

Appendix 1

Cape Sharp Tidal Venture Update

ABOUT CAPE SHARP TIDAL VENTURE

Cape Sharp Tidal Venture (CSTV) is a joint venture between tidal energy technology developer, OpenHydro Technology, a Naval Energies company, and Halifax-based energy company Emera Inc. The CSTV project used OpenHydro's Open-Centre Turbine (Figure A.1). This turbine technology has four key components:

- a horizontal axis rotor;
- a magnet generator;
- a hydrodynamic duct; and
- a subsea gravity base foundation.

The turbine design has 10 fins, each approximately 2.4 m wide x 4.8 m long, manufactured from glass-reinforced plastic. The thickness of each fin ranges from 21 cm at the root (outer diameter) to 1.5 cm at the tip (inner diameter). The turbine is supported by a triangular-shaped gravity foundation subsea base structure. The entire unit sits on the sea floor without requiring drilling or any preparation to the substrate.

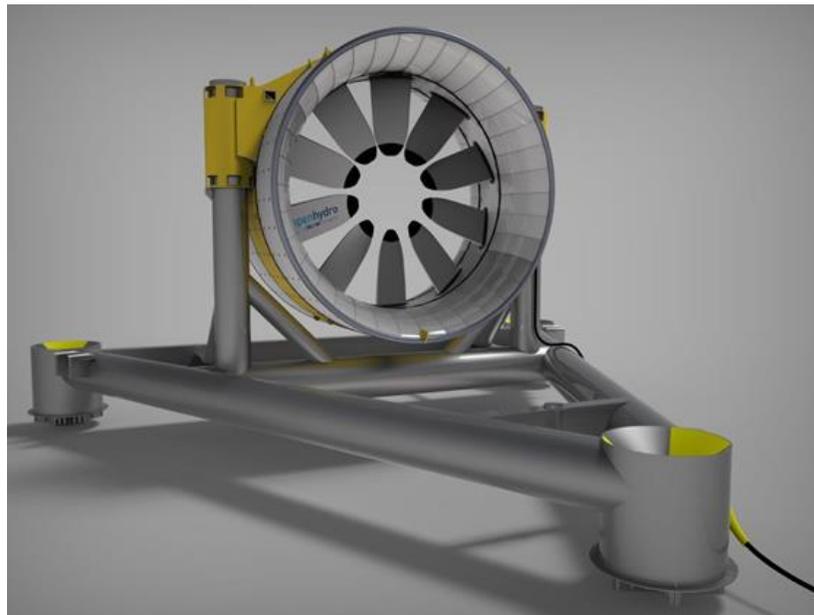


Figure A.1: An image of the OpenHydro Open-Centre Turbine design.

Previously, CSTV deployed a 2-megawatt (MW) in-stream tidal energy turbine at the FORCE site on November 7, 2016. This turbine was retrieved on June 15, 2017. Following retrieval, the turbine and subsea base were towed to port facilities in Saint John, New Brunswick. Details of the marine operations around the retrieval were provided in the 2017 Environmental Effects Monitoring (EEMP) Reports (www.capesharptidal.com/eemp/).

A second turbine was deployed on July 22, 2018 and on July 24, 2018 OpenHydro successfully connected the subsea cable to the turbine and confirmed establishment of communication with the turbine systems. Two days later, on July 26, 2018 Naval Energies filed a petition with the High Court of Ireland for the liquidation of OpenHydro Group Limited and OpenHydro Technologies

Limited. In order to ensure safety, the OpenHydro commissioning team isolated the turbine from the Nova Scotia Power Inc. grid, which consequently disabled the monitoring devices. On September 4, 2018 the turbine was re-energized and power was restored to the environmental sensors. At that time it was confirmed that the turbine was not spinning and that one hydrophone was not communicating.

As a result of the OpenHydro insolvency, on August 13, 2018, Emera formally notified OpenHydro and OpenHydro's provisional liquidator that the company was withdrawing from its involvement in Cape Sharp Tidal. These processes are ongoing in Q1 2019.

At this time, the turbine remains at the FORCE berth where it was deployed in July. The turbine rotor is stationary and some of the environmental sensors are operating and continuously transmitting data to shore. An internal component failure in the generator has caused sufficient damage to prevent the rotor from turning.

Q1 2019 OPERATIONAL UPDATE

The focus of operations during this reporting period (January 1 – March 31, 2019) was regular reports to regulators to confirm that the turbine rotor remains stationary (i.e., not turning).

On September 19, 2018, the Department of Fisheries and Oceans (DFO) confirmed a modification of monitoring requirements under the CSTV *Fisheries Act* Authorization to be comprised of a monthly status updates on the turbine to confirm that the rotor is not spinning by monitoring turbine status during the peak tidal flow of each month. This program began October 1, 2018. CSTV suspended reporting on March 1, 2019 due to lack of funds from OpenHydro Technology LTD (as it is presently in liquidation).

Acoustic Doppler current profiler (ADCP) data indicate that during the months of January and February the turbine rotor remained stationary.

NEAR-FIELD ENVIRONMENTAL EFFECTS MONITORING – Q1 2019 UPDATE

As indicated above, while FORCE completes site-level or 'mid-field' monitoring activities at the FORCE site, near-field monitoring (i.e., device-specific monitoring within 100 m of a turbine) is completed by individual berth holders. Like the mid-field monitoring programs, the near-field monitoring plans and reports undergo review by FORCE's EMAC and regulators.

Moving forward, each berth holder's monitoring activities will be included as appendices below. Updates from future berth holders will be provided as others develop and implement near-field, device-specific environmental effects monitoring programs.

As noted above, CSTV is currently not completing near-field monitoring at 'Berth D' since it has been confirmed that the turbine rotor is not spinning.

Data is still being collected by two hydrophones (a third was confirmed to be non-operating in March 2019) mounted in separate locations on the turbine rotor and the subsea base. The three ADCP devices mounted on the turbine are also collecting data on water flow.