

Nova Scotia Energy Research and Development Forum 2012

Justine McMillan, Dalhousie University

Title: Flow Field Measurements Obtained in Digby Gut, Nova Scotia

Research Advisor: Dr. Alex Hay

Category: Marine Renewable Energy

The development of small-scale tidal power is progressing in the three passages of Digby Neck as a result of the collaborative effort between Fundy Tidal Inc., Acadia University and Dalhousie University. The installation of the first in-stream turbine is planned for 2014 and resource assessments of Digby Gut, Petit Passage and Grand Passage are currently underway.

In this poster, I present the flow field measurements that have been acquired in Digby Gut using an array of acoustic Doppler current profilers (ADCP). These measurements, together with an unstructured grid numerical model, are used to investigate the dynamics of the tidal flow in the passage on both tidal and supra-tidal time scales. The potential of power extraction from several sites within the passage is also explored due to the recent approval of a 2 MW COMFIT project for the channel.