

OVERVIEW

The Fundy Ocean Research Center for Energy (FORCE) is Canada's lead test centre for tidal energy technology. FORCE works with industry, government, and researchers to study the interaction between tidal turbines and the Bay of Fundy environment.

FORCE acts as a host to turbine developers, providing a shared observation facility, submarine cables and grid connection at its pre-approved test site. FORCE has built considerable electrical infrastructure assets both onshore and offshore, installing approximately 11 kilometres of submarine power cable, an electrical substation, and underground cabling. Marine operations have steadily increased over the last 24 months; the next 24 months are expected to be equally active with the anticipated deployment of tidal turbines and their cable interconnections. As well, in response to Nova Scotia's allocation of approximately 20 megawatts to four developers at the FORCE site, FORCE is upgrading its electrical equipment to allow for greater transmission capacity.

FORCE also conducts baseline studies and environmental effects monitoring – providing reliable data is essential to our mandate, and acquiring this data in high-flow sites like the Minas Passage. Additionally, FORCE conducts applied research, with a focus on site data to better understand the environment and characteristics of the test area. Both these activities are being enhanced by Fundy Advanced Sensor Technology (FAST) program. FAST is building and instrumenting two underwater, recoverable platforms designed to capture a clearer picture of subsea conditions from the high flows of the Minas Passage.

To assist in the areas above – including subsea interconnections, electrical interconnection upgrades, FAST platform deployments, and marine operating procedures – FORCE seeks a person knowledgeable in both marine and electrical engineering.

The new **Director of Marine Engineering** will advise senior staff of FORCE on marine operations and equipment, and will conduct or oversee all of FORCE's marine activities, projects, and responsibilities, as well as manage upgrades and changes to the FORCE onshore electrical infrastructure.

Please see job description for more details.

Terms

This is a full-time, two-year contract (until September 30, 2017, possibly longer). Compensation will be based on qualifications and experience.

Anticipated Start: October 1, 2015

Director, Marine Engineering



Location: Nova Scotia (must be able to travel within province)

Applications:

FORCE will accept submissions until 4:00 pm, August 7, 2015. Please email your CV and letter of introduction in confidence to jessie.ross@fundyforce.ca with the subject header "Director, Marine Engineering"

FORCE welcomes submissions from all interested parties; however, only those candidates selected for interview will be contacted. For more information about this opportunity please e-mail jessie.ross@fundyforce.ca or call 902-406-1166 x0.

Job Description

Purpose:

- Coordinates all marine operations and onshore electrical projects conducted by FORCE or by other parties at FORCE.
- Provides technical management and leadership in the planning and implementation of projects including deployments, environmental monitoring and research projects, and electrical system upgrades and modifications.
- Develop guidelines for project implementation and deployment
- Supports board and staff to deliver FORCE mandate.

Scope:

- All activities related to offshore and onshore operations at FORCE.

Working relationships:

- Reports to General Manager for executing external contracts, for delivering the overall project, and for cost controls.

Work Performed

General:

- Provide management direction for all marine operations:
 - co-ordinate and plan deployments of monitoring equipment
 - ensure marine activities comply with FORCE's Safety and Environmental Policies and Standard Operating Procedures;
 - advise on and develop new Standard Operating Procedures as necessary;
 - co-ordinate and communicate as needed with technology developers, researchers, fishers, and others who may be active in the FORCE lease area;

- act as FORCE on-site representative for all FORCE marine and facility operations
- Assume responsibility for managing the onshore electrical system and substation facilities:
 - develop annual maintenance and operating plans with electrical engineering contract;
 - prepare maintenance and operating budgets;
 - technical liaison with berth holders;
 - ensure electrical and interconnection activities comply with FORCE's Safety and Environmental Policies and Standard Operating Procedures
 - oversee planned upgrade of substation from 5 to 25MW
 - supervise and conduct tests of the electrical system, including the data management system, to ensure that functionality matches design criteria
 - prepare and implement a quality assurance plan
 - obtain approvals required for permits, rights-of-way, and transmissions.
- Oversee installation of monitoring technologies:
 - develop a detailed project implementation plan;
 - develop engineering requirements and design criteria for the cabled network, from subsea terminations to the delivery of data to the data centre in conjunction with project partners;
 - develop a risk management plan for both financial and liability concerns;
 - identify opportunities to grow the project.
- Plan and track budgets:
 - report expenditures within FORCE and as required by funding agencies;
 - provide accountability in anticipation of agency audits;
 - identify potential problems and mitigation strategies.
- Other general duties:
 - maintain technical and financial records, in accordance with project office procedures;
 - serve as spokesperson, facilitator or participant in meetings and presentations to discuss marine projects or proposals;
 - provide timely notice to other FORCE staff of any potential activities or conflicts related to marine operations;
 - prepare reports as required;
 - negotiate with contractors;
 - procure services and equipment, using procedures established by FORCE

Qualifications

Education:

- Bachelor's Degree in Engineering (Marine, Electrical or Mechanical) or combination of technical diploma/marine certification with experience in the marine industry.

The ideal candidate will have the following desirable characteristics:

- Eligibility for registration in the Association of Professional Engineers of Nova Scotia.
- Five or more years of progressively responsible related experience in project management, including some supervisory experience, or any equivalent combination of education, experience, and training that provides the required knowledge, skills, and abilities.
- Experience with subsea engineering systems and electronic equipment.
- Experience with electrical engineering design and construction.
- Offshore or marine operations experience.
- Project/construction management in an ocean related field.
- Able to provide a high degree of project leadership while working effectively with the General Manager.
- Ability to plan, organize and monitor activities according to priorities, established schedules and deadlines.
- Knowledge of ocean engineering principles and operating conditions.