

CAPACITY AND ASSOCIATED ENERGY

REQUEST FOR EXPRESSIONS OF INTEREST

October 18, 2004

POWER PLANNING AND PORTFOLIO MANAGEMENT

INTRODUCTION

BC Hydro's Request

BC Hydro is seeking Expressions of Interest and project information from the private sector for projects and opportunities that can provide new dependable capacity or reduce capacity demands on BC Hydro's system.

BC Hydro's intent is to advance our plans and activities to source capacity that can be in-service as early as Fall 2007 for a minimum term of at least five years.

Specifically under this Request for Expressions of Interest (RFEI), BC Hydro is seeking information from independent power producers, industrial and commercial customers, electricity market participants, and other interested parties concerning new electricity capacity or proposals to reduce electricity capacity requirements on BC Hydro's system. Examples of such projects include:

- dispatchable peaking plants;
- hydro with storage;
- baseload energy plants;
- load curtailment; and
- load shifting.

This information will be used to advance our resource planning and power acquisition initiatives. In particular, our emphasis in this RFEI is to identify capacity acquisition opportunities in the private sector to assist us in planning and determining the timing and content of competitive capacity call processes.

Background to BC Hydro's Request

Information concerning available capacity resources is critical to the planning and electricity procurement processes of electric utilities such as BC Hydro. The capacity reserves that a utility has available to it determine its ability to meet its supply obligations at the peak demand times of the year. Utilities must plan to meet the supply demands made on them during peak demand hours on the "coldest day" during single contingency conditions on the system.

In 2003/04, BC Hydro's planning process started with the development of an Integrated Electricity Plan (IEP), which identified options to meet anticipated demand requirements. As part of the IEP process, BC Hydro developed a Resource Options database which contains information on the options and their attributes that can be advanced to reliably meet demand. BC Hydro then developed and submitted a Resource Expenditure and Acquisition Plan (REAP) to the British Columbia Utilities Commission, which outlined the expenditures BC

Hydro planned to undertake for resource acquisitions – both for investment in existing facilities and new competitive market acquisitions.

In the 2004 REAP, various options and actions were identified for meeting capacity requirements, including:

- determining the optimal sequence for capacity additions at Revelstoke and Mica with a view to preserving the option of a fiscal 2009 in-service date for one of the units;
- incenting reductions in customer demands on BC Hydro's system through the existing Power Smart Program, and examining the feasibility of a capacity-based Power Smart Program; and
- updating the IEP Resource Options database (e.g., with additional information on private sector capacity options).

Subsequent to the published forecast used in these planning documents, BC Hydro experienced its highest historical peak demand for electricity in January 2004, which added approximately 300 MW above the forecast requirements on the coldest day. As a result of this event and BC Hydro's updated load requirements and ongoing supply uncertainties, BC Hydro anticipates the need for additional capacity to be available earlier than previously forecast in order to meet increased peak requirements.

Information and Expressions of Interest received in response to this RFEI will assist BC Hydro in advancing its plans and activities to secure cost effective and reliable capacity to meet supply demands.

How will we use this information?

BC Hydro anticipates that project information and Expressions of Interest submitted in response to this RFEI will establish the market potential for capacity. To date BC Hydro has been active in confirming the market potential for energy through a series of energy-focused calls and a locationally-specific capacity call on Vancouver Island. BC Hydro is now proceeding with this RFEI as a means to ensure that the broader set of capacity resource options will be accurately reflected in future planning and acquisition activities.

In particular, BC Hydro is planning to use the RFEI information as follows:

- as an update to the IEP Resource Options database;
- as an input to 2005 REAP filing, with respect to resource expenditures and acquisition activities to be advanced; and
- as an input to the BC Hydro 2005 IEP, serving as the basis to assemble portfolios of resource options.

BC Hydro expects that information from the RFEI responses will be reported in a level of detail consistent with that outlined for resource options in Section 3 of BC Hydro's 2004 IEP. To respect the confidentiality of the respondents, information will be presented on an aggregated basis by geographic region or resource type, and may report cost information by averages or cost ranges.

While BC Hydro plans to use this information to determine acquisition activities to be advanced, please note that the purpose of this RFEI is not to pre-qualify respondents for any future call for tenders or request for proposals that may be issued by BC Hydro, nor will any contract or other benefit be awarded on the basis of the information provided.

Who is eligible to participate in this RFEI?

All independent power producers, industrial and commercial customers and electricity market participants who are proponents of projects located in British Columbia are eligible to submit a response to this RFEI. BC Hydro welcomes innovative project proposals that utilize commercially proven technology to provide capacity and associated energy.

To participate in this RFEI, projects should have:

- a minimum capacity size of 1 MW;
- a scheduled in-service date as early as Fall 2007, but not later than Fall 2012; and
- a minimum availability of at least 5 years.

TIMETABLE

Below is an approximate timetable of activities related to this RFEI. Dates and activities may vary.

<u>Activity</u>	<u>Date</u>
RFEI Issued	October 18th, 2004
RFEI Closes	November 15th, 2004
Evaluation of Responses Complete	End of December, 2004

SUBMISSION OF INFORMATION

RFEI Questionnaire

To participate in the RFEI process, participants must complete the accompanying RFEI Questionnaire, which requests detailed information concerning projects that can provide capacity with associated energy.

The RFEI Questionnaire is available as a Word document, with fields for completion, which can be downloaded and submitted electronically by respondents. It is available on BC Hydro's web site at <http://www.bchydro.com/ipp>.

Respondents are encouraged to provide responses to all questions and to be as specific as possible. Respondents should complete a separate RFEI Questionnaire for each project. Detailed instructions and definitions are included in the RFEI Questionnaire and respondents should read these carefully before completing the RFEI Questionnaire.

Project Cost Information

Respondents are requested to provide, to the extent possible, detailed information concerning projected capital and operating costs for their projects. BC Hydro recognizes that some projects may be in the early planning stages, and that further detailed work may be required before such projects would be sufficiently developed to support a firm bid price in response to a call for tenders or a request for proposals. However, such information as proponents are able to provide will assist BC Hydro in its resource options planning and in shaping future resource acquisition programs.

Confidentiality

BC Hydro plans to use information from responses to the RFEI Questionnaire in its 2005 IEP on an aggregated basis by geographic region or resource type, and may report cost information by using averages or cost ranges. However, BC Hydro will not disclose names of specific respondents, or the names and locations of their projects, nor other confidential information contained in or accompanying the RFEI Questionnaire responses, or later obtained from a respondent, without the consent of the respondent or except as may be required by law. By submitting a response, each respondent agrees to the disclosure of their response to any independent consultant retained by BC Hydro, who will be under the same non-disclosure obligations as BC Hydro itself.

EVALUATION OF RESPONSES

Scope of Information

RFEI Questionnaire responses should include sufficient information for BC Hydro to make an initial evaluation of the project's cost and development probability. BC Hydro does not guarantee that all or any information provided by a respondent will be used in BC Hydro's planning or other processes. BC Hydro may select or adjust information contained in RFEI Questionnaire responses, or may estimate missing information, based on standard formulae commonly used in the utility industry. Projects with insufficient information may not be considered further.

Independent Consultant and Evaluation of Responses

BC Hydro is planning to retain an independent consultant to review projects for cost and development certainty, and to provide other analyses and recommendations as BC Hydro may request.

Projects with high cost risk and high development risk may not be considered further.

DELIVERY OF RESPONSES AND COMMUNICATIONS

RFEI Closing Time

The closing time for delivery of RFEI submissions is 4:00 p.m. November 15, 2004.

Responses must be delivered on or before the RFEI closing time to be assured of consideration.

Delivery of Responses

Respondents may submit their RFEI Questionnaires either electronically or in hard-copy. However, BC Hydro encourages electronic responses. They may be e-mailed to power.acquisition@bchydro.com.

For responses submitted in hard copy, please deliver one originally signed copy, enclosed in a sealed envelope marked clearly "2004/2005 Request for Expressions of Interest – Capacity and Associated Energy" to the following location:

British Columbia Hydro and Power Authority
10th Floor, 333 Dunsmuir Street
Vancouver, B.C. V6B 5R3
Canada
Attention: Power Acquisition Records Manager

Communications

Communications and questions concerning this RFEI should be submitted by e-mail to power.acquisition@bchydro.com. BC Hydro will make best attempts to respond to questions on this RFEI submitted before November 8, 2004.

BC Hydro may post further information, including questions and answers of general application, to the RFEI website (www.bchydro.com/ipp). Potential respondents should check the RFEI website regularly for updated information. Any further information and questions and answers posted on the RFEI website become part of this RFEI.

BC Hydro may request further information, clarification or verification concerning any information contained in or accompanying a respondent's completed RFEI Questionnaire.

RESPONDENTS' COSTS

BC Hydro is not responsible for any costs incurred by respondents and prospective respondents in connection with this RFEI or with the preparation of any Expression of Interest submitted in response to this RFEI. No contractual or other legal relationship of any kind is created between BC Hydro and any respondent or prospective respondent or any other person as a result of this RFEI or anything done under or in response to it.

RFEI QUESTIONNAIRE

Please complete the RFEI Questionnaire according to the following instructions:

- **General:** Please read the instructions and Appendix A (Definitions) prior to completing the RFEI Questionnaire.

Appendix A (Definitions) has information on how BC Hydro defines key electricity terms. Please read Appendix A carefully before filling out the RFEI Questionnaire.

To complete RFEI Questionnaire, please fill out each field that is represented by a grey box. Please save the completed document as MS Word document. Also note that some fields require data to be inputted in a required format.

- **Additional Project Information:** Respondents are encouraged to provide as much information on their project as possible. If you have additional information you would like to provide, please include it with your RFEI Questionnaire. Please indicate this by filling out the Additional Information section.
- **Multiple Projects :** If you have multiple projects that you wish to submit, please fill out one RFEI Questionnaire per project.
- **Prior Submissions:** If you have previously submitted information on your project to BC Hydro as part of prior acquisition call and the project information has changed, please submit a RFEI Questionnaire. If you have submitted information prior to 2000, BC Hydro requests that you resubmit information on your project.
- **Confidentiality:** As stated in the RFEI, BC Hydro will not disclose names of specific respondents, or the names and locations of their projects, nor other confidential information contained in RFEI Questionnaire without the consent of the respondent or except as may be required by law. BC Hydro plans to use information from RFEI responses in the 2005 IEP on an aggregated basis.
- **Submitting your RFEI Questionnaire:** You can submit the RFEI Questionnaire in soft or hard copy format.

BC Hydro encourages respondents to submit their RFEI Questionnaire electronically (in MS Word format) to power.acquisition@bchydro.com. Additional files can be attached as well.

Hard copies of the completed RFEI Questionnaire can be sent to:

BC Hydro and Power Authority
Power Planning & Portfolio Management
10th Floor, 333 Dunsmuir Street
Vancouver, BC V6B 5R3
Canada
Attention: Power Acquisition Records Manager

Project Information			
Have you submitted information on this project to BC Hydro since 2000? <input type="checkbox"/>			
Project Name:			
Project Location Geographic Region: (blank) ↓			
Project Location (nearest city):			
Project Point of Interconnection:		Proposed Length of Term: yrs	
Primary Resource Type: (blank) ↓		If Other, describe:	
Secondary Resource Type (if more than one): (blank) ↓		If Other, describe:	
Project In-Service Date: (e.g. 2004-10-18)		How long is this opportunity available? yrs	
Project Description (other information):			
Developer Information			
Developer Name:			
Company Address:			
Contact Name:			
Title:		Email:	
Telephone:		Fax:	
Financial Information			
Level of financial analysis completed on the project: (Blank) ↓ If Other, describe:			
Total Capital Cost (TCC): 2004 \$ M		TCC lower end: 2004 \$ M TCC upper end: 2004 \$ M	
Fixed OMA: \$ K/yr		Variable OMA: \$ /MWh Project Life: yrs	
If gas-fired, Average Heat Rate: GJ/GWh		If not gas-fired, Fuel Cost: \$ /MWh	
For DSM, provide an indication of expected capacity payment:			
Technical Information (please refer to Appendix A for definitions)			
Level of technical analysis completed on the project: (blank) ↓ If Other, describe:			
Installed Capacity: MW		Dependable Capacity: MW	
Is the project dispatchable? <input type="checkbox"/>		If yes, Minimum Annual Generation: GWh/yr	
Average Annual Energy: GWh/yr		Firm Annual Energy: GWh/yr	
Social and Environmental Impact			
Level of environmental analysis and consultation completed on the project: (blank) ↓ If Other, describe:			
Emissions			
GHG Emission Intensity: tonnes CO ₂ e/MWh		SOx metric tonnes/GWh	
NOx metric tonnes/GWh		CO metric tonnes/GWh	
VOC metric tonnes/GWh		PM 10 metric tonnes/GWh	
PM 2.5 metric tonnes/GWh		Hg metric tonnes/GWh	
Net Project Footprint: Ha		BC Clean Energy: <input type="checkbox"/> EcoLogo Certified: <input type="checkbox"/>	
Construction Jobs Created: person-yrs		Operation Jobs Created (full time equivalents):	

Additional Information (optional)		
<p>Project Development Plan</p> <p>Provide information on the status of the following elements and target date for completion:</p> <ul style="list-style-type: none"> • Site selection and acquisition • Design and engineering • Permitting • Major equipment design and procurement • Construction • Arranging interconnection • Arranging ownership structure • Fuel supply arrangements • Testing and commissioning • Operating plan • Maintenance schedule 		
<p>Financing Plan</p> <p>Provide a description of the following:</p> <ul style="list-style-type: none"> • Proposed method of financing the project including sources of debt and equity • Form of equity investment • Method of financing during each of the development, construction and operating phases • Construction cash flow per year • Expected capital structure (debt/equity ratio) • Proponent's experience in raising capital and obtaining financing for previous projects. 		
<p>Technical Expertise</p> <p>Provide information on the project team's development and operations experience, particularly with respect to projects of a similar scale to the proposed project.</p>		
<p>Stakeholder Engagement Plan (describe):</p>		
Additional Information Attached		
Financial Studies	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>
Technical Studies	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>
Environmental/Social Studies	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>
	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>
	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>
	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>
	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>
	Soft Copy <input type="checkbox"/>	Hard Copy <input type="checkbox"/>

Please submit a soft copy of your completed RFEI to power.acquisition@bchydro.com.

***Thank you for participating
in the Capacity and Associated Energy Request for Expressions of Interest
process!***

APPENDIX A - Definitions

Many of the following definitions have been based on the Glossary in the 2004 Integrated Electricity Plan. Respondents may wish to consult the Glossary for additional information
<http://www.bchydro.com/info/epi/epi8970.html>.

Average Energy: The estimate of the amount of energy that a project is physically capable of producing annually over a long period of time. For example, for a hydroelectric project, it is based on average streamflow conditions.

Baseload: A plant, which is normally operated to produce electricity at an essentially constant rate and, except for planned outages, is expected to run continuously (e.g. cogeneration).

BC Clean Energy: Electricity generation that meets the BC Clean Electricity Guidelines, as defined by the Government of BC. In general, this refers to alternative energy technologies that result in a net environmental improvement relative to existing energy production (e.g., small/micro hydro, wind, solar, photovoltaic, geothermal, tidal, wave and biomass energy, as well as cogeneration of heat and power, energy from landfill gas and municipal solid waste, fuel cells and efficiency improvements at existing facilities). For more information on the Guidelines, please refer to the Government of BC's web site:
http://www.em.gov.bc.ca/AlternativeEnergy/bc_clean_electricity_guidelines.htm.

CO₂e: Carbon-dioxide equivalent. A unit that measures the climate change potential of each of the six greenhouse gases identified in the Kyoto Protocol. For more information on how to calculate CO₂e, use the process used in the 2002/03 Green Power Generation Call for Tenders as an illustrative example:
http://www.bchydro.com/rx_files/info/info5507.pdf

Dependable Capacity: The amount of megawatts a plant can reliably produce when required. Factors external to the plant affect its dependable capacity. For example, streamflow conditions can restrict the dependable capacity of hydro plants and fuel supply constraints can impact thermal plant dependable capacity. Planned and forced outage rates are not included.

Dispatchability: The ability of BC Hydro to schedule and control the delivery of net electrical output from a resource option.

EcoLogo Certified: The electricity generated by the project either has been certified by EcoLogo or is highly likely to attain EcoLogo Certification once developed. For more information on EcoLogo certification, refer to the following link:
<http://www.environmentalchoice.com/index.cfm?fuseaction=main.DspDivision&PageID=28&fkMainPage=0>

Firm Energy: The annual energy that is reliably available (i.e. equalled or exceeded). For a hydroelectric project, this would be the estimated annual energy capability of the project based on the lowest historical streamflow records, if available. If not available, this would be based on the best estimate of the lowest streamflow conditions. For thermal projects, this is based on fuel source and the annual availability (net of planned and forced outages).