

Case Study

Power Infrastructure Solution - Juan de Fuca Project

Electrical systems engineering / Planning Studies & Analysis

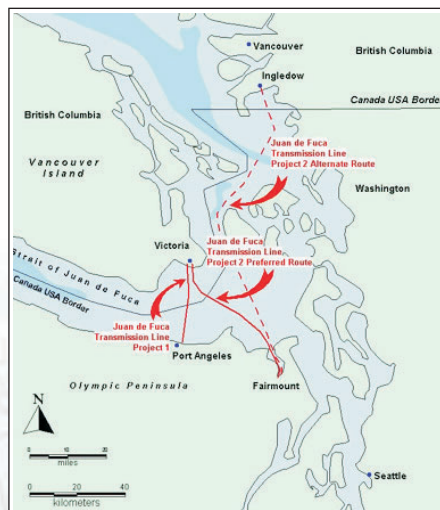
Sea Breeze Power Corporation has proposed to build an undersea high voltage DC cable connection between Vancouver Island and the Olympic Peninsula in Washington State.

Based on the state-of-the-art HVDC technology, Sea Breeze wants to lay 550 MW High Voltage Direct Current Light® power lines along the sea bed of the Juan De Fuca Strait linking the two countries, as a creative answer to the growing transmission constraints in the main electrical subsystems in the NW region of North America.

The Juan de Fuca Cable undersea solution would provide a new path for electricity delivery between B.C. and Washington. The resulting potential increase in transmission capability would strengthen both the B.C. and Washington grids and would benefit communities in both regions.

ZE Power Group developed the Marketing Study for the project and ZE Power Engineering was retained to provide the electrical systems engineering advice, project planning criteria and high level studies required to support the regulatory application before the NEB.

- Power flow simulations for different supply / demand scenarios in the Pacific North West grid.
- Studies related to contingencies in the Vancouver Island System
- System losses Analysis
- Reactive supply studies for the major systems to be connected.
- Investigating alternative substation configurations and performing an overall reliability study.



ZE Power Engineering is an engineering consulting firm, based in Vancouver, Canada, which caters specifically to the electric utility industry.

ZE Power Engineering is able to provide its clients with a comprehensive range of engineering services. The company provides services to generation, transmission and distribution companies. The primary services include:

- ◆ SYSTEM PLANNING
- ◆ DESIGN
- ◆ ASSET MANAGEMENT/QUALITY ASSURANCE
- ◆ COMMISSIONING

Each service area is guided by a principal engineer. The service areas feature a core group of senior engineers and technologists, all with extensive experience in the utility industry.

ZE Power Engineering focuses on clients' requirements, to develop close working relationships and an understanding of project issues and goals in today's increasingly competitive markets. The company's integrated expertise in all disciplines enables it to provide innovative and cost effective solutions and actions to complex challenges.



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