

OCEAN CONDITIONS WITH LABORATORY CONTROL

Bourne Tidal Test Site (BTTS)

is part of the New England Marine Energy Development System (NEMEDS), a network of development and test infrastructure. Located within a 100 mile radius NEMEDS offers developers testing facilities from TRL Levels 1-8 at university tanks, flumes located at the USGS S.O.Conte Anadromous Fish Lab, and the open waters of Muskeget Channel.

Bourne Tidal Test Site

MARINE RENEWABLE ENERGY

COLLABORATIVE (MRECo) is a nonprofit corporation that educates and involves all stakeholders (academic, industry, governmental/regulatory, and public interest groups) to promote the sustainable development of renewable energy in New England ocean waters.



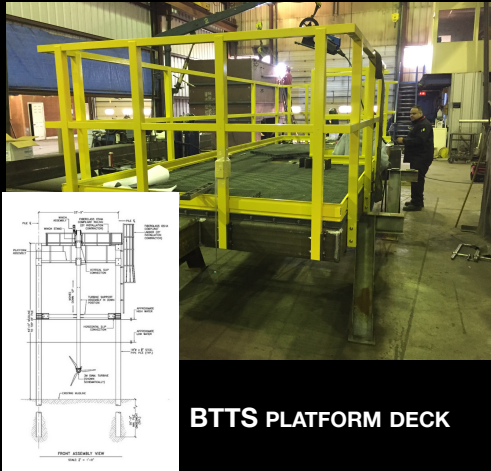
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Offered by
Marine
Renewable
Energy
Collaborative



MRECo offers a full suite of pre-permitted testing capabilities that will facilitate cost effective, rapid commercialization of innovative tidal power equipment. This infrastructure will provide partial scale testing that will complement full scale testing facilities in Canada and Europe.

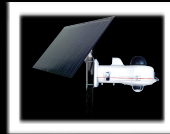


BTTs PLATFORM DECK



**DELL V5
PORTABLE
EDGE UNIT TO
BE DEPLOYED
ON PLATFORM
DECK.**

**SOLAR PANEL AND
TRANSMISSION
UNIT FOR
PLATFORM DECK.**



MRECo provides a very capable and flexible open architecture data acquisition system that will be installed atop the platform for power storage, monitoring and data transmission. The system supports standard interfaces (ie USB, RS232, RS422, RS485, CANBUS, etc.) and, therefore, can easily be integrated with Supervisory Control and Data Acquisition (SCADA) systems.

The architecture is based on the Dell V5 System Portable Edge Computing Unit (PECU). This system, which fuses edge and hybrid cloud analytics capabilities into a pre-integrated and compact outdoor security system, was developed specifically for remote Internet of Things applications. The system provides reliable power through its patented solar-powered smart power system and can support terrestrial and wireless communications. System support will be provided by Impact Labs.

The ocean is a harsh and unforgiving environment, and those developers who jump from laboratory to full scale have often paid the price with disastrous consequences. Many have concluded that the critical need is for testing in the ocean environment at partial scale. BTTs was developed specifically to meet this need.

BTTs WILL PROVIDE DEVELOPERS BENEFITS THAT INCLUDE:

- A fully permitted site at competitive rates
- Easy access from shore or small boat
- Winch powered lift arm to raise and lower turbine for maintenance
- Flows of over 2 meters/second with little wave influence at 7 meters depth.
- Ability to accommodate turbines up to 3 meters in diameter with minimal blocking.
- Sensor data acquisition and transmission system onboard.
- Technical support from BTTs staff and regional academic institutions.
- Location near Boston/Providence for transportation and manufacturing



**BTTs location
in Cape Cod
Canal with
water velocity
profile
provided by
WaterCube.**

