

Scope of Work Summary:

Nalcor Energy's Lower Churchill Project plans to execute a Sea Current and Directional Wave Measurement Program inclusive of a MetOcean Report in the Strait of Belle Isle.

The anticipated start date of the monitoring programs is June 1st, 2012. The duration of the program will be between 2 and 6 years. For 2012, the operational period will be from June to the end of December. From 2013 onwards, it is the desire of the Project to have the current meters operational for 365 days of the year and Directional Wave Measurement Program equipment operational for periods pending environmental conditions. Nalcor is interested in a fee for service solution inclusive of supply, install, maintenance, data processing and analysis.

The primary area of interest is the southwest end of the Strait of Belle Isle, between Forteau Point and Shoal Cove. Directional wave measurement and sea current vectors are required across the breadth of the Strait and sea current vectors through the water column. These data shall be used as inputs into the cable installation program which will be executed in 2015. These measurements shall be recorded 24 hours per day, 7 days per week and reported regularly to Company.

Fit for purpose equipment recommendations should be included and give appropriate considerations to various technologies, hardware, and structural/mechanical requirements, as well as the environment. High level details of mobilization/demobilization should be included, along with marine deployment and retrieval requirements such as vessel(s), durations, and seasonal considerations.

The MetOcean (meteorological and oceanographic) report will include the compilation and validation of the environmental influences across the Strait. The information provided within this report will be used for reference during operations in the region, as well as input into design, installation and protection of the cable system. The environmental influences that shall be included in the report are, without limitation:

- Seasonal weather and local effects;
- Average monthly, yearly, and seasonal rainfall amounts;
- Average monthly, yearly and seasonal snowfall amounts;
- Average daily, monthly, yearly and seasonal temperature including max & min
- Average monthly, yearly and seasonal wind speeds (inc 1,10,100&1000yr storm);
- Average current speeds per location, season and depth (Near surface, Near mid-depth, Near seafloor) (include 1yr, 10yr, 100yr and 1000yr storm case),
- Maximum current speeds per season and depth,
- Location of Oceanographic data acquisition equipment,
- Average monthly, yearly and seasonal Wave Height (Hs and max) and Wave Period (Tp) (include 1yr, 10yr, 100yr and 1000yr storm case)
- Tidal information,
- Average monthly seawater temperatures,
- Average monthly seawater salinity,
- Average monthly seawater density.
- The effects of joint criteria will also be evaluated (simultaneous occurrence of extreme values)(include 1yr, 10yr, 100yr and 1000yr storm case)

All information provided within the report shall be validated from as many reputable sources as possible with sources

and the sources accuracy provided. If any probabilities or logic is used to determine values an explanation on how these values were arrived at will be included as a separate report.