contractors & Consultants*



East Foreland Project Layout

Demonstration Project
(estimated 600 kW capacity)

- Four TidGen™ devices
- Power & data cables to on-shore station in Nikiski



TIDGEN™ DEVICE



East Foreland Tidal Energy Project Deployment Schedule

	2014	2015	2016	Number of TGUs	Project Output
	Demonstration Phase				
Cook Inlet TidGen™ Array Project	Four TidGen™ Devices			4	600 kW
		Pilot Project			
Year One of Build-Out		Four TidGen™ devices and one 4-TGU OCGen™ module or two 2-TGU OCGen™ modules		8	1,200 kW
Year Two of Build-Out			Eighteen 175 kW TGUs in array of OCGen™ modules and/or TidGen™ devices	18	3,150 kW
Total Installed Capacity	600kW	1,800 kW	4,950kW	30	4,950 kW

Comparing Tidal Energy Market Incentives

Maine	Nova Scotia
Maine PUC program to incentivize up to 5 MW of Tidal Energy capacity through Systems Benefit Charge	Community Feed In Tariff (COMFIT) for: <ul style="list-style-type: none">• Devices under 500 kW• Arrays up to 2 MW
Proposed at 0.26 \$/kWh Contract term of 20 years	Approved at 0.65 \$/kWh Contract term of 20 years
Rate Payer Impact Estimated 0.03 cents/kWh or 15 cents/month (\$1.80/yr) for average house	Rate Payer Impact Estimated at less than \$1.60/month (approx. \$20/yr)

In both Maine and Nova Scotia, elected officials have determined that the economic benefits of tidal energy far exceed the minimal costs.

600kW Cook Inlet Power Cost Projections

Preliminary Estimate

	Funding required	Amount Spent in Alaska	AEA Funding Available	ORPC Cost Share	Additional needed
Total Project Capital	\$10,250,00	\$5,025,000	\$2,000,000 (secured AEA REF Rd 4)	\$950,000	\$7,300,000
Monitoring & Operation and Inspection, Maintenance & Repair 2013-2016 (3.5 yrs)	\$2,800,000	\$2,275,000	\$0	\$850,000	\$1,950,000
Total	\$13,050,000	\$7,300,000	\$2,000,000	\$1,800,000	\$9,250,000



Thank you!

This nascent industry in Alaska
needs your support to bring the
significant economic benefits of tidal
energy to the state.