


FORCE



**Fundy Tidal Energy
Demonstration Project
Project Update for the CLC
October 22, 2009**



The Project

Fundy Ocean Research Centre for Energy (FORCE)

- Not-for-profit corporation
- Board of Directors (Province, 3 developers, academia)
- Report on device performance assessment
- Clearing house for environmental data

Objectives:

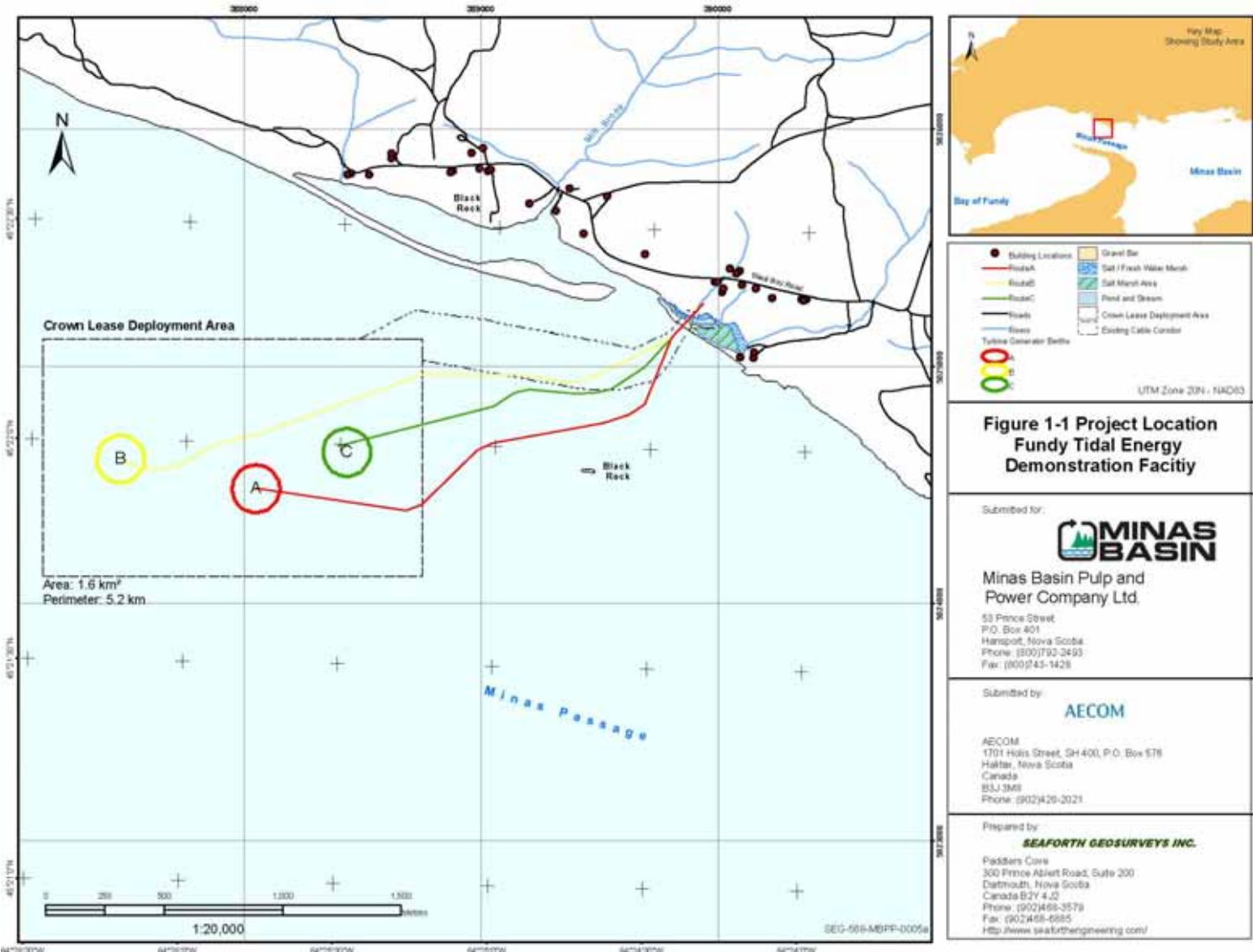
- To demonstrate and test underwater turbines for the generation of electricity from tidal currents.
- To assess impacts on the environment and impacts of environment on turbines.

The Structure:

- 3 underwater turbines will connect via underwater cables to the onshore center
- Energy will be generated, synchronized then transmitted via a 10 km onshore line to the existing electrical grid.

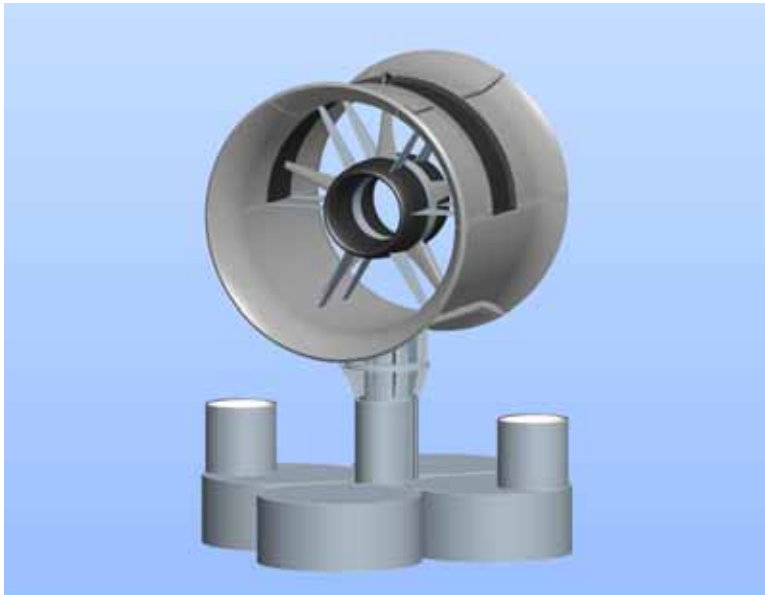


Project Location





Clean Current Power Systems Inc.

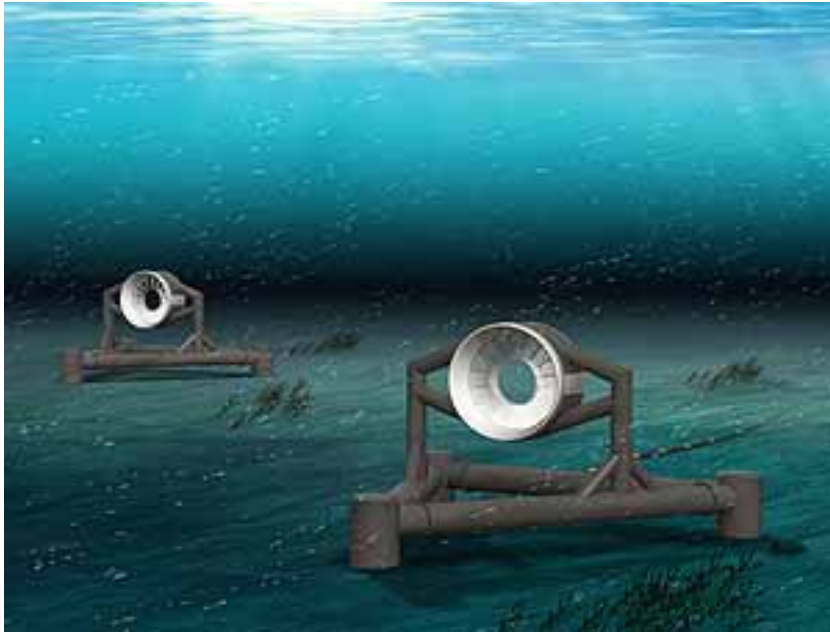


- Canadian company – B.C.
- Gravity base
- Ducted turbine
- 5 blades – Duct diameter = 20 m
- Low RPM (<20 rpm)
- Centerline above seabed ~20 m
- 15 m below LLW to top of turbine





OpenHydro



- NSPI partner - Irish technology
- Gravity base under construction in Dartmouth
- Ducted turbine -10 m dia.
- RPM ~30
- 15 m below LLW to top of turbine





Marine Current Turbines

- MBPP partner - UK Technology
- Gravity base or four pin pile foundation
- Open rotor, variable pitch
- Surface piercing structure
- Low RPM (~ 14 rpm)
- Blade diameter = 16 m
- Centerline above seabed ~ 13 m





Proposed Project Schedule

2009

- Oct/Nov: Deployment of NS Power/Open Hydro turbine
- Fall - Clearing and begin construction of onshore facilities

2010

- Summer – installation of the subsea cables/connection power line
- Summer 2010/2011 – remaining turbines deployed and connected to cables



Environmental Assessment Process

- Joint Federal/Provincial EA Review Process (90 day for a decision)
- EA Document Registered with Province on June 17, 2009 –predicted no significant environmental impacts
- 30 day Public Comment Period completed on July 17, 2009 - 8 submissions received
- NS Minister of Environment considered comments and EA Document – concurrent with the Federal Responsible Authority (DFO)
- EA was approved on September 15, 2009, with Conditions
- EA Document, Comments, Decision and Conditions – can be viewed at NSE's website: <http://www.gov.ns.ca/nse/ea>



Selected Conditions

- Completion of an Environmental Management Plan (EMP), which includes an Environmental Effects Monitoring Program (EEMP) acceptable to NSE and DFO – approved on Oct 16/09
- Formation of an Environmental Monitoring Advisory Committee (EMAC) to advise FORCE on the adequacy of the environmental effects monitoring programs – EMAC formed and provided with EEMP
- Community Liaison Committee (CLC) to act as liaison between FORCE and the community on the new project developments and feedback on community issues and concerns



What's New

Presentation on NSPI/Open Hydro Turbine Deployment this evening

FORCE :

- Press release on CLC and EMAC soon
- FORCE Website (in early November)
- 1-800 Complaint and Inquiry number (soon)
- Complaint Response Plan
 - Complaints and inquires via 1-800 number or CLC.
 - 1-800 number checked daily, response with 48 hrs
 - If can't be resolved, FORCE Board involved
 - All complaints and follow-up recorded, and provided to NS Environment



- Questions?
- Contact
 - Joe Kozak
Joseph.kozak@aecom.com
T-902-428-2028 C-902-499-2959
F-902-428-2031
 - Karen Verney
Karen.verney@aecom.com
T-902-428-2021
F-902-428-2031