Outline

• The Company
• The Environment
• The Machine
• The Challenges
• The End
THE COMPANY
The Company

BRTP will develop tidal energy both locally and throughout North America

• Unique conditions in Nova Scotia
  ▪ Excellent resource
  ▪ Government support & commitment from the Province to support tidal power development
  ▪ Feed-in tariff established, PPAs in place

• First deployment of the Triton Technology
• Turbines have been demonstrated in the UK and Europe in a range of scenarios
Sub-sea Environment
Slack Water

June 7 2015

<table>
<thead>
<tr>
<th>Surface velocity</th>
<th>Flood -&gt; Ebb</th>
<th>Ebb -&gt; Flood</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.5 m/s</td>
<td>&lt; 1 knot</td>
<td>15 min</td>
</tr>
<tr>
<td>&lt; 1 m/s</td>
<td>&lt; 2 knot</td>
<td>35 min</td>
</tr>
<tr>
<td>&lt; 1.5 m/s</td>
<td>&lt; 3 knot</td>
<td>55 min</td>
</tr>
<tr>
<td>&lt; 2 m/s</td>
<td>&lt; 4 knot</td>
<td>1h 20min</td>
</tr>
</tbody>
</table>

< 0.5 m/s = < 1 knot
< 1 m/s = < 2 knot
< 1.5 m/s = < 3 knot
< 2 m/s = < 4 knot

SNAME & SUT, April 2016
THE MACHINE
FORCE Project
2.5 MW Tidal Platform ‘TRITON’

TRITON S40 - a platform that is designed to halve the cost of Tidal Energy*

Cut in speed: <1 m/s
• Rated speed: 4.0 m/s
• Ultimate design speed: 7.8 m/s
• Amount of turbines: 40 pc.
• Turbine diameter: 4.0 m
• Rated power output: 2.5 MW, grid AC
  • Phase 1 output: 1MW grid AC
• Water depth range: 50 – 62 m
• Wing spread: 37.6 m
• Max. pivoting radius: 80 m

*According to Black & Veatch study, 2012
TRITON Dimensions

48m

36m

48m

80m
Maintenance Mode
THE CHALLENGES
Additional Geophysical Information

- Need to core drill
- Subsidence of GBS
- Scouring around GBS
- Co-efficient of friction
- Type and holding power of anchors
Transport & Install GBS

- GBS 4400 dry weight
- Launch
- Pick-up
- Move to site
- Install
Installation of Triton

Top view (different scale)

Side view (different scale)

Sea level (40m – low tide)
Cable Connections

- Managing Triton umbilical
- Drymating Triton to existing subsea export cable
- Splitting and managing for T2