Commercialization of Wave Power Technology

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Ocean Power Technologies

Ocean-tested PowerBuoy® Systems
Patented, Proprietary Technology
World-class Customers and Partners
Listed on Nasdaq and London’s AIM market
Rapid Commercialization Plan
Product Line Development Plan
Currently Developing Large Wave Parks
Experienced Management Team
Wave Energy and OPT’s Technical Advantages

Wave Energy
- The most concentrated form of renewable energy
- Widespread throughout the world
- Close to population centers
- Predictable & dependable
- Can be fed into the power grid or stored
- Relatively small site “footprint”

OPT’s PowerBuoy Technical Advantages
- Load factor of 30-45%
- Environmentally benign & non-polluting
- Safe for sea life
- No exhaust gases
- Minimal visibility from shore
- Scalable to high capacity power stations
- High power density

Early Market Initiatives

2TW of energy, the equivalent of twice the world’s electricity production, could be harvested from the world’s oceans (World Energy Council)

Commercialization Ramp-Up

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
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<tbody>
<tr>
<td>Hawaii: US Navy</td>
<td>PB40’s</td>
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<tr>
<td>Orkney Islands, Scotland</td>
<td>Scottish Government (PB150)</td>
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<tr>
<td>Reedsport, Oregon</td>
<td>FERC Application for 50 MW’s (PB150’s)</td>
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<td>Spain</td>
<td>Iberdrola (PB40 and PB150’s)</td>
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<tr>
<td>Coos Bay, Oregon</td>
<td>FERC Application for 100 MW’s (PB500’s)</td>
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<tr>
<td>Wave Hub, United Kingdom</td>
<td>British Government (PB150)</td>
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The PowerBuoy System

- PowerBuoy structure time tested
- Moveable float and stationary spar
- Innovative "smart" technology
- Power combined in undersea substation
- Simplified transmission to shore
- Scalable and modular for MW sized wave park applications
- In-ocean experience over 10 years
- Easily deployed
- Lloyd’s insured

PowerBuoys for Wave Power

- Initial commercial products rated at 150 kW
- 500 kW products available in 2010-11
- Wave park consists of array
- 1.5m to 7m operating range
- Automatically locks up for storm conditions
- Designed for 100 year storm surges
- Demonstrated survivability in wind and wave forces of hurricanes
**PowerBuoy Development**

**Decreasing Costs with Size**

- **PB150**
  - 150 kW PowerBuoy
  - Cost competitive with solar power
  - Target 50MW by 2010

- **PB500**
  - 500 kW PowerBuoy
  - Cost: competitive with fossil fuel
  - Target full scale production by 2012

**Environment & Permitting**

- Leaders in wave energy permitting
- Proactive Approach
  - Sensitive to regional concerns
  - “Do it right”
  - Appreciation of commercial time frame
- Two stage permitting process
  1) Community Involvement
     - Identify stakeholders
     - Inclusive constructive dialog
     - Consensus-based process
     - “Settlement Agreement”
  2) Licensing
     - Currently with FERC
     - Traditional Process
Wave Energy Technology (WET) Program

- Collaborative effort with the Navy and Marine Corps Base
- Driving technology toward higher power density
- Accomplishments working with Navy
  - Environmental Assessment (EA) with FONSI
  - Buoy design configuration proven
  - Hydrodynamic models validated
  - Buoy tuning demonstrated
  - Deployed two test buoys and generated power
- Current Activity
  - Advanced 40 kW Buoy ready for deployment in Honolulu
  - Multiple buoy ocean testing infrastructure in place

Oregon Projects

Collaborative effort with DOE and Oregon state leadership

Integrated Coastal Strategy

- Reedsport
  - Initially 2MW using PB150’s
  - Future build out to 50 MW
  - FERC Settlement Process
- Coos Bay
  - 100 MW using PB500’s
  - Beginning FERC licensing process (PAD)
- Newport
  - 100 MW using PB500’s
  - Preliminary permit filed
OPT Points of Contact

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