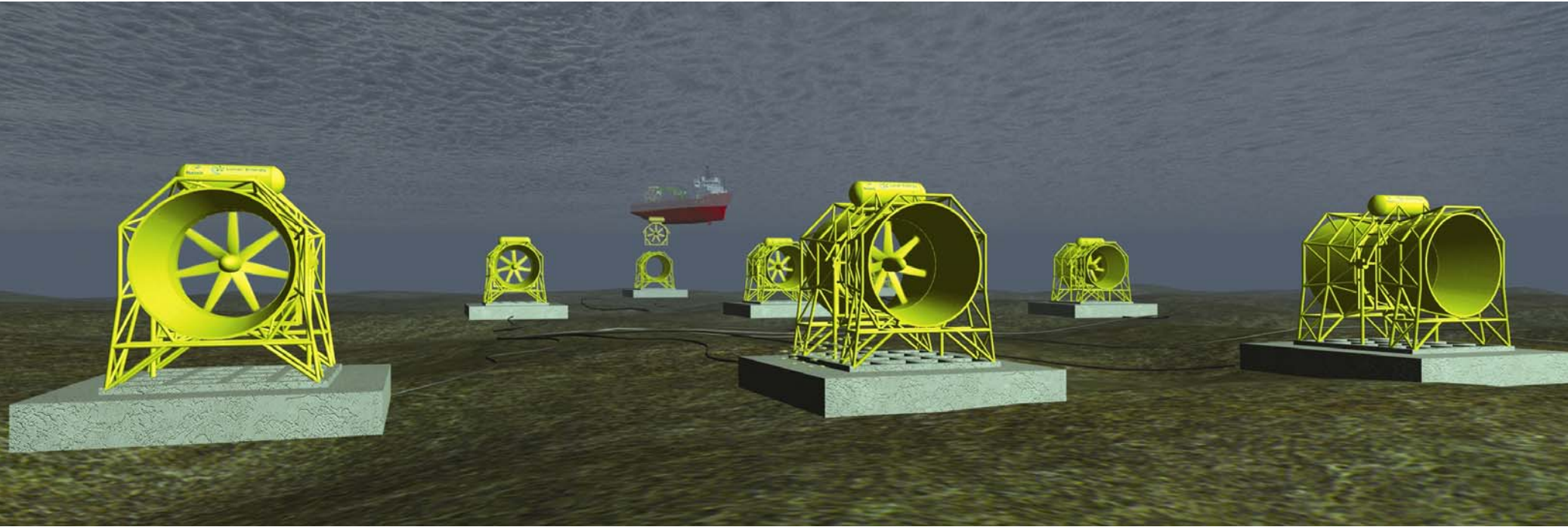


Presentation to
Hydrokinetic & Wave Energy Technologies
Technical & Environmental Issues Workshop
October 26-28, 2005
by
Simon C Meade, Chief Executive Officer

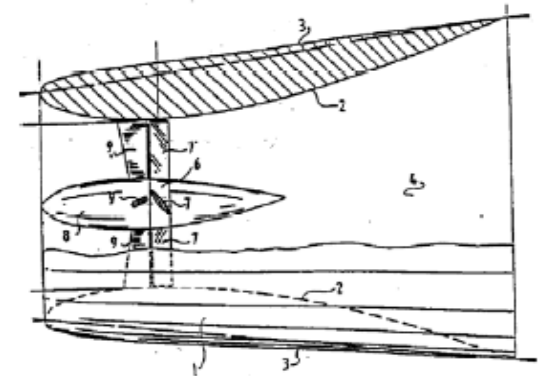


predictable • invisible • economic



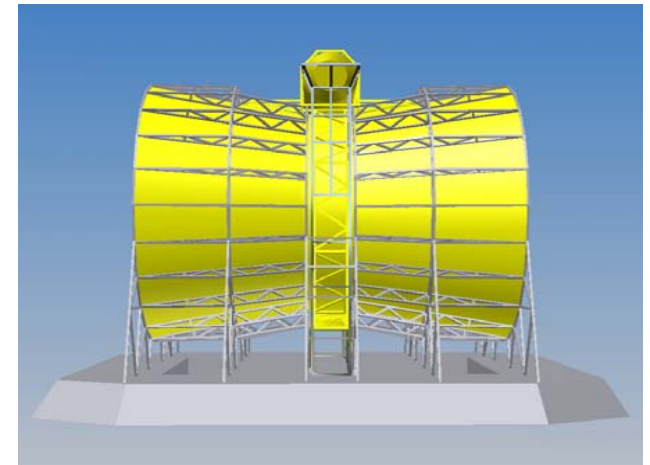
Technology Classification

- Horizontal axis turbine arrangement encased with shroud to form a duct
 - Mono directional requires yawing mechanism (expensive and/or difficult)
 - Bi-directional reduces augmentation
- Can be mounted:
 - Gravity Foundation
 - Buoyant, submerged and anchored
 - On a monopole

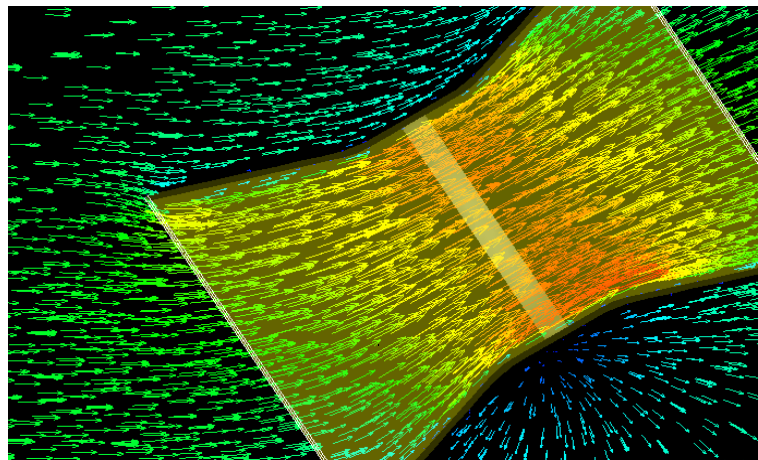
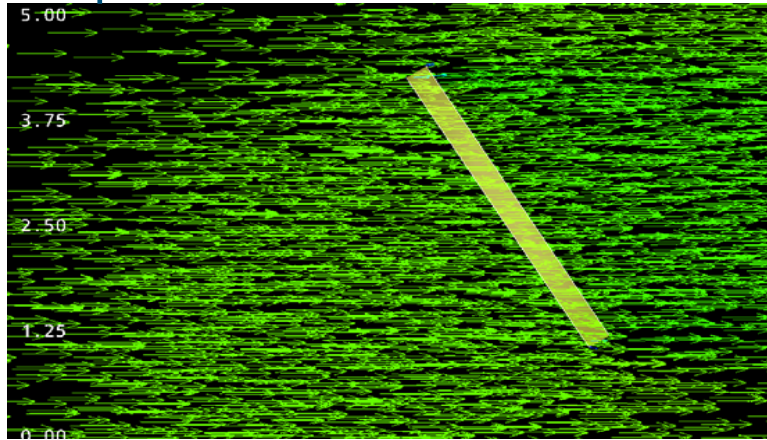


Sub Classifications

- 1. Complex. Accelerator used to create large increase in efficiency/power produced? (Aero Engine)
 - Tends to complex technology
 - High Cost
 - Therefore tends to small units
 - Clusters required
- 2. Simple. Accelerator used to reduce cost and complexity (O&M)
 - Units Large



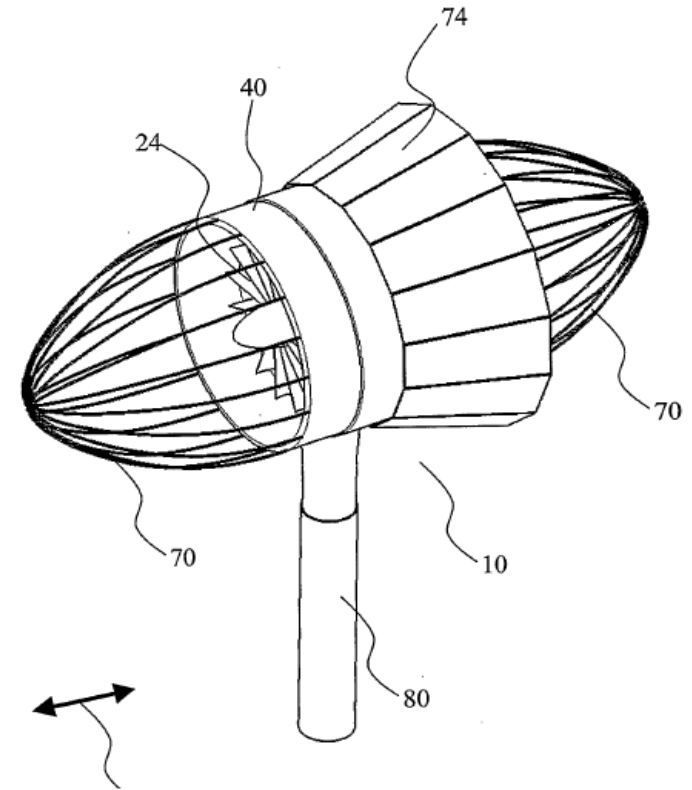
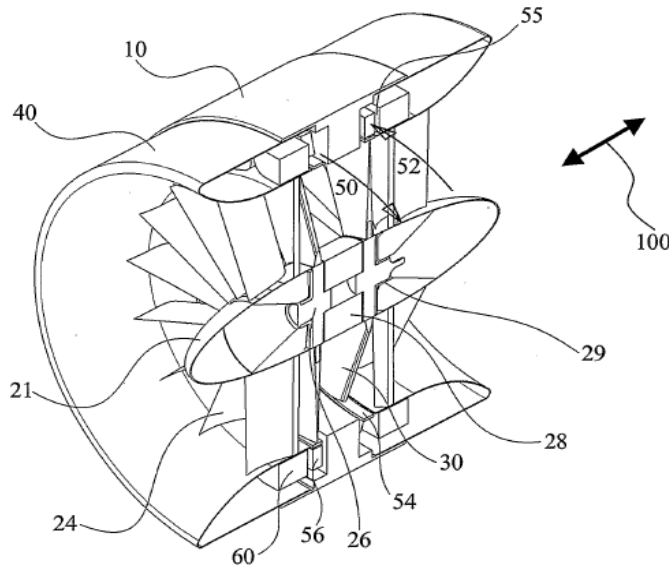
Benefit of a Simple Bi-Directional Duct



1/20th Scale Model Tests
April 2004

predictable • invisible • economic

Clean Current (Canada)



Features:

- Small Demonstrator (1-2m) 2006?
- Mono-Pile mounted or Buoyant?
- Bi-directional?
- Accelerator specifically for power augmentation
- Rotors (2) and Stators? Linear Generator

Underwater Electric Kite (UEK) (USA)

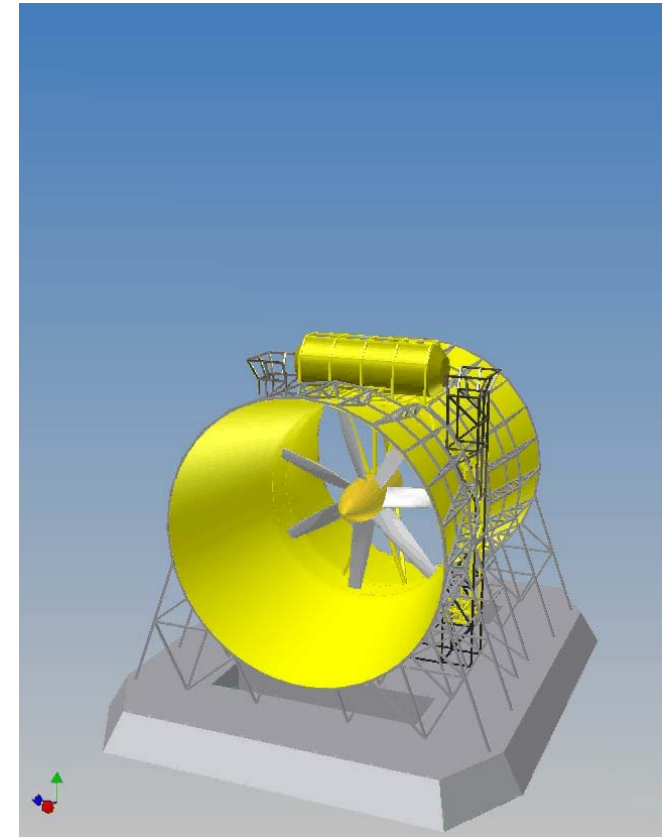


Features:

- Pre-commercial?
- “Kite” with buoyancy?
- Mono-directional
- Accelerator specifically for power augmentation
- High RPM
- Multi Rotors
- Small Scale depending on clusters to create meaningful power output

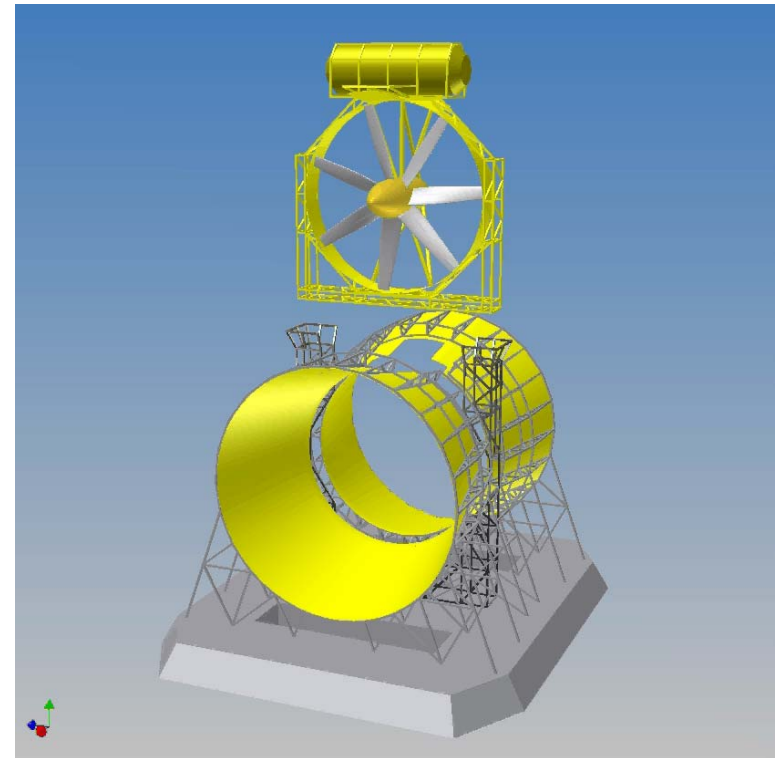
Lunar Energy RTT Technology

- Use of Duct
 - Removes requirement for Yawing Mechanism
 - Blades Fixed Pitch
 - No Gear Box (no dynamic seal in generation compartment)
 - Simple, Robust Technology
- Use of Gravity Foundation Base
 - Little or no seabed preparation required
 - Quick Installation
 - Not surface piercing



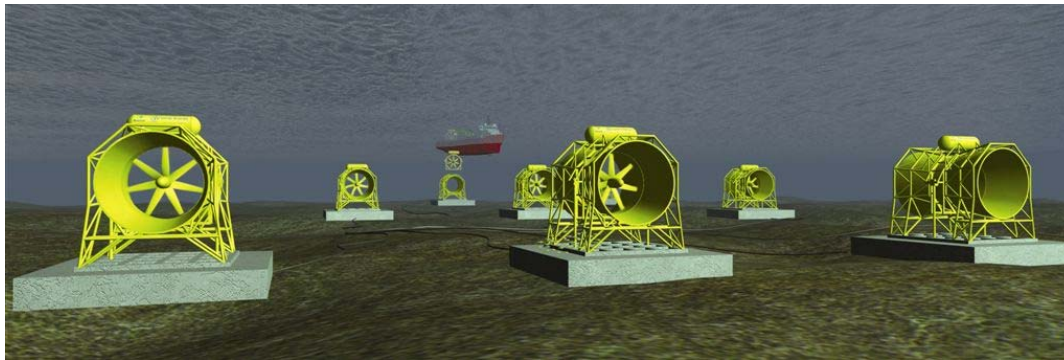
Lunar Energy RTT Technology

- Systems design allows for Innovative O&M procedure to be incorporated
- Not dependant on divers/ROVs
- Proven (North Sea Oil & Gas)
- All working parts contained in 'cassette', removed to shore for service



Environmental Benefits of using the RTT

- Low rpm
- No Dynamic Seal into Generators compartment – Significant reduction in risk of leaks
- Small Foot Print
- Installation not intrusive
- Little or no seabed preparation required
- Invisible from above the surface
- 30-60 ft clear draft for surface traffic



Technology Development

Stage of Development

- Clean Current – Small scale demonstration
- Underwater Electric Kite – Full Scale (?) Demonstration
- Lunar Energy - 1MW demonstration

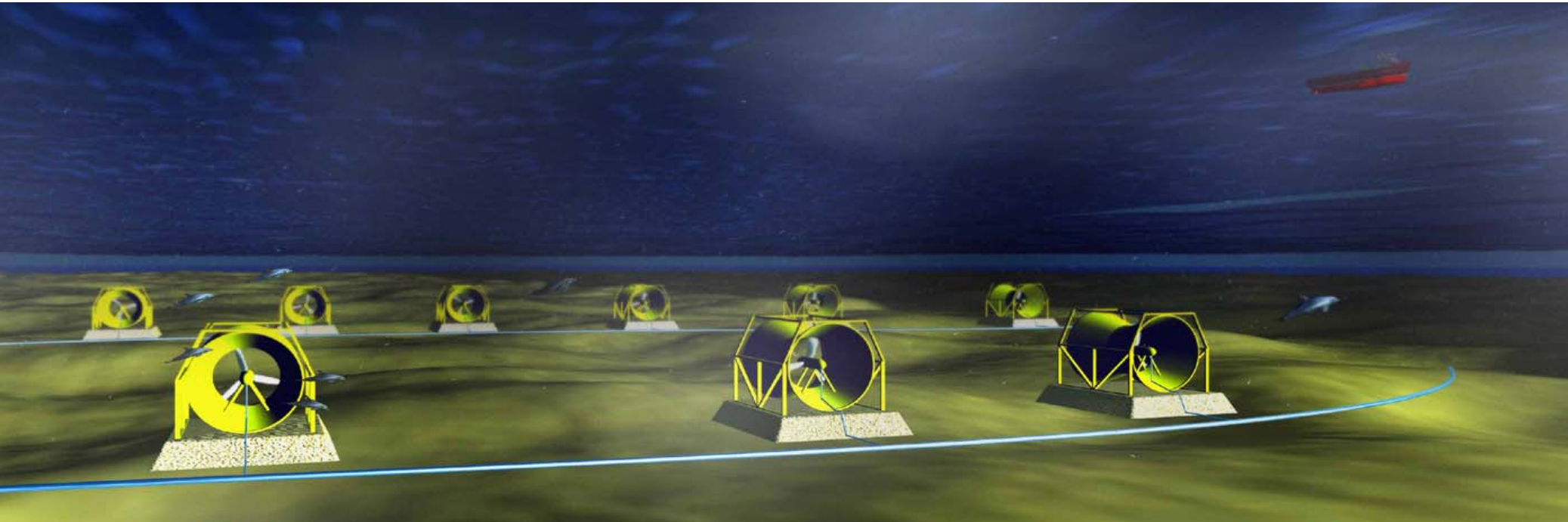
Barrier to Development

- ? Scale?
- ? Foundation?
- Time = \$

Markets = Investment = Technology!

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