Improving the Economics of Marginal Fields through Technology Transfer from the Defence and Renewables Industries
Introduction

Who are OPT? - The world leader in “scalable” wave energy conversion technology (WEC)

What do we do? – OPT delivers innovative WEC energy solutions that cross industry boundaries

What is our strategy and vision? - to redefine how power is generated and used offshore in the Oil and Gas industry over the next 25 years.

Why is the O&G sector interested? - OPT’s “green” WEC technology has the potential to improve the public perception of the O&G industry, while delivering significant cost and operational benefits to operators that make currently un-economic fields viable
Wave Energy/O&G production correlation (1)
Wave Energy/O&G production correlation (2)
Case Study: US Navy Offshore Data Platform

Monostatic and Bistatic Detections on the Amalthea

- Sea Bright radar and AIS Rx
- Belmar radar
- Track of Amalthea from 11:00 to 1:00
- AIS data ends 20 km from receiver at Sea Bright

Amalthea
- MMSI: 240447000
- Ship Type: Tanker
- Length: 247 m
- Breadth: 40 m

The Center for Secure and Resilient Maritime Commerce (CSR)
Case Study Result: Improved performance

Integration of sensors to a stable reliable platform delivered an enhanced system with more accurate, high definition data to enable effective operational decisions.

Before

Amalthea Detections out to 20 km

After

Amalthea Detections out to 40 km

Doubled the detection range with use of LEAP

The Center for Secure and Resilient Maritime Commerce (CSR)

Track of Hurricane Irene

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"25 Year Vision" Roadmap

- **Development Milestones**
- **Technology Development Path**
- **O&G Industry Implementation Path**

**Power**
- 350W
- 40KW
- 150KW
- 500KW
- 2MW

**Time**
- 1Yr
- 5Yr
- 10Yr
- 25Yr

**Key Milestones**
- Diesel Replacement on unmanned platforms
- Pipeline Heating
- Meteorological Monitoring
- UV Garages
- Diesel Replacement on production platforms
- Minor Subsea autonomous applications
- Fully autonomous subsea production in deep/ultra deep waters
- Full Diesel Replacement
- Large autonomous subsea operations
- Smaller Powers for Non Production Applications
- Larger powers to augment subsea production & Industry wide Acceptance

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Current Potential O&G Applications

• Real-time on-site field monitoring/sensing systems for 4D reservoir analysis.
• Continuous pipeline monitoring and heating
• Advanced autonomous in-ocean security networks
• Real time on-site meteorological monitoring
• Power and point control for subsea step-out
Offshore Security Networks
Electric Tree Power & Control
Diesel Replacement for NUI’s
Prepositioned AUV Networks
Contact

For further discussions please visit us at Booth 135

Thank You & Questions

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