

LC-SB-002

Iceberg Tracking Program

Scope of Work Summary:

Nalcor Energy's Lower Churchill Project plans to execute an Iceberg Tracking Program utilizing radar technology in the Strait of Belle Isle. The anticipated start date of the program is May 1st, 2011. The duration of the program will be between 2 and 6 years. For 2011, the operational period will be from May to the end of September, and for 2012 and beyond, February to the end of September. Nalcor is interested in a unit rate solution inclusive of supply, install, maintenance, data processing and analysis.

The primary area of interest for radar coverage is the marine area at the southwest end of the the Strait, between Forteau Point and Shoal Cove, approximately bounded by the following coordinates in LAT/LON format DEG MIN SEC:

- 1) 51 23 51.1 N/57 04 52 W
- 2) 51 33 38.9 N/56 45 42.8 W
- 3) 51 23 0.8 N/56 34 40 W
- 4) 51 14 1.7 N/56 48 23.3 W

An additional area of interest may also be required for radar coverage, and is the marine area at the northeast end of the Strait, approximately bounded by the following coordinates in LAT/LON format DEG MIN SEC:

- 1) 51 35 39 N/56 47 52.7 W
- 2) 51 51 50.7 N/56 09 24.1 W
- 3) 51 37 21.9 N/55 52 53.8 W
- 4) 51 20 54.8 N/56 32 30 W

Equipment recommendations for the radar installation(s) should be included and give appropriate consideration to various technologies, hardware, and structural/mechanical requirements. The radar installation(s) should be of an optimized land based location for coverage of the entire target area(s), giving consideration to height and power requirements/proximity. The radar installation(s) should be equipped with visual confirmation equipment (some combination of video, IR, and still camera equipment) to provide size confirmation of tracked targets where possible. The radar installation(s) should provide some form of data feed from the remote location to an urban center for processing and analysis.

The radar installation(s) should be capable of tracking icebergs of size 12 m waterline length (bergy bit) and larger. However, detection and tracking of icebergs with waterline lengths of 50 m and above are the highest priority for Nalcor Energy.

Outputs from this program will be plots of tracked targets at specified intervals, providing speed over ground, heading, and coordinates, among others. Waterline length measurements of all tracked targets are also to be provided as accurately as reasonably practical at the specified interval. The level of accuracy shall be noted for all measurements.