MacLaren, Les MEM:EX

From: MacLaren, Les MEM:EX
Sent: Tuesday, December 10, 2013 5:46 PM
To: 'Paul B . Manson'
Cc: Wieringa, Paul MEM:EX; McNeil, Kevin MEM:EX
Subject: October 16, 2013 Firm Power Proposal

Hi Paul:

I am in receipt of your letter dated December 2, 2013 related to the above topic. I understand that you have recently met with BC Hydro, who responded that they will not be pursuing your proposal at this time. That is the Ministry's view as well.

Regards

Les MacLaren
Assistant Deputy Minister
Electricity and Alternative Energy Division
Ministry of Energy and Mines
Office: 250 952-0204
Fax: 250 952-0258

MacLaren, Les MEM:EX

From: Jacobs, Jake GCPE:EX
Sent: Friday, November 1, 2013 11:04 AM
To: MacLaren, Les MEM:EX; Wieringa, Paul MEM:EX
Cc: McNeil, Kevin MEM:EX; Jacobs, Jake GCPE:EX
Subject: Media Request: Sea Breeze
Attachments: 131028SBNR.pdf

Les, Paul

The reporter says BC Hydro indicated to him that Sea Breeze was participating in their IRP process, which had closed on Oct. 18. However, he says the press release (attached) is from Oct. 28 and specifically mentions the ministry, not BC Hydro. So he says it is the impression of Mora Scotta, from BC Hydro, that Sea Breeze may have sent a separate term offer sheet to the ministry, outside of the IRP process.

He would like to check this with Paul Manson at Sea Breeze, but he's in the Philippines and not available. He is asking us if we have an offer from Sea Breeze that is separate from the IRP process? And if there is such a submission, he would like to know what the next administrative steps are in responding to such an offer? His deadline is 2pm.

Thanks, Jake

MacLaren, Les MEM:EX

From: Sandve, Chris MEM:EX
Sent: Wednesday, November 27, 2013 3:56 PM
To: MacLaren, Les MEM:EX
Cc: Nikolejsin, Dave MEM:EX
Subject: Re: Sea Breeze Power Projects

Sounds good - will do - thanks

Sent from my iPhone

On 2013-11-27, at 3:45 PM, "MacLaren, Les MEM:EX" <Les.MacLaren@gov.bc.ca> wrote:

> Hi Chris:
>
> Both Dave and I have spoken to Mr Bailey today. We both have been very frank with him as to why the government does not support the project or the proposed term sheet. He gets it (he cam on after the "term sheet"). BCH has a meeting scheduled with Seabreeze on December 9.
>
> I think Frankie should respond now to the incoming e-mail indicating that you understand that he has spoken with the DM and ADM and is aware of the Province's position, that BCH will be meeting with them to respond to their term sheet which was submitted into their IRP process, and that no further meetings will be scheduled at this time.
>
> Les
>
> **From:** Sandve, Chris MEM:EX
> **Sent:** Wednesday, November 27, 2013 1:09 PM
> **To:** MacLaren, Les MEM:EX
> **Subject:** FW: Sea Breeze Power Projects
>
> Hi Les
>
> See below. An individual from Sea Breeze has been trying to contact Frankie. Do you know if Sea Breeze has met with BCH on this project and what message BCH conveyed in that meeting (I assume they would have conveyed that government and BCH have no interest in considering this project). I am happy to call this person and advise them that the Minister is not interested in meeting with them to discuss this project but let me know if you think an alternate approach is more appropriate (i.e. should you or Paul call them or should we direct them back to BCH)
>
> Thanks
>
> Chris
>
> **Chris Sandve**
> Ministerial Assistant to the Hon. Bill Bennett
> Minister of Energy and Mines and Minister Responsible for Core Review
> Office: 250-953-0942 | Cell: 250-818-4306 | E-mail: chris.sandve@gov.bc.ca
>
> **From:** Nash, Frankie W MEM:EX
> **Sent:** November-27-13 10:22 AM

To: Sandve, Chris MEM:EX
Subject: FW: Sea Breeze Power Projects

Hey Chris,

I think this would probably be a conversation best had by you.

Do you feel OK taking that on?

Frankie

From: WPC Inc. [mailto:wpc@telus.net]
Sent: November-27-13 10:21 AM
To: Nash, Frankie W MEM:EX
Subject: Sea Breeze Power Projects

Dear Frankie,

Again, sorry for bothering you on the road today. The discussion I would like to have with you is around Sea Breeze Power Project's proposal for the sale and purchase of electricity imported into British Columbia and the proposed Juan de Fuca Cable transmission interconnection between Port Angeles, Washington and Victoria, BC.

Please give me a call at your convenience at 604-684-2228.

Thanks very much for your help, and I look forward to speaking with you soon.

Cheers,

Mike Bailey

(the "Company")
Suite 1400, 333 Seymour Street,
Vancouver, British Columbia, Canada V6B 5A6
(604) 689-2991

NEWS RELEASE

October 28, 2013 TSX-VENTURE: SBX

Sea Breeze Power Projects Inc. - Proposal for "550 MW Firm Power" Transaction

VANCOUVER, Canada, October 28, 2013 – Sea Breeze Power Projects Inc., (a wholly-owned subsidiary of Sea Breeze Power Corp.), is pleased to announce that it has submitted an unsolicited Term Sheet to the British Columbia Ministry of Energy and Mines for their consideration, proposing a transaction whereby the Province of British Columbia would purchase 550 MW of firm power (24/7) for a 10-year period, at a price of $69 per megawatt hour (6.9 cents per kWh).

Acceptance of this market-based "power purchase proposal" - as a "stand-alone" transaction - would in turn allow construction of the Juan de Fuca Cable to proceed with no investment (direct or indirect - such as loan guarantees) required from the Province of British Columbia.

The Juan de Fuca Cable, a 550 MW high voltage direct current (HVDC Light®) submarine transmission cable, would connect the BC Hydro grid at Victoria, British Columbia, with the Bonneville Power Administration's substation in Port Angeles, Washington, creating a new north/south cross-border interconnection between the two regions.

The Term Sheet was created in conjunction with a Fortune 100 corporation, which is active in the power trading business and will guarantee delivery of the 550 MW of firm power over the 10-year period, to Victoria, British Columbia, via the Juan de Fuca Cable.

All project risk and cost for the Juan de Fuca Cable (including any possible over-runs above the estimated project capital cost of $500 million) would be carried by the developer, Sea Breeze Pacific Juan de Fuca Cable, LP.

The main transmission pathway between Vancouver and Seattle (along the "I-5" corridor) has been flagged by the U.S. Department of Energy as one of the most congested transmission pathways in North America. The new cross-border interconnection created by the Juan de Fuca Cable would essentially expand the north/south transmission capacity of the region by around 25%, and would enable Greater Victoria to receive its electricity from two sources, resulting in greater energy security and reliability for the residents of Vancouver Island, and also for the residents of northwestern Washington State.

Recent reports have indicated that BC's demand for electric power will continue to grow due to an improving provincial economy, a number of proposals for LNG export terminals (with accompanying port, pipeline and production facilities), new mining operations and expansion of existing mining operations, as well as ongoing population growth.

A draft "Integrated Resource Plan" released by BC Hydro in August 2013, projects an electricity capacity deficit of up to 594 MW for British Columbia by 2017, if no other measures are taken. The Juan de Fuca Cable could be constructed, and in operation, within a three year period.

The Juan de Fuca Cable has been under development by Sea Breeze Pacific Juan de Fuca Cable, LP, a limited partnership sponsored by Sea Breeze Power Corp. and Boundless Energy NW, Inc., with financial support from Energy Investors Fund, a private equity fund manager specializing in the North American power sector.

About the Company

Sea Breeze Power Corp. is a Vancouver, Canada-based diversified renewable energy company presently engaged in the development of utility-scale wind farms, 'run-of-river' hydroelectric projects, low impact/high voltage transmission projects, and energy storage projects.

The Cape Scott Wind Farm, a 99 MW facility on northern Vancouver Island, developed by Sea Breeze Power Corp. and purchased by GDF Suez in 2011, is scheduled to begin commercial operations in late 2013.

ON BEHALF OF THE BOARD OF DIRECTORS
"Paul B. Manson"

PAUL B. MANSON, President & CEO
Email: info@SeaBreezePower.com
Phone: (604) 689-2991
Fax: (604) 689-2990

MacLaren, Les MEM:EX

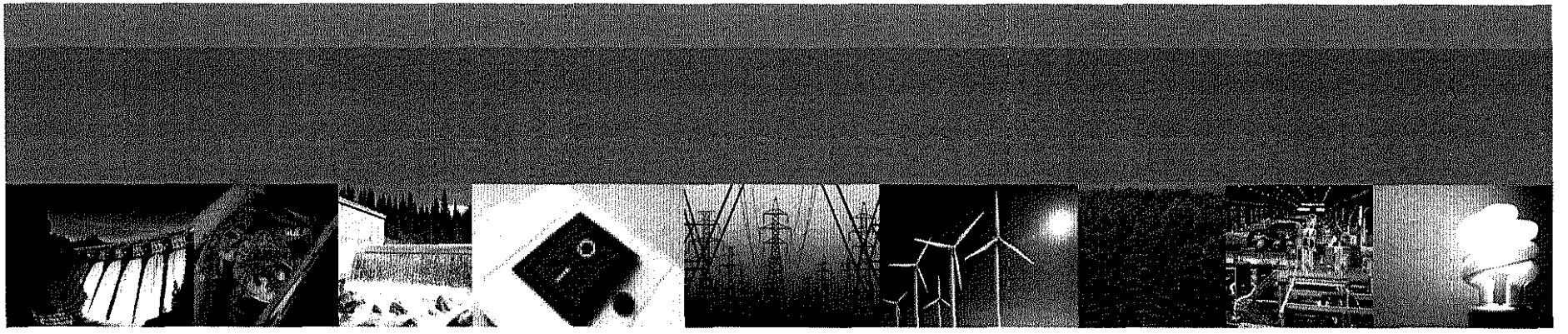
From: MacLaren, Les MEM:EX
Sent: Wednesday, October 30, 2013 8:55 AM
To: Sandve, Chris MEM:EX
Cc: Nikolejsin, Dave MEM:EX; Wieringa, Paul MEM:EX; Cochrane, Marlene MEM:EX
Subject: Seabreeze - Juan de Fuca Project and Power Offer
Attachments: 20131029 JdF 10 Yr EPA for Min Bennett.pdf

Hi Chris:

You had asked that this issue be raised in the IRP Briefing, but we did not get to it. BC Hydro prepared the attached short deck that I think is self-explanatory. If there are any questions/issues we could speak to it at our briefing with MBB tomorrow.

Note that the technology proposed for the transmission, High-Voltage Direct Current or HVDC, is not currently in use in BC. Our transmission circuits are alternating current (69, 138, 230, and 500 kilovolts (kV)). HVDC is in use in the eastern US and Europe, and is the technology proposed for new Edmonton to Calgary lines and the Newfoundland to Nova Scotia Maritime Link. Key features are quite expensive AC-DC and back converter stations, with lighter cheaper cables and lower transmission losses. DC technology is well suited to longer distances, where lower wire costs and losses offset higher converter station costs, and specialized things like marine crossings, and inter-utility connections where you want to closely control the flows.

Les MacLaren
Assistant Deputy Minister
Electricity and Alternative Energy Division
Ministry of Energy and Mines
Office: 250 952-0204
Fax: 250 952-0258



Juan de Fuca (JdF) Cable and Seabreeze's "Firm Power Proposal"

BC Hydro Briefing for Minister Bill Bennett

29 October 2013

BC hydro

FOR GENERATIONS

BACKGROUND

BC hydro
FOR GENERATIONS

JdF Project Description

- 550 MW bi-directional, submarine HVDC cable
- Victoria to Port Angeles, WA
- About 5000 GWh

10 Year Firm Power Proposal

- Option 1: "550 MW Firm Power" for 10 years
- Option 2: "275 MW Firm Power" plus "Option for 275 MW of Transmission Capacity" for 15 years

PREVIOUS REGULATORY REVIEW

BC hydro
FOR GENERATIONS

- JdF has already had serious consideration by BC Hydro, BPA and BCUC – it is not supported by any of these entities

- It is a project in search of a need and a customer

INCONSISTENT WITH PROVINCIAL ENERGY POLICY

BC hydro
FOR GENERATIONS

- Relying on imported power from a planning perspective is not permitted under legislated requirements of the Clean Energy Act (self-sufficiency provisions)

s.13, s.17

ECONOMIC IMPACT TO RATEPAYERS

BC hydro
FOR GENERATIONS

- Transmission is not the constraining factor – min generation and inertia limits typically prevent full use of existing import capability
- BC Hydro is long on energy and doesn't need any more energy in Q2 in particular

s.13, s.17

- If energy were needed,

s.13, s.17

s.13, s.17

SUMMARY

BC hydro
FOR GENERATIONS

- JdF is a project in search of a need
- It has been thoroughly considered & rejected
- A 10 year EPA for imported power that is not needed and is inconsistent with Provincial policy

s.13, s.17

s.13, s.17

MacLaren, Les MEM:EX

From: MacLaren, Les MEM:EX
Sent: Wednesday, October 23, 2013 4:18 PM
To: Marsh, Kyle MEM:EX
Cc: Sandve, Chris MEM:EX; Nash, Frankie W MEM:EX; Nikolejsin, Dave MEM:EX
Subject: RE: [Fwd: Term Sheet - 550 MW Firm Power - via Juan de Fuca Cable]

Hi Kyle

Seabreeze has been touting this project for years. They have regulatory approval for a new direct-current intertie to the US (Port Angeles to Victoria) that no one has committed to use -

s.13, s.17

s.13, s.17

Paul Manson is a prominent member of the Clean Energy Association, and may try to raise this at the conference on Monday.

Les

From: Marsh, Kyle MEM:EX
Sent: Wednesday, October 23, 2013 3:37 PM
To: MacLaren, Les MEM:EX
Cc: Sandve, Chris MEM:EX; Nash, Frankie W MEM:EX
Subject: FW: [Fwd: Term Sheet - 550 MW Firm Power - via Juan de Fuca Cable]

Les, just looking for a staff opinion on the feasibility of this project. Thanks.

Kyle

From: "Paul B. Manson" <paulmanson@seabreezepower.com>
To: "Bennett, Bill MEM:EX" <Bill.Bennett@gov.bc.ca>
Subject: [Fwd: Term Sheet - 550 MW Firm Power - via Juan de Fuca Cable]

Dear Minister Bennett,

Please see the forwarded email (with two attachments) below, that was sent to your office email address.

As I believe that the proposal enclosed can provide many solutions to the challenges of your portfolio, I look forward to the opportunity to discuss it with you in more detail in the near future.

Best regards,

Paul

--
Paul B. Manson
President & CEO,
Sea Breeze Power Corp.
Lobby Mail Box 91
1400-333 Seymour Street
Vancouver BC V6B 5A6 Canada
ph: (604) 689-2991 ext. 225
fax: (604) 689-2990

---------- Original Message ----------
Subject: Term Sheet - 550 MW Firm Power - via Juan de Fuca Cable
From: "Paul B. Manson" <paulmanson@seabreezepower.com>
Date: Wed, October 16, 2013 10:00 pm
To: MEM.Minister@gov.bc.ca
Cc: ResjaCampfens@seabreezepower.com

Dear Minister Bennett,

On behalf of Sea Breeze Power Projects Inc., please find attached a Term Sheet dated October 16, 2013, with an explanatory cover letter.

The subject of the Term Sheet is a proposal for the purchase by British Columbia of a 550 MW block of firm power, for a 10-year period, at a fixed price of $69/MWhr.

The power would be delivered to Victoria, British Columbia, via the proposed Juan de Fuca Cable.

The proposal is "market based" - purchase of the 550 MW block of firm power would enable the Juan de Fuca Cable (a $500 million project) to be constructed with no further investment or financial risk by the Province of British Columbia.

The Term sheet also includes a second scenario, which offers additional flexibility to the transaction.

As outlined in some length in our forthcoming comments in response to BC Hydro's Draft Integrated Resource Plan, we believe that the Juan de Fuca Cable will be a valuable addition to the electrical infrastructure of this region.

We look forward to discussing the enclosed Term Sheet with you at your earliest convenience.

Best regards,

Paul Manson

--
Paul B. Manson
President & CEO,
Sea Breeze Power Corp.
Lobby Mail Box 91
1400-333 Seymour Street
Vancouver BC V6B 5A6 Canada
ph: (604) 689-2991 ext. 225
fax: (604) 689-2990

Sea Breeze Power Projects Inc.
A wholly owned subsidiary of Sea Breeze Power Corp.
info@SeaBreezePower.com Lobby box 91, Suite 1400 - 333 Seymour Street
www.SeaBreezePower.com Vancouver, British Columbia Canada V6B 5A6
Voice (604) 689-2991 Fax (604) 689-2990

December 2, 2013

VIA CANADA POST

Ministry of Energy and Mines
Deputy Minister's Office
P.O. Box 9319
Station Provincial Government
Victoria, BC
V8W 9N3

ATTN: Mr. Dave Nikolejsin, Deputy Minister

Dear Mr. Nikolejsin,

Re: "Firm Power Proposal" dated October 16, 2013

For your reference, please find enclosed documents concerning the Firm Power Proposal previously sent to the Honourable William Bennett, Minister of Energy and Mines.

Please find enclosed Sea Breeze Power Corp.'s news release (dated October 28, 2013) announcing the proposal, a copy of the Term Sheet (dated October 16, 2013) provided to Minister Bennett, and our response commentary to BC Hydro's Draft 2013 Integrated Resource Plan (dated October 28, 2013, which provides insight into the "Firm Power Proposal" and the associated Juan de Fuca Cable).

Please feel free to contact me for any additional information.

Best regards,
Sea Breeze Power Projects Inc.

per: Paul B. Manson,
President

encl. *Term Sheet 13-10-16*
News Release 13-10-28
Response Commentary to BC Hydro's Draft 2013 IRP 13-10-18

Dave - do you want Les to respond?

Thks.

- a copy w/go to Les regardless.

No Need to * Respond jm

Kate - pls. update Cliff.

Sea Breeze Power Projects Inc.
A wholly owned subsidiary of Sea Breeze Power Corp.
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www.SeaBreezePower.com Vancouver, British Columbia Canada V6B 5A6
Voice (604) 689-2991 Fax (604) 689-2990

TERM SHEET

Date: October 16, 2013

To: Honourable William Bennett,
Minister of Energy and Mines, British Columbia

From: Sea Breeze Power Projects Inc. ("SBPP")

This Term Sheet describes proposed transactions between SBPP and the British Columbia Government or their agent, BC Hydro (collectively, "the Province") for the sale and purchase of electricity imported into British Columbia via the Juan de Fuca Cable (submarine transmission connection), a proposed new transmission interconnection between Port Angeles, WA and Victoria, BC.

This Term Sheet offers two scenarios:

1. A transaction of "550 MW Firm Power" over a period of 10 years.

2. A transaction of "275 MW of Firm Power" coupled with an "Option for 275 MW of Transmission Capacity", over a period of 15 years.

The power delivered to the Province would be Firm Power delivered around the clock, and would have a carbon intensity approximately equal to or lower than power sourced from "new-build" natural gas. The BC Carbon Tax would not apply to the imported power.

Acceptance of either Scenario #1 or #2 herein, would allow the Juan de Fuca Cable to be built with no further financial commitments from the Province.

The proposed transactions would be executed in accordance with a new Master Agreement between SBPP and BC (to be negotiated). An option to purchase the Juan de Fuca Cable could be included in the agreement.

Scenario #1: Purchase of 550 MW Firm Power

Trade Date:	TBD
Products:	Firm Electric Power
Buyer:	Government of British Columbia
Seller:	Sea Breeze Power Projects Inc.
Quantities:	Firm Power: 550 MW flat (All Hours)
Point of Delivery:	BC Hydro's Pike Substation (near Victoria, BC)

Pricing:

Table 1 shows prices for a 10 year contract for Firm Power. As discussed in the cover letter, this proposal offers significant system benefits. As shown below, these benefits would partially offset the power costs, and could also provide flexibility in structuring the overall transaction.

Table 1: Price for 10 year power sale contract on 550 MW Firm Power

Scenario	Contract Term	Power Price ($/MWh)	Value of System Benefits* ($/MWh)	Net Cost ($/MWh)
#1	10 Years	69.00	s.21	s.21

*This column reflects potential system benefit values to the Province. These estimates are for a range of benefits which include (but are not limited to) the opportunity to eliminate transmission losses associated with the current need to transmit electricity from BC Hydro's dams in the northeast and Kootenay regions of BC to the Lower Mainland and Vancouver Island, a reduced need to operate the Burrard Thermal plant, and increased system reliability for the Lower Mainland and Vancouver Island.

Scenario #2: Purchase of 275 MW Firm Power with Option on 275 MW Transmission Capacity

Trade Date:	TBD
Products:	Firm Electric Power; Option on South-to-North Transmission Capacity
Buyer:	Government of British Columbia
Seller:	Sea Breeze Power Projects Inc.
Quantities:	Firm Power: 275 MW flat (Delivered All Hours) Option on Capacity: 275 MW (South-to-North, Any Hour)
Point of Delivery:	BC Hydro's Pike Substation (near Victoria, BC)

Pricing:

Table 2 shows pricing for 275 MW of Firm Power coupled with an Option on 50% (i.e. 275 MW) of the south-to-north Capacity on the Juan de Fuca Cable. The Option on Transmission Capacity is priced at s.21 This scenario would give the Province additional flexibility in the amounts of power it wishes to draw.

Table 2: Price for 275 MW Firm Power with an Option on 275 MW Transmission Capacity s.21

Scenario	Contract Term	Option Price ($/kW-mo)	Power Price ($/MWh)	Value of System Benefits* ($/MWh)	Net Power Cost ($/MWh)
#2	15 Years	s.21	69.00	s.21	s.21

*This column reflects potential system benefit values to the Province. These estimates are for a range of benefits which include (but are not limited to) the opportunity to reverse transmission losses associated with the current need to transmit electricity from BC Hydro's dams in the northeast and Kootenay regions of BC to the Lower Mainland and Vancouver Island, a reduced need to operate the Burrard Thermal plant, and increased reliability for the Lower Mainland and Vancouver Island.

(the "Company")
Suite 1400, 333 Seymour Street,
Vancouver, British Columbia, Canada V6B 5A6
(604) 689-2991

NEWS RELEASE

October 28, 2013 TSX-VENTURE: SBX

Sea Breeze Power Projects Inc. - Proposal for "550 MW Firm Power" Transaction

VANCOUVER, Canada, October 28, 2013 – Sea Breeze Power Projects Inc., (a wholly-owned subsidiary of Sea Breeze Power Corp.), is pleased to announce that it has submitted an unsolicited Term Sheet to the British Columbia Ministry of Energy and Mines for their consideration, proposing a transaction whereby the Province of British Columbia would purchase 550 MW of firm power (24/7) for a 10-year period, at a price of $69 per megawatt hour (6.9 cents per kWh).

Acceptance of this market-based "power purchase proposal" - as a "stand-alone" transaction - would in turn allow construction of the Juan de Fuca Cable to proceed with no investment (direct or indirect - such as loan guarantees) required from the Province of British Columbia.

The Juan de Fuca Cable, a 550 MW high voltage direct current (HVDC Light®) submarine transmission cable, would connect the BC Hydro grid at Victoria, British Columbia, with the Bonneville Power Administration's substation in Port Angeles, Washington, creating a new north/south cross-border interconnection between the two regions.

The Term Sheet was created in conjunction with a Fortune 100 corporation, which is active in the power trading business and will guarantee delivery of the 550 MW of firm power over the 10-year period, to Victoria, British Columbia, via the Juan de Fuca Cable.

All project risk and cost for the Juan de Fuca Cable (including any possible over-runs above the estimated project capital cost of $500 million) would be carried by the developer, Sea Breeze Pacific Juan de Fuca Cable, LP.

The main transmission pathway between Vancouver and Seattle (along the "I-5" corridor) has been flagged by the U.S. Department of Energy as one of the most congested transmission pathways in North America. The new cross-border interconnection created by the Juan de Fuca Cable would essentially expand the north/south transmission capacity of the region by around 25%, and would enable Greater Victoria to receive its electricity from two sources, resulting in greater energy security and reliability for the residents of Vancouver Island, and also for the residents of northwestern Washington State.

Recent reports have indicated that BC's demand for electric power will continue to grow due to an improving provincial economy, a number of proposals for LNG export terminals (with accompanying port, pipeline and production facilities), new mining operations and expansion of existing mining operations, as well as ongoing population growth.

A draft "Integrated Resource Plan" released by BC Hydro in August 2013, projects an electricity capacity deficit of up to 594 MW for British Columbia by 2017, if no other measures are taken. The Juan de Fuca Cable could be constructed, and in operation, within a three year period.

The Juan de Fuca Cable has been under development by Sea Breeze Pacific Juan de Fuca Cable, LP, a limited partnership sponsored by Sea Breeze Power Corp. and Boundless Energy NW, Inc., with financial support from Energy Investors Fund, a private equity fund manager specializing in the North American power sector.

About the Company

Sea Breeze Power Corp. is a Vancouver, Canada-based diversified renewable energy company presently engaged in the development of utility-scale wind farms, 'run-of-river' hydroelectric projects, low impact/high voltage transmission projects, and energy storage projects.

The Cape Scott Wind Farm, a 99 MW facility on northern Vancouver Island, developed by Sea Breeze Power Corp. and purchased by GDF Suez in 2011, is scheduled to begin commercial operations in late 2013.

ON BEHALF OF THE BOARD OF DIRECTORS
"Paul B. Manson"

PAUL B. MANSON, President & CEO
Email: info@SeaBreezePower.com
Phone: (604) 689-2991
Fax: (604) 689-2990

Sea Breeze Power Projects Inc.
A wholly owned subsidiary of Sea Breeze Power Corp.
Info@SeaBreezePower.com Lobby box 91, Suite 1400 - 333 Seymour Street
www.SeaBreezePower.com Vancouver, British Columbia Canada V6B 5A6
Voice (604) 689-2991 Fax (604) 689-2990

October 18, 2013

VIA HAND DELIVERY and EMAIL: *Integrated.Resource.Planning@BCHydro.com*

British Columbia Hydro and Power Authority
18th Floor – 333 Dunsmuir Street
Vancouver, BC V6B 5R3

Dear BC Hydro IRP Project Team,

Re: **Draft 2013 Integrated Resource Plan - Response Commentary to BC Hydro**

Sea Breeze Power Projects, Inc. ("SBPPI" a wholly-owned subsidiary of Sea Breeze Power Corp.), appreciates this opportunity to provide written comments on BC Hydro's Draft Integrated Resource Plan ("IRP") released in August, 2013.

As a major planning document addressing the anticipated future energy requirements and industry in British Columbia, the IRP admirably tackles many of the issues facing our Province in the complicated and constantly shifting electricity sector. We acknowledge BC Hydro's efforts to balance the issues of reliability, system integrity and electricity rates, particularly in light of the energy surplus and need for capacity in the Lower Mainland.

We draw your attention to the proposed **Juan de Fuca Cable ("JDF Cable"** - described in detail below), which is capable of providing valuable solutions to many of the issues identified in the IRP:

Just as significantly, the **Juan de Fuca Cable** ably addresses issues not referenced in the IRP, but which are nonetheless facing British Columbia.

Following construction, and when operated in conjunction with our **Firm Power Proposal**[1] (presented to government in a Term Sheet dated August 24, 2012, and revised and re-submitted again on October 16, 2013), the **Juan de Fuca Cable** can dramatically resolve a number of energy capacity and load dilemmas facing British Columbia. Foremost among these is the need to fill the short term peak capacity gap (years 2016 – 2023) identified in the IRP.

The **Juan de Fuca Cable** will also enhance reliability by enabling Greater Victoria to receive substantial power from two directions.

The **Juan de Fuca Cable** provides unique flexibility and resiliency capable of addressing issues such as stakeholder concerns with new capacity options, energy requirements of the LNG industry, environmental concerns, and uncertainty regarding future loads, power rates, and infrastructure construction schedules.

Overview

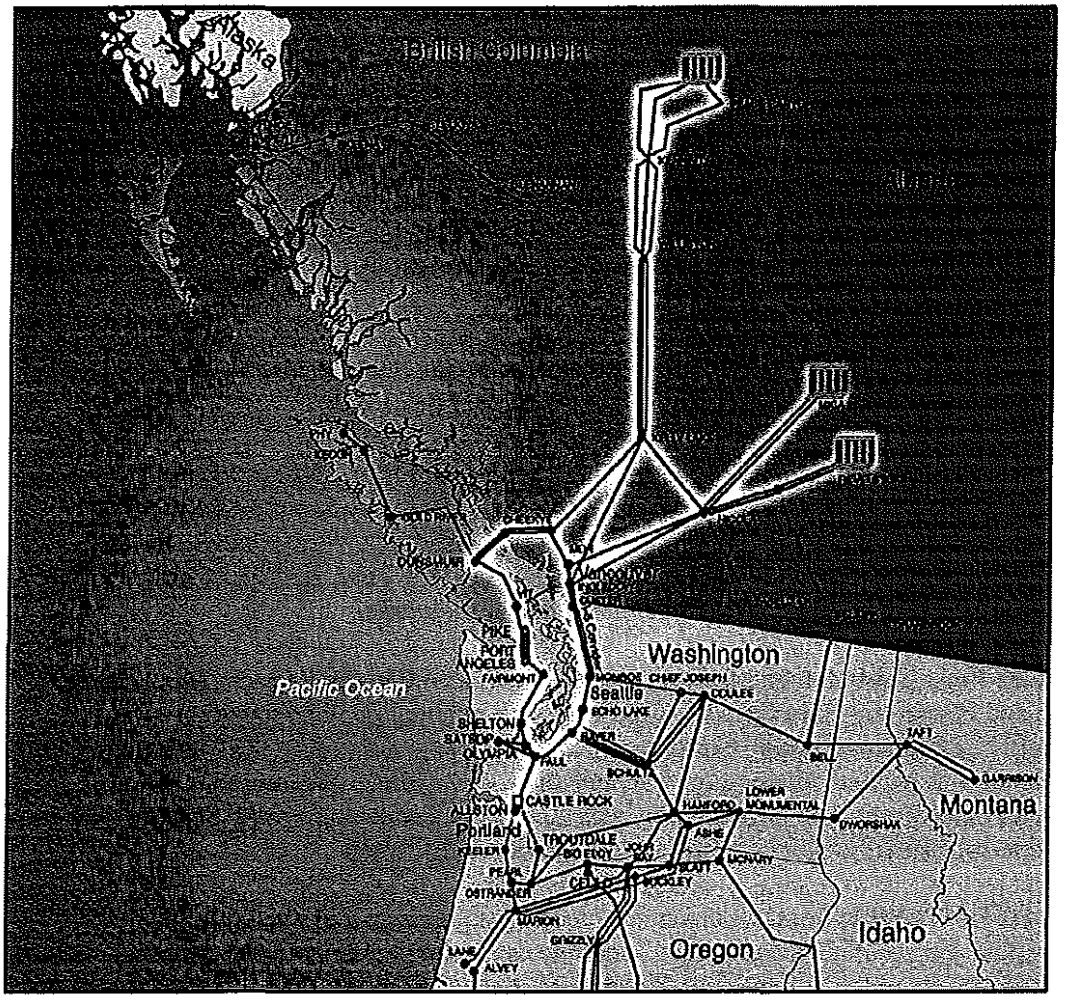
The **Juan de Fuca Cable**, a proposed new 550 MW bi-directional electricity transmission cable crossing beneath the Strait of Juan de Fuca, will expand transmission capacity between British Columbia and the US Pacific Northwest by adding a new interconnection between these two regions.

The interconnection points will be outside Victoria in the Capital Regional District area of southern Vancouver Island, British Columbia, and in the City of Port Angeles on the Olympic Peninsula in Washington State. Upgrades to both systems (accounted for in the Project's financial model) will ensure full integration of the new infrastructure on a regional basis, and effectively increase the transmission capacity between Vancouver and Seattle (the "I-5 corridor"), an estimated 25%.

The **Juan de Fuca Cable** will allow power to be delivered to Vancouver Island and, if desired, transmitted eastward across the Georgia Strait, and onward through southern British Columbia to B.C.'s storage reservoir system. In other words, the **Juan de Fuca Cable** will enable:

- increased capacity for Vancouver Island, and
- increased capacity to import from the US to Vancouver and the rest of the BC system.

Figure: *Proposed **Juan de Fuca Cable** route (in red) and regional transmission grid.*



A market-based financing approach being proposed by Sea Breeze Power Projects Inc., referred to as the **"Firm Power Proposal,"** will allow British Columbia to acquire **550 MW of Firm Power at** a highly competitive rate of **$69/MWh for 10 years**. This will enable British Columbia to meet a substantial portion of its future load growth without exposure to the risk of price-spiking inherent to short term trading on the spot market, and with reduced reliance on new, capital intensive generation projects during this period.

s.21

The current physical limitations of our cross-border transmission capacity preclude the opportunity to import a block of firm power of 550MW. Construction of the **Juan de Fuca Cable** enables this possibility.

s.21

As a requirement for meeting future electricity loads in the province, British Columbia's transmission system needs augmentation of its capacity and flexibility.

One case in point - the deployment of the Montana-Alberta Tie Line - will result in a significant operational reduction of the Alberta-BC intertie, thereby reducing system flexibility and lowering the ability to import and export. During a serious and long-term drought, the ability to import power in British Columbia may be of critical value. The **Juan de Fuca Cable** will expand new transmission capacity into and out of British Columbia.

s.21

Addressing Issues in the Integrated Resource Plan

The **Juan de Fuca Cable** is capable of providing practical and economic solutions to a number of concerns articulated in the Integrated Resource Plan ("IRP") issued by BC Hydro on September 23, 2013, as follows:

1. Ability to Fill a Short Term Gap in Peak Capacity

Problem Identified in the IRP: Recommended Action # 7. "*Fill the short-term gap in peak capacity with cost-effective market purchases first and power from the Columbia Treaty second.*"

Chapter 8 (page 8-39)
"*There is a three-year capacity gap without Expected LNG load from F2021 to F2023. BC Hydro proposes to rely on the market, backed up by the Canadian Entitlement provided under the Columbia River Treaty for up to about 200 MW, to meet any system capacity shortages during this period because the reliance is for a short period and because the market/Canadian Entitlement is cost-effective as compared to B.C.-based capacity resources that could be in-service by F2021 and would only be needed for about three years.*"

s.21

s.21

2. Manage the Risks Involved with Forecasting Loads

Problem Identified in the IRP: BC Hydro's IRP notes that its long-term resource planning is complicated by the considerable uncertainties about predicting loa[d] growth and the risk that load growth will either exceed or fall below expectations, potentially resulting in inadequate capacity on the one hand and inefficient investment on the other. See IRP § 1.1.2, pp. 1-5-6; IRP § 4.3.4.1, p. 4-37 ("*The uncertainty around the load forecast is one of the largest uncertainties faced by BC Hydro in its long-term planning process.*").

Issue identified in Minister Bennett's letter of August 23, 2013:

"While the consultation should cover the IRP in its entirety, of particular interest is feedback on the changes to the IRP since BC Hydro undertook consultations in the spring and summer of 2012, and on uncertainty over the 20-year period and the contingency plans BC Hydro is proposing to deal with that uncertainty."

The **Juan de Fuca Cable** addresses this challenge strongly and uniquely, providing tremendous flexibility ("contingency") and resiliency in the following ways:

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3. Reduce Our Dependency on Natural Gas Generation for Capacity

Problem Identified in the IRP: Recommended Action #16: *"Investigate natural gas generation for capacity. Working with industry, explore natural gas supply options to reduce their lead time to in-service and to develop an understanding of where and how to site such resources, should they be needed."*

The **Juan de Fuca Cable** addresses concerns implied by or related to this Recommended Action in the following ways:

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4. Provide a Bridging Mechanism for Site C

Recommended Action #6: *"Continue to advance Site C. Build Site C to add 5,100 GWh/year of annual energy and 1,100 MW of dependable capacity to the system for the earliest in-service date of F2024 (for all six generating units) subject to: environmental certification; fulfilling the Crown's duty to consult, and where appropriate, accommodate Aboriginal groups; and Provincial Government approval to proceed with construction."*

The **Juan de Fuca Cable** can complement this Recommended Action in the following ways:

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5. Effect a Beneficial Impact on Rates Over the Next 10-15 Years

Problem Identified in the IRP: *BC Hydro's IRP notes that in defining the IRP's objectives, one of the three energy objectives in the Clean Energy Act is "to ensure [BC Hydro's] rates remain among the most competitive of rates charged by public utilities in North America."* IRP § 1.2.3, p. 1-16.

The **Juan de Fuca Cable** addresses this objective in the following ways:

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6. Stabilize the Higher Cost of Future Power

Problem Identified in the IRP: BC Hydro's IRP states that the price of new power produced from clean or renewable sources by Independent Power Producers ("IPPs") will be $125 per MWh, that new capacity at Site C will be $83/MWh, and that prices for power from combined cycle gas turbines (CCGT) will range from $42/MWh to $139/MWh - depending on the size of the generation plant, and assumptions about economic factors such as prevailing market rates for power, natural gas prices, and carbon taxes. IRP § 6.2.6, p. 6-12.

The **Juan de Fuca Cable** addresses this need in the following ways:

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- Firm power coming north via the **Juan de Fuca Cable** in conjunction with the **Firm Power Proposal**, will have a guaranteed price of **$69 MWh** for the term of 10 years (in addition to providing a host of valuable system benefits). In contrast, power from Site C is estimated to cost $83 MWh.

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7. Reduce Reliance on the Burrard Thermal Generating Station ("Burrard")

Problem Identified in the IRP: BC Hydro's IRP states that Burrard is to eventually be retired as a standby source of capacity pursuant to the Clean Energy Act, except for emergencies or for voltage support. IRP ¶ 3.7.1, pp. 3-82-83.

The **Juan de Fuca Cable** addresses this challenge in the following ways:

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8. Facilitate LNG Electric Drive – Reduce Emissions

Problem Identified in the IRP: A conflict is apparent between two of the directives in the IRP Summary: (1) the need to comply with the Clean Energy Act's objective of "*Using clean or renewable resources to help achieve provincial GHG reduction targe*ts" and (2) supporting development of the emerging liquefied natural gas (LNG) industry, particularly in the north of the Province.

The "Expected LNG" planning in the north assumes use of direct-drive for the liquefaction process. A recent Tides Canada report, 'The Cleanest LNG in the world?' http://cleanenergycanada.org/works/cleanest-lng-in-world/, and subsequent media reports[4] predict that the increased emissions (CO_2) associated with direct-drive could be similar to those attributed to the Alberta oil sands industry in 2010, which may lead to undesirable comparisons.

There have been discussions with certain LNG proponents about use of electric drive as a more environmentally responsible choice. The "Expected LNG" scenario in the IRP is significantly short in its assumptions of power required if even a portion of the LNG industry opts for electric drive instead of direct drive. This shortfall could conceivably be in the thousands of MW.

The **Juan de Fuca Cable** addresses these concerns in the following ways:

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9. Provide New Transmission Capacity for the Lower Mainland/Vancouver Island

New transmission capacity will be required for the Lower Mainland/Vancouver Island area even with the Interior to Lower Mainland Transmission Line ("ILM") entering service in 2015, but especially if the ILM is delayed and/or if Demand Side Management ("DSM") falls short of projections.

Problem Identified in the IRP: BC Hydro's IRP states that even with the projected completion in January 2015 of the 500kv ILM reinforcement project, "*in the absence of incremental DSM or new or renewed dependable capacity supply in the Coastal region, new transmission transfer capability will be required in F2022*" to serve anticipated loads in the Lower Mainland /Vancouver Island area. IRP § 2.5.3, p. 2-49.

BC Hydro's IRP also states that "*future sources of capacity in the Lower Mainland/Vancouver Island region other than natural gas-fired generation...have significant uncertainties in terms of development and operations*," and then indicates a new transmission line to the Lower Mainland could be needed by 2029. IRP § 6.2.7.1, p. 6-17.

The **Juan de Fuca Cable** addresses these needs in the following ways:

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10. Defer the Need for Transmission Upgrades Lower Mainland/ Vancouver Island, and New Generation Capacity on Vancouver Island

Problem Identified in the IRP: *"[W]ithout incremental DSM [demand-side management], renewal of the EPA [electricity purchase agreement] with Island Cogeneration [gas-fired generator] or new on-island dependable capacity generation, new transmission upgrades between the Lower Mainland and Vancouver Island would be required in F2023*." IRP § 2.5.4 (p.2-50, 2-51).

The **Juan de Fuca Cable** makes it possible to avoid or postpone the need for transmission upgrades between the Lower Mainland and Vancouver Island, as well as the need for new generation on Vancouver Island, as indicated in Chapter 2 (pages 2-50 and 2-51) in the IRP.

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11. Facilitate Availability of Clean Power for the North Coast

Problem Identified in the IRP. *RA #10: "Explore natural gas-fired generation for the north coast: Working with industry, explore natural gas supply options on the north coast to enhance transmission reliability and to meet the expected load."*

The **Juan de Fuca Cable,** together with the **Firm Power Proposal,** addresses concerns related to this Recommended Action in the following ways:

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12. Provide Additional Clean Energy Supply Options

Problem Identified in the IRP: BC Hydro's IRP recommends the following in **Recommended Action #11:** *"Explore clean or renewable energy supply options and be prepared to advance a procurement process to acquire energy from clean power projects, as required to meet LNG needs that exceed existing and committed supply."* IRP ¶ 8.3.2, p. 8-54, "."

The **Juan de Fuca Cable** together with the **Firm Power Proposal** addresses this challenge in the following ways:

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Additional Advantages and Capabilities

There are additional advantages and capabilities that are provided by the **Juan de Fuca Cable** and **Firm Power Proposal**, some of which are implicit in the IRP, and some of which simply constitute good power planning policy.

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The **Juan de Fuca Cable** and **Firm Power Proposal** are compatible with BC Hydro's "self-sufficiency" objective.

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Thank you for your consideration of these comments.

We look forward to the inclusion in the revised IRP of the **Juan de Fuca Cable** and the **Firm Power Proposal** as contributing solutions to British Columbia's electricity challenges and, primarily, capacity needs.

Please feel free to contact us at any time for further information about the **Juan de Fuca Cable** or the **Firm Power Proposal**.

Sincerely,
Sea Breeze Power Projects Inc.

per: Paul B. Manson,
President

encl. *Term Sheet* **"Firm Power Proposal"** *dated October 16, 2013*

Notes:

1) See Term Sheet, attached, for **Firm Power Proposal.**

2) Challenge for the Northwest: Protecting and managing an increasingly congested transmission system, BPA, April 2006 at 7-10, accessed at http://www.bpa.gov/corporate/pubs/Congestion_White_Paper_April06.pdf;

BPA Fact Sheet - BPA to automate transmission curtailment procedure for the Puget Sound Area, September 2007 accessed at http://www.bpa.gov/corporate/pubs/fact_sheets/07fs/fs092607.pdf;

Letter dated September 15, 2004 from Puget Sound Energy, Seattle City Light, and Snohomish County PUD No. 1 submitting comments to BPA re potential solutions to obviate BPA Northern Intertie transmission reliability curtailments and disputes, accessed at

http://www.transmission.bpa.gov/Business/Customer_Forums_and_Feedback/Programs_in_Review/documents/PSANI091504_TBL_PIR_Comments.pdf;

Final Draft - 2009 Biennial Transmission Expansion Plan, Rev. 2, ColumbiaGrid, February 2009 at 57.

3) BC Hydro pays $150,000 a day to an Alberta power corporation to be in standby mode, GlobalNews.ca, November, 2012, accessed at http://globalnews.ca/news/308344/bc-hydro-pays-150000-a-day-to-an-alberta-power-corporation-to-be-in-standby-mode/

4) B.C.'s LNG plants won't be cleanest: report
Proposed LNG plants could emit up three times more carbon dioxide than comparable foreign facilities, accessed at http://www.cbc.ca/news/canada/british-columbia/b-c-s-lng-plants-won-t-be-cleanest-report-1.1865355

Clark accused of watering down clean LNG promise, Oct. 2, 2013, accessed at http://www.theglobeandmail.com/news/british-columbia/clark-accused-of-watering-down-clean-lng-promise/article14648992/