

LC-SB-011

Subsea Rock Protection Design, Supply and Installation

Scope of Work Summary:

The Strait of Belle Isle submarine cable corridor is nominally 36 km in length and will consist of three HVDC submarine cables. The maximum water depth along the route is approximately 120m. Cable protection will be accomplished using subsea rock installation in deep water portions, and horizontally directional drilling at cable landfall locations. The Strait of Belle Isle is fraught with sea ice and icebergs for the majority of the year, strong currents, difficult bathymetry, harsh weather conditions and complex geotechnical features. There is a local fishery in the area as well as seasonal commercial shipping traffic for which subsea rock protection is required to mitigate the risk of damage.

A rock berm must cover each cable individually within the cable corridor between the Shoal Cove and Forteau submarine landfall exits. Cable and berm stability and integrity must be ensured along with protection of the cables with consideration for environmental conditions specified, local fishing activities and commercial traffic.

Nalcor Energy will require the Subsea Rock Protection Design, Supply and Installation contractor to provide, as a minimum, the following:

- Design of rock berm for protection for each of the 3 submarine cables
- Rock supply
- The rock size shall be optimized to maintain berm and cable on bottom stability without compromising the cable
- A means to monitor and verify rock size / specific gravity
- Rock shall be transported from quarry location to a suitable Newfoundland marine / loading facility and loadout vessel
- Mobilization and supply of a certified fit for purpose fallpipe vessel for offshore subsea rock installation campaign
- Marine subsea rock installation campaign using a **fallpipe subsea rock installation vessel** for placement of rock along installed cable on seabed
- Rock berm as-laid and as-built survey
- Construction of a marine terminal and loading facility in proximity to the work site, if optimal.