

## Invitation

Proposals are invited from independent vendors, commercial vendors, academic institutions and individuals (hereafter referred to as “the Vendor”) to provide quotation on services required listed below to support the Fundy Ocean Research Center for Energy’s (FORCE) passive acoustic monitoring drifter program.

## Background and Context

FORCE is Canada’s leading facility to demonstrate and evaluate technology and undertake research on tidal in-stream energy devices. FORCE collaborates with developers, regulators, and researchers to study the interaction between tidal turbines and the dynamic environmental conditions in the Bay of Fundy.

FORCE’s Environmental Assessment (EA) received formal approval on September 15, 2009. One of the conditions of the approval required FORCE, as the Approval holder, to establish an Environmental Effects Monitoring Program (EEMP) covering a number of subject areas. These subject areas are Fish, Lobsters, Marine Birds, Marine Mammals, Acoustics, Physical Oceanography, Currents and Waves, and Benthic environment. Based on the data gathered under previous FORCE EEMPs undertaken from 2009 to 2013 and feedback from FORCE’s independent Environmental Monitoring Advisory Committee (EMAC), it was determined that the future FORCE EEMP should focus on five subjects: Fish, Lobsters, Marine Birds, Marine Mammals, and Acoustics (marine noise).

As stated in S. 5.0 of FORCE’s Environmental Effects Monitoring Program (available online at [www.fundyforce.ca/enviroment/monitoring](http://www.fundyforce.ca/enviroment/monitoring)), the purpose of FORCE’s acoustic monitoring program is to “compare noise levels between devices and predict effects on marine biota” (p. 34). In addition, FORCE’s EEMP describes the need to test different instrumentation currently under development by local acoustic engineering firms for drifting devices before and after device deployment at the FORCE site.

Additional information and background on FORCE and its EEMP studies completed to-date are available on FORCE’s website: [www.fundyforce.ca](http://www.fundyforce.ca).

## Services Required

The Vendor should provide separate comprehensive quotes on the following services:

### 1. Equipment Rental:

- a. Provide rental of one (1) passive acoustic monitoring drifter buoy that conforms to the specification listed below.
- b. Provide rental of two (2) passive acoustic monitoring drifter buoys that conform to the specification listed below.

#### **Passive Acoustic Drifting Equipment Specification:**

- Duration of rental: the rentals will be required for a period of approximately 30 days. This period may be divided into two distinct and separate 15 day (approximate) periods with an unknown amount of time between them. The Vendor should note how these two scenarios affect the quote provided.
- Schedule: the rentals will be required as early as July 4<sup>th</sup>
- Drifters must:
  - Have sufficient battery life for 10 – 15 drift days, approximately 6 hours each day, over the duration of the rental; or have a battery that is easily recharged.
  - Not require significant operator training.
  - Be easily deployed and recovered by hand by a single operator.
  - Be suitable for deployment at the FORCE CLA and surrounding areas in the Minas Passage.
  - Must provide data in WAV format.

#### **Rental Equipment must come with:**

- A single page specification sheet for the product
- Any relevant technical documentation
- Any necessary training (if required, training must not exceed ½ day in order to be considered “insignificant” as per the specification above.)

### 2. Equipment Rental & Data Analysis:

- a. Provide equipment rental as per “1. Equipment Rental”
- b. Provide data analysis and reporting, as described below, on the data collected by the drifters utilized in a drift program as described in “Passive Acoustic Drifting Equipment Specification.”

#### **Report should include, but not be limited to, the following expected sections:**

- Title Page
- Table of Contents
- Executive Summary
- Introduction
  - Background
  - Study Description

- Marine Life in the Study Area
- Anthropogenic Activity in the Study Area
- Methods
  - Data Collection
  - Data Analysis
    - Automated Methods
    - Manual Methods
- Results
  - Marine Life Detections
  - Anthropogenic Activity Detections
- Discussion
- Acknowledgements
- Literature Cited

**Note:**

- FORCE will provide the drifter plan, the field team and the vessel for this project. It is assumed that the field team will contribute to the report, and these contributions shall remain outside of the scope of this quote and shall remain the responsibility of FORCE.

## Future Requests for Quote

FORCE intends to release a second RFQ for the passive acoustic monitoring drift program that will request the Vendor to provide a quote on data analysis and reporting on a data set collected by drifters, potentially from multiple vendors.

Additionally, FORCE anticipates an option for vendors to bid on a data analysis and reporting project for a larger data set that includes bottom mounted passive acoustic data.

## Enquiries

Questions should be addressed in writing to Andrew Lowery, Technical Director, at [andrew.lowery@fundyforce.ca](mailto:andrew.lowery@fundyforce.ca).

## Quote Submission

Prices are to be quoted in Canadian dollars exclusive of HST. Please indicate unit rates in case additional work is required.

The response to this Request for Quote is due to FORCE by **4:00 p.m. on June 30<sup>th</sup>, 2016**. Please submit the Quote to Andrew Lowery, Technical Director, at [andrew.lowery@fundyforce.ca](mailto:andrew.lowery@fundyforce.ca).

## Reservations

FORCE reserves the right to reject any or all proposals and to award the contract in its entirety, or in part, whichever in its opinion best serves the interest of FORCE and its stakeholders. Proponents are solely responsible for their own expenses in preparing and delivering their proposal. Unless otherwise specified, all proposals submitted shall be irrevocable for ninety (90) calendar days following the closing date. It is the responsibility of consultants to identify all possible conflicts of interest that may affect services.