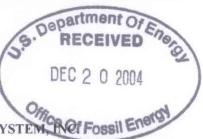
## UNITED STATES OF AMERICA BEFORE THE DEPARTMENT OF ENERGY OFFICE OF FOSSIL ENERGY



SEA BREEZE PACIFIC REGIONAL TRANSMISSION SYSTEM

DOCKET NO. PP- <u>29</u> 7

# APPLICATION OF SEA BREEZE PACIFIC REGIONAL TRANSMISSION SYSTEM, INC. FOR PRESIDENTIAL PERMIT FOR THE VICTORIA/PORT ANGELES PROJECT

Pursuant to Section 202(e) of the Federal Power Act ("FPA"), 16 U.S.C. § 824a(e), Executive Order No. 10485 as amended by Executive Order No. 12038 and 10 C.F.R. §205.320, et seq. (2003), Sea Breeze Pacific Regional Transmission System, Inc. ("SBPRTS") hereby applies for a Presidential permit authorizing it to construct, operate, maintain and connect facilities for the transmission of electric energy at the international border between the United States and Canada. In support of this application for a Presidential permit, SBPRTS states the following:

#### I Introduction.

SBPRTS is a developer of non-utility transmission projects in the United States and Canada. SBPRTS is proposing to develop a transmission interconnection between the bulk power transmission systems of Canada and the United States. The proposed facilities would interconnect with the British Columbia Transmission Corporation ("BCTC"), a Crown corporation of the Province of British Columbia, Canada, and the Bonneville Power Administration ("BPA"), a U.S. federal government-owned utility. SBPRTS proposes to connect the two transmission systems using direct current (DC) submarine cables under the Strait of Juan de Fuca, an international waterway.

The Victoria/Port Angeles Project (the "Project") is proposed to be a 550 MW bidirectional, controllable transmission system, comprised of HVDC Light™ (trademarked systems of ABB, Inc. denoting Voltage Source Converter technology) modules interconnected by submarine and underground terrestrial cables.

In Canada the Project would originate at or adjacent to one of two existing 230 kilovolt (230-kV) electrical substations in the vicinity of Victoria, BC, on Vancouver Island. Using the HVDC Light™ technology, SBPRTS would convert electricity from 230-kV to ±150-kV DC and transmit that electricity to the US border with Canada, first by underground terrestrial cables from the substation to the shore, and then to the border using submarine cable. At the international border, the mid-point of the Strait of Juan de Fuca, the submarine cable would continue into the territorial waters of the US to the shore in Washington State (see map in Attachment II), and continue underground to a BPA-owned 230-kV substation in Port Angeles, Washington. At the BPA substation the cable would enter another converter station and be returned to 230-kV. The entire length of the proposed transmission facilities is 22 miles consisting of 1-1/2 miles of land-based underground cable in Canada, 19 miles of submarine cable, and 1-1/2 miles of land-based underground cable inside the United States.

<sup>&</sup>lt;sup>1</sup> In the vicinity of the proposed international transmission project the US border with Canada is located within the Strait of Juan de Fuca, at the mid-point between the approximately 22-mile wide body of water.

The Project is proposed to be placed in service in late 2007 for the purpose of alleviating an expected capacity shortfall on BPA's Olympic Peninsula system.

Alternative cable routes will be addressed through the regulatory processes of Canada's National Energy Board and U.S. Federal agencies.

SBPRTS is seeking market-rate authority from the Federal Energy Regulatory Commission ("FERC") in order to sell its capacity at market rates pursuant to the results of the Open Season. The transmission facilities will be "open access" and subject to an Open Access Transmission Tariff of one of the interconnected utilities. The transmission facilities will also be operated and maintained by one of the interconnected utilities.

Transmission capacity on the Project's facilities that is not contractually obligated will be made available through utility or regional OASIS sites, and capacity contracted but not scheduled will be made available on the hour ahead OASIS markets.

SBPRTS does not own any power generation facilities and the Project is not dependent upon or related to any specific generating facility. Therefore, SBPRTS does not intend to seek an Export Authorization in connection with the Project.

## II. Presidential Permit Application.

### A. Information Regarding the Applicant.

# Legal Name of Applicant.

The legal name of the applicant is Sea Breeze Pacific Regional Transmission System, Inc.("SBPRTS"), a British Columbia corporation, certificate # BC0695182. The principal place of business of SBPRTS is Suite 1400, 333 Seymour Street, Vancouver, British Columbia, V6B 5A6, Canada.

#### Legal Name of All Partners.

Sea Breeze Pacific Regional Transmission System, Inc. is the sole applicant. SBPRTS is a joint venture between Sea Breeze Power Corporation, a publicly traded Canadian corporation, and Boundless Energy, LLC a Maine (USA) limited liability company.

# 3. Communications and Correspondence

All communications and correspondence regarding this application should be addressed to the following parties:

Tony Duggleby
Chief Executive Officer
Sea Breeze Pacific Regional Transmission System, Inc.
Lobby Box 91
Suite 1400
333 Seymour Street
Vancouver, British Columbia, Canada
V6B 5A6
604-689-2991
tonyduggleby@seabreezepower.com

John G. Osborn, or Gordon F. Grimes Bernstein, Shur, Sawyer & Nelson 100 Middle Street P.O. Box 9729 Portland, ME 04104-5029 207-774-1200 josborn@bssn.com ggrimes@bssn.com

# 4. Foreign Ownership and Affiliation.

Neither SBPRTS nor its proposed transmission facilities are owned wholly or in part by a foreign government or instrumentality thereof. SBPRTS does not have any agreement pertaining to such ownership by or assistance from any foreign government or instrumentality thereof. SBPRTS is a Canadian corporation.

### 5. Existing Foreign Contracts.

SBPRTS does not have any existing contracts or agreements with any foreign government, or any foreign private concerns, relating to any purchase, sale or delivery of electric energy. SBPRTS does not intend to apply for an authorization to export electricity.

#### 6. Opinion of Counsel.

A signed opinion of counsel that the project is within SBPRTS' corporate powers and that SBPRTS has complied with or will comply with all pertinent Federal and State laws is provided as Attachment I.

#### B. Information Regarding the Transmission Facilities Subject to the Presidential Permit.

From the US border with Canada, mid-point in the Strait of Juan de Fuca, the Project will involve approximately 11.5 miles of transmission line and an HVDC converter station in United States territory. The transmission line will be the continuation of a line that originates in Greater Victoria, BC, Canada. It will terminate at a converter station in Port Angeles, Washington, to be constructed within or in the vicinity of the BPA-owned Port Angeles 230-kV substation. The converter station and the BPA substation will be linked via an underground 230-kV AC connection. Approximately 10 miles of the transmission line routing will be buried beneath the sea floor in the Strait of Juan de Fuca, and approximately 1-1/2 miles of the transmission line will be buried beneath terrestrial public rights of way in the City of Port Angeles.

A joint interconnection feasibility study is being conducted by BPA, BCTC and SBPRTS. SBPRTS has also initiated a Regional Study, pursuant to Western Electricity Coordinating Council (WECC) guidelines, to evaluate the regional impacts and benefits of the Project. SBPRTS is a full member of the WECC in the "transmission provider" category, subcategory "developer".

### 1. Technical Description.

### (i) HVDC Cable.

The Project will comprise a bipolar circuit, rated at  $\pm$  150-kV DC. A positive and negative pole are bound in a single circuit together with a fiber optic communication cable. The cables are solid dielectric and are designed for both submarine and buried terrestrial installation. Submarine conductors are copper, 2000 mm², and each cable is 112 mm in diameter. Land conductors are aluminum, 2400 mm², and each cable is 94 mm in diameter. The submarine cables are bundled together for installation. The submarine cable uses an alloy metal sheath, PE protective sheath, galvanized steel armored wires and an outer layer of polypropylene yarn bonded with bitumen. The bipolar circuit creates no varying magnetic fields and only a weak net static magnetic field as the static magnetic fields surrounding each conductor mostly cancel each other because of opposite current flows in the two cables.

On land, the DC cable will be buried at a depth of approximately 1.5 m, and in sub tidal areas it will be buried via a minimum turbidity trenching method to a depth of 2-3 m. In inter tidal areas, Horizontal Directional Drill installation will be of a length and to a depth dictated by a variety of factors to be determined by on site assessment, including: topology, geology, sediment contamination, benthic habitat, archaeological and historic resources, fishing and recreational conflicts, navigation and existing utility structures.

Attachment II is a map that depicts the general routing. Final routing is subject to stakeholder input and the results of core sampling.

SBPRTS proposes to utilize existing utility rights-of-way. Sediment and land disturbance are expected to be a transitory phenomenon with rapid recovery to pre installation conditions either through natural processes or remediation/repair (in the case of terrestrial trenching).

Following installation, the cable will be marked by GPS coordinates on appropriate nautical, marine and highway/utility maps.

#### (ii) Converter Stations.

HVDC Light™ utilizes a Voltage Source Converter ("VSC") technology to rectify/invert AC power as opposed to the standard thyristor valve technology deployed in the latter decades of the 20th century. The primary differences are that thyristor technology is a current controlling device whereas, VSC utilizes Insulated Gate Bipolar Transistors to control voltage. The effect is that HVDC Light™ is capable of continuous automatic voltage control of the interconnected AC system, can create or absorb Reactive Power at either terminal simultaneously, has black start capability, is capable of reversing power flow instantaneously, and can operate in a range from 0 to 550 MW DC. It is considerably more compact owing to its modular component design and lower DC voltage, which does not require a valve hall for insulation.

Each converter station will have an overall footprint of approximately 1.5 acres. Building height can be minimized to residential standards and the only exterior equipment is the AC transformers, heat exchangers and Power Line Carrier (PLC) filters. Preliminary site alternatives, subject to land owner negotiations, are in the near proximity of the Port Angeles BPA substation in the US and the Esquimalt substation in Canada.

### (iii) AC Interconnections.

A one-line diagram of the Port Angeles substation is included as Attachment III. The interconnection will be on the south end - the 230-kV portion of the station. There are numerous alternatives for the physical interconnection, and a final one will be selected following the conduct of a facilities interconnection study by BPA.

#### (iv) Power Flows.

To be provided at the completion of BPA/BCTC/SBPRTS studies.

# C. General Area Map.

A map of the general location of the Project facilities is included as Attachment IV.

# D. Bulk Power System Information.

A map depicting the BPA bulk power system on the Olympic Peninsula and the SBPRTS interconnection points is included as Attachment V.

The Project will interconnect to the Port Angeles substation, which is fed by two 230-kV circuits running up the Olympic Peninsula from Shelton substation. From the Port Angeles substation power is stepped down for distribution to the Port Angeles municipal utility and load to the west, south and east of Port Angeles. On the Canadian side, the Project will interconnect either to the Esquimalt or Horsey substations, both of which are supplied by two 230-kV circuits originating at Duncan substation.

#### E. Environmental Impact Data.

### 1. Statement of Environmental Impacts.

An assessment is being prepared of the environmental impacts of the proposed facilities due to construction/installation, operation, maintenance, and decommissioning activities. This assessment will include an identification of areas that may be impacted, including: flood prone areas, wetlands, critical wildlife habitat, rare biota and communities, contaminated sites, navigable waters, commercial fishing, archaeological sites, Indian tribal land, and historic and recreational usage sites. The Environmental Assessment will be provided to DOE as Attachment VII as soon as it is completed.

#### 2. Stakeholder Process.

A process for identifying stakeholder concerns and including public and governmental interests in the design and evaluation of the Project has been initiated and will be described in a separate Attachment, to be delivered upon initiation of the Environmental Assessment.

#### 3. Known Historic Sites.

A list and mapping of known historic, archaeological and significant Native American sites will be provided in the Environmental Assessment.

### 4. Threatened or Endangered Wildlife, Plant Life and Habitat.

A list and mapping (where appropriate) of threatened and/or endangered resident and migratory animals and plants, as well as identification of critical habitats which could be impacted by the Project will be provided in the Environmental Assessment.

### 5. Alternatives to the Proposed Facilities.

A description of the alternatives considered by the applicant, as well as those previously evaluated by the interconnecting utilities will be presented in the Environmental Assessment.

#### 6. Contribution to National Interest.

At a minimum, the Project will provide a secure parallel transmission path to increase both reliability and capacity on the only major interconnection between the US and Canada from the Pacific Northwest to Minnesota. It will also increase access to substantial renewable energy resources in Canada to lessen the reliance on imported fossil fuel to meet future load growth in the region

A description of how the Project will contribute to national energy reliability, security, supply and cost will be augmented from the results of the Regional Interconnection Impact Study and addressed more fully in the Environmental Assessment.

#### Traffic.

The Project facilities do not require full time staffing, so there will be no traffic impact other than during the construction period. Construction period impacts will be addressed in a construction management plan to be submitted as part of the Environmental Assessment.

#### 8. Similar Facilities.

There is currently an HVDC converter and a submarine cable system interconnecting Lower Mainland British Columbia and Vancouver Island, with a number of submarine AC cables serving islands in the region. The only similar submarine HVDC Light<sup>TM</sup> system is the recently installed Cross Sound system between Connecticut and Long Island, New York.

# 9. Financing.

The Project will be financed by a combination of private equity and debt. Revenue will be derived from the sale of transmission and ancillary services as well as potential deferral of otherwise required utility upgrades. The revenue sources and structure will be determined by the results of an Open Season.

# 10. Other US and Canadian Approvals.

The Project will require a large number of US federal, Washington State and municipal approvals, as well as Canadian federal, provincial, and municipal approvals. The master permits, besides the Presidential permit, are a Canadian National Energy Board export facility construction/operation permit (Certificate of Public Necessity and Convenience) and a Washington State Environmental Policy Act Permit. The former has been initiated through the conduct of a mandated prior stakeholder process, and the latter is triggered by the preparation of a draft environmental assessment by the Department of Energy.

A complete list of permit requirements is contained in Attachment VI.

# 11. Right of Way Width.

No new rights of way will be required for terrestrial cable installations. Right of way for submarine installations will be determined through consultation with US and Canadian agencies having jurisdiction.

#### 12. Verification.

This application has been verified under oath by an officer of the applicant having knowledge of the matters set forth above.

Respectfully submitted,

Gordon F. Grimes John G. Osborn

BERNSTEIN, SHUR, SAWYER & NELSON Counsel for Applicant, Sea Breeze Pacific Regional Transmission System, Inc.

100 Middle Street P.O. Box 9729 Portland, Maine 04104-5029

PH: 207-774-1200 FX: 207-774-1127

# VERIFICATION

# THE PROVINCE OF BRITISH COLUMBIA

### CITY OF VANCOUVER

Mr. Anthony O. Duggleby, being first duly sworn, hereby certified under oath: That he is the Chief Executive Officer of Sea Breeze Pacific Regional Transmission System, Inc. ("Sea Breeze Pacific RTS, Inc."), the Applicant, that he has read the foregoing Application for Presidential Permit and knows its content, and that the same are true and correct to the best of his knowledge and belief.

Anthony O. Duggleby

Chief Executive Officer

Sea Breeze Pacific RTS, Inc.

Subscribed and sworn before me this \_\_\_\_\_ day of December 2004.

**Notary Public** 

LINDA J. HOGG

LANG MICHENE

P.O. BOX 11117

VANCOUVER, B.C.

TELEPHONE: 804-859 9174

My Commission Expires:

NIA

# ATTACHMENT I:

SIGNED OPINION OF COUNSEL

# Lang Michener LLP

**BARRISTERS & SOLICITORS** 

Vancouver Toronto Ottawa

1500 - 1055 West Georgia Street, P.O. Box 11117 Vancouver, British Columbia, Canada V6E 4N7 Telephone (604) 689-9111 Facsimile (604) 685-7084

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Direct Line: (604) 691-7459 Direct Fax Line: (604) 893-2382 E-Mail: lhogg@lmls.com

December 3, 2004

DELIVERED

File Number: 55435-1

U.S. Department of Energy Office of Fossil Energy Washington, DC 20585

Dear Sirs:

Sea Breeze Pacific Regional Transmission System, Inc. (the "Company") Application for Presidential Permit for the Port Angeles Project

We write to advise that we are the Solicitors in the Province of British Columbia for Sea Breeze Pacific Regional Transmission System, Inc., a company incorporated under the British Columbia Corporations Act.

As counsel for the Company we have reviewed:

- (a) the incorporation documents of the Company; and
- (b) draft of their Application to the Department of Energy, Office of Fossil Energy dated December 2, 2004.

On the basis of the foregoing, we are of the opinion that the project set out under their application for Presidential Permit for the Port Angeles project is within the corporate power of the Company.

The Company has further provided an undertaking to us that they have to date and will continue to comply with all pertinent federal and state laws as provided in the application for Presidential Permit for the Port Angeles Project.

Yours truly,

for Lang Michener LLP

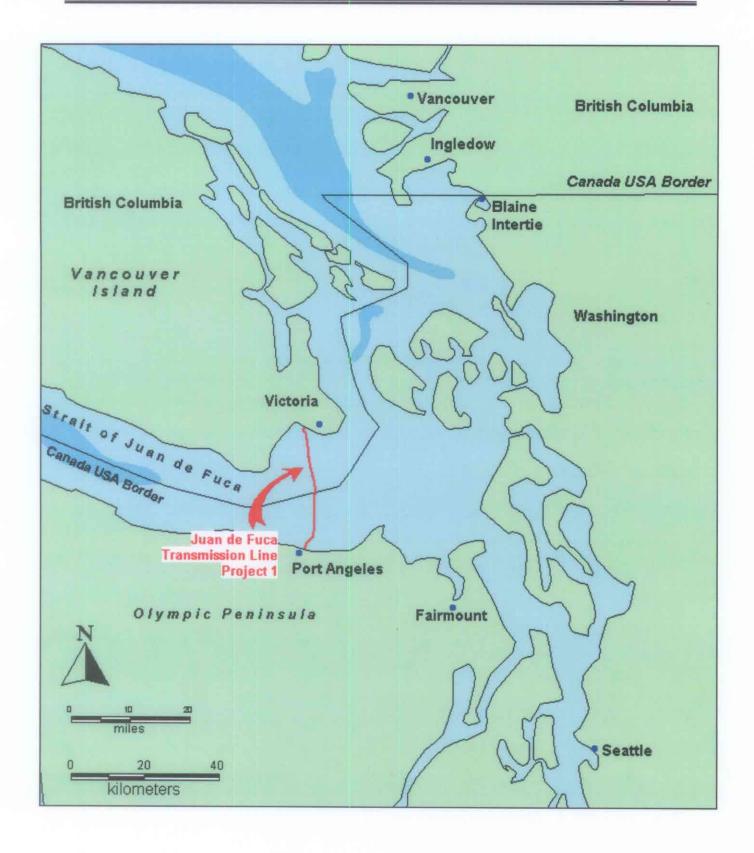
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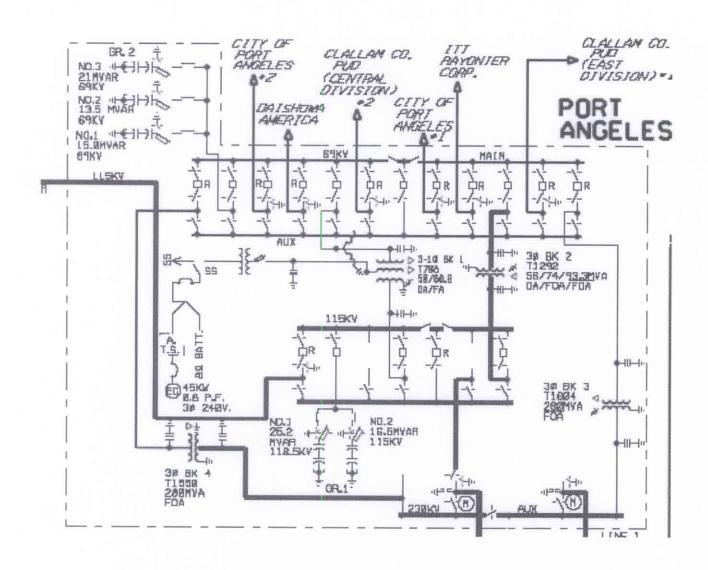
# **ATTACHMENT II:**

GENERAL ROUTING MAP



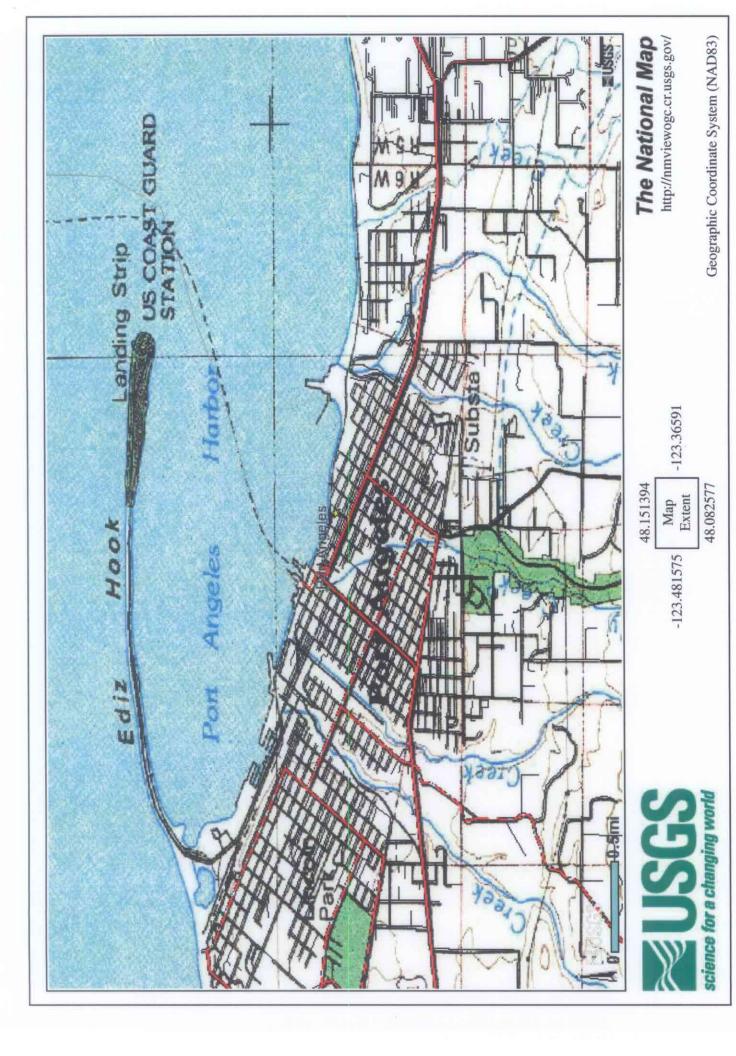
# **ATTACHMENT III:**

# PORT ANGELES SUBSTATION DIAGRAM



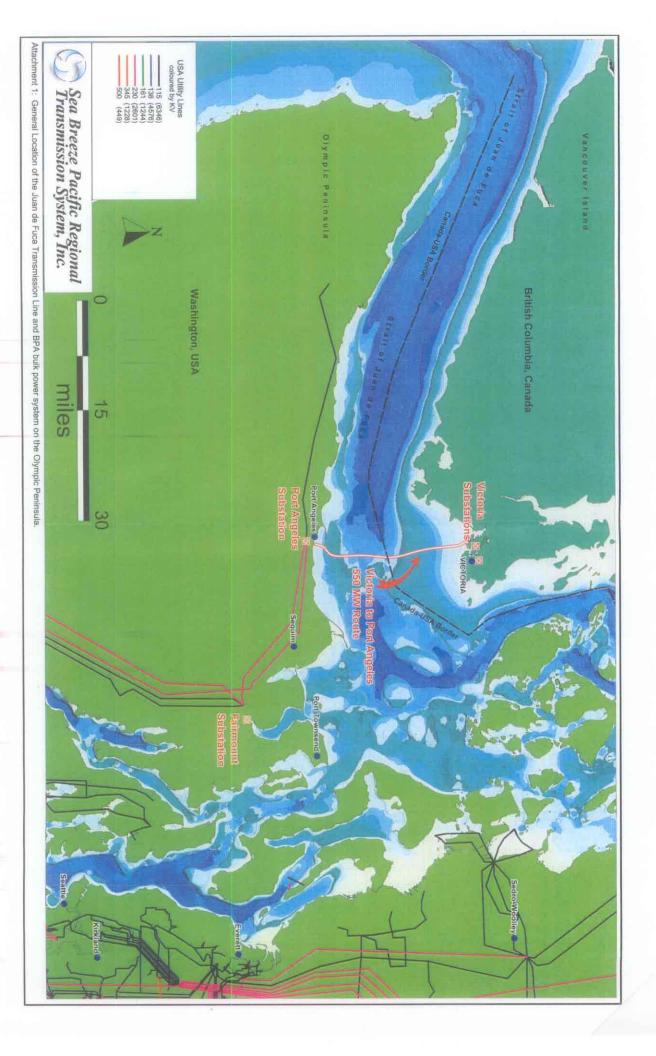
# **ATTACHMENT IV:**

# PROJECT FACILITIES MAP



# ATTACHMENT V:

# BPA BULK POWER SYSTEM ON THE OLYMPIC PENINSULA



# ATTACHMENT VI:

# LIST OF PERMIT REQUIREMENTS

CANADIA	CANADIAN PERMITTING	AMERICAL	AMERICAN PERMITTING
	Federal	ral	
Agency	Act and Permit/Approval	Agency	Act and Permit/Approval
Canadian Environmental Assessment Agency	Canadian Environmental Assessment Act and National Energy Board Act require a screening level Environmental Assessment.	Environmental Protection Agency	Federal Water Pollution Control Act requires permit for the disposal of deleterious substance into navigable waters – Section 401. Washington State
			Department of Ecology 1s also involved in this permitting.

	_		
AMERICAN PERMITTING		Endangered Species Act governs activities that may affect endangered species – Section 10. Fish and Wildlife Service is consulted by the US Army Corp of Engineers to provide recommendation on the impact of the Project on fish, wildlife and habitat.	
AMERICAN	al	Fish and Wildlife Service	
CANADIAN PERMITTING	Federal	Through the Canadian Environmental Protection Act, an Ocean Dumping Permit may be required.	
CANADIA		Environment Canada	

AMERICAN PERMITTING		National Marine Fisheries Service is consulted by the US Army Corp of Engineers to provide recommendation on the impact of the Project on fish and habitat.	Rivers and Harbors Act of 1899 requires authorization for works in, on, under, over, through, across a navigable water – Section 10	If a bridge is to be constructed, authorization under Section 9 of the Rivers and Harbors Act of 1899 is required.
AMERICAN	.al	National Marine Fisheries Service	US Army Corps of Engineers	US Coast Guard – 13 <sup>th</sup> Coast Guard District
CANADIAN PERMITTING	Federal	Fisheries Act requires approval/permits for.	National Energy Board Act requires a Certificate of Public Convenience and Necessity.	Navigable Waters Protection Act requires a permit for works to occur in, on, under, over, through, across a navigable water.
CANADIA		Fisheries and Oceans Canada	National Energy Board	Transport Canada, Canada Coast Guard

AMERICAN PERMITTING	State	Act and Permit/Approval	<ul> <li>Coastal Zone         Management Act         requires written         authorization to be         provided by the         Department of Ecology         for:         → Coastal zones         consistency.         → 401 justification.</li> <li>Clean Water Act         requires Construction         Stormwater General         Permit.</li> </ul>	Hydraulic Project Approval (using a Joint Aquatic Resource Permit Application) is necessary following State Environmental Policy Act review.
AMERICAN	S	Agency	Department of Ecology	Department of Fish and Wildlife
CANADIAN PERMITTING	Provincial	Act and Permit/Approval	Heritage Conservation Act requires, at the minimum, an overview of archaeological/historical resources – Section 12.	Environmental Management Act requires permit for waste disposal – subsection 14(1).
CANADIAL	Pr	Agency	British Columbia Ministry of Sustainable Resource Management, Archaeology	British Columbia Ministry of Water, Land and Air Protection

CANADIA	AN PERMITTING	AMERICAN	AMERICAN PERMITTING
Land and Water BC, Inc.	Land Act requires permit and statutory right-of-way and temporary workspace for Crown land.	Department of Natural Resources	Requires permit and lease for marine floor and shore.

CANADIA	CANADIAN PERMITTING	AMERICAN	AMERICAN PERMITTING
	Municipal	cipal	
Agency	Act and Permit/Approval	Agency	Act and Permit/Approval
City of Victoria	→ Electrical Permits	City of Port Angeles	→ Building permit.
	→ Construction Permits		→ Shoreline permit
Corporation of the	Construction Permits		→ right-of-way permits
Township of Esquimalt			
BC Safety Authority	Electrical Permits		

# IRREVOCABLE LIMITED POWER OF ATTORNEY

This IRREVOCABLE LIMITED POWER OF ATTORNEY is made December 3, 2004 by Sea Breeze Pacific Regional Transmission System, Inc. (The "Principal"), a corporation organized and existing under The Business Corporations Act of British Columbia, with its headquarters at Lobby Box 91, Suite 1400, 333 Seymour Street, Vancouver, B.C. V6B 5A6.

- Appointment. The Principal does hereby appoint Craig Gannett, whose principal place of business is at 2600 Century Square, 1501 Fourth Avenue, Seattle, Washington, 98101-1688, as the Principal's true and lawful agent and attorney-in-Fact ("Attorney in Fact") for the limited purpose hereinafter set out.
  - 2. Scope of Authority. The Attorney-in-Fact shall have the limited power and authority to receive service of process for any and all matters relating to the Principal's application before the Department of Energy to transmit electric energy to Canada, filed pursuant to 10 C.F.R. 205.300 et. seq.
  - 3. Irrevocability. This Power of Attorney is irrevocable by the Principal, subject only to the Principal's right to re-designate, or substitute the Attorney-in-Fact upon 30 days prior notice to the Department of Energy and Attorney-in-Fact.

IN WITNESS WHEREOF, the Principal has caused this Power of Attorney to be duly executed on this 3rd day of December, 2004.

Name: Anthony O. Buggleb

Title: Chief/Executive Officer

Name: Paul B. Manson Title: Secretary & Officer

This instrument was acknowledged before me on the 3rd day of December, 2004 by ANTHONY DUGGIEBY and PAUL BMANZER of Vancouver, B.C.

LINDA J. HOGG BARRISTER & SOLICITOR LANG MICHENER 1500 - 1055 WEST GEORGIA STREET P.O. BOX 11117 VANCOUVER, B.C. V6E 4N7 TELEPHONE: 604-689-9111