2002/03 GREEN POWER GENERATION CALL FOR TENDERS BIDDERS' MEETING

QUESTIONS & ANSWERS

Introduction

This document contains an edited version of the Questions and Answers at the April 30, 2003 Green Power Generation Call for Tenders Workshop.

Questions and Answers have been edited for clarity and accuracy. Similar questions and answers have been consolidated into a single, comprehensive question and answer. Only those questions and answers posted on the web site (www.bchydro.com/greenipp) become part of the 2002/03 Green Power Generation Call for Tenders (2002/03 GPG CFT).

Future questions may be submitted in writing as directed in the 2002/03 GPG CFT. Those questions will be answered in writing. If a question is relevant to more than one bidder, BC Hydro will post the Q&A to the web site. Those questions will be edited as indicated above as well as to remove any project-specific information. Duplicate questions and answers will not be posted.

There were a number of comments at the Workshop concerning the 2002/03 GPG Standard EPA. In some cases there was no question associated with the comments; therefore, these comments have not been included in this Q&A.

Call for Tenders Process and Selection

1. **During the CFT process, will BC Hydro tell the short-listed bidders if a project is cancelled, disqualified or rejected? Will BC Hydro announce how many pre-qualified bidders did not submit a Notice of Intent to Tender?**

   Information on the status of tenders will ***not*** be made publicly available until the Tender selection process closes on September 29th, 2003, after which BC Hydro may announce the number of bidders who have been awarded EPAs. Bidders will be advised individually of the status of their Tenders on September 29, 2003.

2. **If bidders submit their proposed project changes to BC Hydro prior to the Tender submission deadline of August 29th, will they be given the opportunity to have their proposed project changes reviewed by BC Hydro? If so, will BC Hydro provide feedback as to whether or not these changes will be considered "material" by BC Hydro and, consequently, grounds for Tender disqualification, in time for the bidder to prepare their Tender by the August 29 deadline?**

   BC Hydro has determined that it will establish a process to review project changes prior to the deadline for submission of Tenders. Bidders will have a single opportunity to submit details of all projects and bidder changes for a "one time only" review by BC Hydro. Details will be posted within the next few days to the web site under 2002/03 GPG CFT Addenda.

3. **In the case of a tie bid – where two or more projects have identical Bid Prices, adjusted for bid comparison purposes – how are you deciding which project gets the EPA?**

   In the event of a tie between competing Tenders due to the Tenders having the same adjusted Bid Price, the first Tender submitted that contains all the required information, as evidenced by BC Hydro's date and time stamp on the last submitted element of the Tender, including any amendments, addenda or supplements, will be preferred for award of an EPA as specified on page 19 of the 2002/03 GPG CFT.

4. **From a practical perspective, it appears that the earliest point at which a complete Tender package can be submitted is July 17th, once the interconnection cost estimates and final Adjustments have been sent by BC Hydro to the bidders. Given the tie-breaking rule of preference going to the first bidder to submit the final component of the Tender package, as evidenced by BC Hydro's date and time stamp, can you please confirm that this rule creates an incentive to submit a**

complete Tender package as early as possible after July 17th, and that it presents a risk for proponents who choose to wait longer to submit their complete Tender package?

The earliest point at which a proponent can submit a complete Tender package is on or after July 17th. Each bidder must assess the risks and benefits associated with filing their Tender at any particular time.

5. **I am concerned about some questions being omitted from the Q&As posted on the web site by BC Hydro. Will all the questions be posted with corresponding answers?**

As noted in the Introduction, the questions and answers from the GPG CFT Bidders' Meeting have been edited for clarity and accuracy.

Future questions may be submitted in writing as directed in the 2002/03 GPG CFT. Those questions will be answered in writing. If a question is relevant to more than one Bidder, BC Hydro will post the Q & A to the web site. Those questions will be edited as indicated above and to remove any project-specific information. Duplicate questions and answers will not be posted.

6. **Are there any consequences in submitting a Notice of Intent to Tender and then withdrawing from the Tender process by not submitting a Tender by August 29th, 2003?**

No.

7. **The Bid Price Adjustments impact the economic feasibility of a project. The longer the proponent has to wait before receiving these Adjustments, the more money may be spent on the development of a potentially uneconomic project. Is there any way to shorten the CFT process and receive all the Bid Price Adjustments before July 17th?**

BC Hydro appreciates this issue and has aggressively sought to shorten the CFT schedule, while maintaining a responsive process that allows for Q&As, EPA revisions and CFT Addenda. The main schedule constraint involves the interconnection studies, a complex planning and costing process, which must be conducted for each and every bidder. After careful consideration, July 17th is the earliest date on which BC Hydro can commit to providing all the Bid Price Adjustments. In light of this key constraint, we believe that the schedule, as it

currently stands in the CFT, has been compressed as much as it can practically be, while still allowing BC Hydro to address all issues in a thorough, consistent and fair manner.

8. Do Bidders have to adhere to the Contracted Capacity Profile they submit on June 11th or can they submit a different profile in their Tender as Attachment C of the CFT? Also, will there be an opportunity to revise the Contracted Capacity Profile prior to signing the EPA?

The Contracted Capacity Profile to be submitted on June 11th is the Contracted Capacity Profile you submit in your Tender as Attachment C. If there are any discrepancies between the Contracted Capacity Profile filed by the bidder on June 11th and Attachment C to the bidder's Tender Forms, BC Hydro will decide whether to recalculate the Area Location Adjustment and/or the System Adjustment for bid comparison purposes or to disqualify the Tender as set out on page 11 of the CFT.

Attachment C to the Tender Forms automatically becomes Appendix 2 of the EPA; it cannot be changed prior to signing the EPA. However, during the Initial Period, Section 3.5 in the EPA allows bidders to increase the Contracted Capacity in Part I of Appendix 2 by a percentage not exceeding 20%, and amend the monthly delivery profile in Part II of Appendix 2 provided certain conditions are met.

EPA Terms & Conditions

9. Please clarify the Limitation of Liability amounts specified in section 12.2 of the EPA; i.e., the $3,000 and $1,000 annual and monthly capacity factor liquidated damage limits indicated. These are stated to be per "MWh/h"; shouldn't this be per "MW"?

No, per "MWh/h" is the correct unit. However, for purposes of calculating liquidated damages (LDs), the MWh/h can effectively be read as MW with the result that a Seller that agreed to deliver 100% of 10 MWh/h in the month would be subject to a maximum of $10,000 of LDs for the month.

10. How does this EPA compare with other EPAs signed by BC Hydro with IPPs in the past?

The 2002/03 GPG Standard EPA is modelled very closely on the Standard EPA used in the recent CBG Call for Tenders process. Five IPPs were awarded an EPA in that process. In addition, the 2002/03 GPG Standard EPA has many provisions that are very similar to those contained in the form of EPA used in the 2000/01 "Green Call". The IPP proponents for twenty-three projects were awarded EPAs in that process. Since that time a number of options and features and new commercial terms have been added to the EPAs to reflect the new provincial Energy Plan and competitive era in British Columbia. Finally, in developing the 2002/03 GPG Standard EPA BC Hydro looked at a number of standard form EPAs in use throughout North America to benchmark the terms and conditions of the 2002/03 GPG Standard EPA. BC Hydro is confident that the 2002/03 GPG Standard EPA compares very favourably with EPAs in other jurisdictions.

11. Can the EPA be customised for particular projects?

Because we have chosen a Call for Tenders process utilising a Standard EPA, only limited, non-material changes can be accommodated. This ensures a fair, transparent process for all bidders. As described in the CFT under "Project-Specific Revisions to 2002/03 GPG Standard EPA," limited revisions directed at correcting unanticipated consequences of contract language which would be unworkable in the context of a particular project may be submitted to BC Hydro prior to submission of Tenders in accordance with the procedure and deadlines set out in the 2002/03 GPG CFT.

12. The Hardship Event definition in Appendix 1 to the EPA includes provision for relief, in the case of thermal projects, where there is a shortage of the energy source due to diminished supply or an increase in the delivered cost. Why was similar relief not included for small run-of-river hydro projects, where there is no storage capability and the potential inability to generate due to low water flows?

The Natural Resource Adjustment described in the CFT will provide relief from liquidated damages for capacity factor shortfalls for those bidders who select it for hydro (and wind) projects, when they are unable to generate the Contracted Capacity due solely to natural resource limitations. See the definition of Natural Resource Limitation in Appendix 11 to the EPA.

13. What effect will the formation of the new British Columbia Transmission Corporation (BCTC) have on the EPA?

We do not anticipate that the formation of the BCTC, and its role as operator of the BC Hydro transmission system, will have any effect on the EPA. In developing the GPG EPA we were aware that it was likely that the BC Hydro transmission system would be put under independent operation, and we took this into account in the EPA provisions.

14. How do the terms of the 2002/03 GPG EPA compare to the terms of the EPA used in the previous Green call? Specifically, were liquidated damages previously applied to run-of-river hydro projects in past EPAs?

The 2001 Green Energy Call EPA used a standard pricing framework, rather than competitive pricing. While the pricing framework factored in the value of "greenness," and did take into account the variability in the resources we anticipated in that process, it was not arrived at through a bid process. In the 2002/03 GPG call we have moved to more commercial terms, and have allowed for the variability and risks associated with various projects to be taken into account through the competitive bid process, while subject only to a ceiling price.

Regarding LDs, they apply to all projects awarded an EPA in the recent CBG tender process. LDs were not included in the EPAs in the 2001 Green Call. However, damages for failure to deliver under those contracts will be assessed based on the general law of damages applicable in breach of contract situations.

15. The Hardship Event definition includes changes of federal, provincial or local laws. Does this mean that increased water rental rates for a hydro project would

be allowed as a pass through? What about increased municipal or local taxes on a project?

There are no direct pass throughs provided for in the EPA, either under the Economic Hardship provisions or otherwise. The Economic Hardship provisions only provide relief from the delivery obligations of the Seller in certain defined Hardship Event circumstances, similar to *force majeure* relief. There is no provision for price increases, or pass through of costs, other than for general cost increases that will be reflected in the Consumer Price Index price adjustment mechanism contained in Appendix 3 to the EPA.

16. **In its July 1990 decision in response to BC Hydro's rate application, the B.C. Utilities Commission expressed the view that the EPAs then being offered for small hydro projects should include assurances that the IPPs would not be disadvantaged by taxes and certain other unavoidable costs incurred after the contracts had been signed. BC Hydro agreed with this at that time. Why has similar provision not been included in the 2002/03 GPG EPA?**

The comments in the 1990 decision were not a ruling or directive of the BCUC and were limited to the EPA for the 1990 small hydro (less than 5 MW) program. Under the 1990 small hydro program, BC Hydro was offering a relatively low, fixed price for this energy supply and, in return, agreed to assume the risks of certain extraordinary incremental costs. Under the 2002/03 GPG CFT, and other current programs, the decision was made to move to more commercial terms in the EPA, and to let the marketplace decide – through the competitive bid process – appropriate pricing for the risks assumed.

17. **Section 7.8(b) of the EPA provides that the obligations of BC Hydro, as Buyer, to accept and pay for electricity from the Seller are subject to transmission suspension, constraint or curtailment for reasons not attributable to the Buyer. Since BC Hydro as Buyer will be responsible for arranging transmission of the electricity purchased from the Seller, why isn't BC Hydro responsible for paying for the electricity that the Seller could have delivered were it not for the suspension or constraint – perhaps subject to a deductible of a few hours, as is the case in some jurisdictions?**

The provisions of the EPA relating to transmission suspension, constraint or curtailment were carefully developed with a view to the likelihood that the BC Hydro transmission system would be placed under independent operation – as will happen under the BC Transmission Corporation. In that case, all participants – including BC Hydro itself – will have access to the transmission facilities under a system of filed rates and tariffs. Any suspension, constraint or curtailment, and the effects of those, will also take place under the filed tariffs, and will be determined by the independent operator. BC Hydro, as Buyer, will be subject to the same rules as everyone else.

In developing the EPA, however, we recognised that BC Hydro, as Buyer, is responsible for arranging firm, take away transmission of the purchased electricity, and also that BC Hydro could impact the transmission system as a generator of electricity. Therefore, in section 7.8(b), we made it clear that BC Hydro remains liable to pay for electricity that would have been delivered by the Seller if the failings of BC Hydro in these capacities has caused upsets in the transmission system preventing deliveries. This is reflected in clause (iv) of the definition of Eligible Electricity in Appendix 1 to the EPA.

18. Can BC Hydro flow through water rental increases or property tax increases to the rate base?

The relationship between BC Hydro, as power purchaser, and its ratepayers is very different from the relationship between IPPs and BC Hydro, as power purchaser. BC Hydro is a public utility. It has an obligation to serve within its service area, and its prices and other activities are regulated. IPPs choose to generate and sell electricity. They compete on price and their business is unregulated. Opinions may differ on risk allocation of particular costs between BC Hydro and IPPs. But the mere fact that BC Hydro may include certain costs in its rate base does not necessarily justify the allocation of the risk of those costs to BC Hydro rather than to non-utility generators.

19. The EPA is a lengthy and complex document containing many definitions and a number of appendices. This will add to our legal costs for having our lawyers review it, and possibly also for having the lawyers for the financial institutions who will be providing our financing review it as well. Couldn't the EPA have been made more simple and straightforward?

The 2002/03 GPG Standard EPA is more detailed than forms used by BC Hydro 10 or 15 years ago. Many things have changed since then in provincial energy policy and in the IPP industry. The EPA is neither longer, nor more detailed, than comparable documents in current use throughout North America. Despite that, it offers options and benefits to IPPs which are not available elsewhere.

A more detailed agreement provides benefits to both parties. Open, price competitive tendering requires that all bidders compete on uniform commercial and legal terms and conditions to ensure a level playing field. A uniform contract reduces transaction costs and brings consistency and efficiency to contract administration. A uniform contract must be sufficiently detailed to deal fairly with a range of energy sources, technologies, plant sizes and configurations, locations and other variables. A more detailed agreement better defines the risk and benefits for both parties and minimises

the risk of disputes which often arise where the rights and obligations of the contracting parties are not clearly stated.

20. What is the rationale for including the liquidated damages provisions in the EPA? Under Canadian law, isn't it the case that if one party breaches a contract the other party has the right to recover damages from the defaulting party? Wouldn't that apply here? Also, if the intention is to provide an incentive for the IPP to get its plant back on line, isn't the fact that it will only be earning income if it generates and delivers electricity a sufficient incentive?

A contractual commitment necessarily has consequences if it is not met. The party which fails to perform is liable to the innocent party for the payment of damages sustained by it. Damages may be liquidated – that is, calculated according to a pre-agreed formula or method – or unliquidated – that is, left to be calculated in accordance with principles recognised by law, but not set out in the contract. In the case of contracts for purchase and sale of commodities, like electricity, unliquidated damages are determined by comparing the contract price to the market price and adding further special damages, if any, which the innocent party has suffered. Liability for general, unliquidated damages can be very significant.

Liquidated damages provisions are common in various commercial contracts. This is particularly the case where, if a default occurs, it can be very difficult to determine the particular damages or consequences that may flow from the default. Electricity markets can be very volatile, with prices varying widely depending on the season of the year, the day of the week, and even the hour of the day. Since Contracted Capacity shortfalls are determined on a monthly and annual basis under the EPA, it would be very difficult, to determine the damages that would flow from a failure to deliver the Contracted Capacity during a particular hour or period of hours.

It is sometimes argued that BC Hydro can use its generation facilities to mitigate any shortfalls in delivery by an IPP seller. But any water BC Hydro puts through its dams to make up for a shortfall is not available at a later date or time of day to generate electricity when the value of that electricity may be many times higher than when the water was used to make up the shortfall; as a result, BC Hydro may have to purchase electricity later at a higher price. Assigning a value to the water so used, and thereby quantifying the damages for the default, would be virtually impossible. A LD provision gives certainty to both the Seller and the Buyer and the buyer's financial supporters in these situations.

Unless there is a Deliberate Breach, the LDs in the 2002/03 GPG EPA are capped at amounts that are very reasonable by comparison to the potential revenue from the generating facilities and by comparison to other similar contracts in common use throughout North America. For example, assuming a firm, flat block of power of 5 MWh/h, annual LDs would be limited to $15,000 and monthly LDs would be limited to $5,000. Assuming a price of $55/MWh, total LDs, inclusive of annual and

monthly calculations on a worst case basis, would be approximately 2.5% of annual revenues.

21. Does payment of liquidated damages for a delivery failure exonerate the Seller from liability generally, for example under section 6.3, in respect of that failure, or only from LD liability?

The Contracted Capacity tables establish a quantity of electricity, expressed in MWh/h, that the Seller must deliver in each hour of each day of each month. We call that the "Contracted Capacity" and the obligation to deliver is set out in section 7.2 of the EPA. It is a firm obligation, subject to force majeure, hardship, and transmission constraint not caused by the Seller, and the Natural Resource Adjustment is selected, Natural Resource Limitations.

The last sentence of section 6.3 of the EPA imposes further obligations which protect the value of the product to BC Hydro by restricting shaping. These obligations relate to (i) consistency of deliveries within each hour and (ii) the range of instantaneous variation of output. Regarding the range, if you do not elect the Natural Resource Adjustment, the range is 90% to 110% of Contracted Capacity. If you elect the Natural Resource Adjustment, the range is 90% of Contracted Capacity to 110% of Plant Capacity (i.e. not Contracted Capacity). But these further obligations are not absolute. The Seller must only use commercially reasonable efforts to achieve them.

Liquidated Damages are payable for failure to meet the monthly and annual capacity factors of 90% and 80% respectively. That exposure is the Seller's only exposure for damages for non-deliberate/non-reckless delivery failures, whether the result is (i) a shortfall from required minimum monthly or annual capacity factors, or (ii) a failure to meet the firm delivery obligation in section 7.2, or (iii) output variations within an hour or output exceeding the permissible range, either of which would violate section 6.3. The exclusivity of Liquidated Damages for non deliberate delivery failures is set out in section 12.3. (Note that if there are repeated delivery failures, the Buyer may also be entitled to terminate the EPA. This is set out in the definition of "Seller Default" in Appendix 1).

However, if a Seller deliberately (or recklessly) varies output within an hour or exceeds the permissible range under section 6.3, then section 12.3 does not apply. In the result, Liquidated Damages, if otherwise payable, are not subject to the limit of liability in section 12.2 and the Seller is exposed to liability for further damages, if any, which its deliberate violation of the contract may cause to BC Hydro. The message is "Do your best to meet your obligations, and if you fail, the consequences are clearly defined and carefully limited. Set about gaming the contract by deliberately breaching it, and your exposure is not so limited."

Eligible Electricity

22. **All the examples use the units MW; however, the contract uses the term MW hours per hour. The EPA does not define MW hour per hour. What does it mean?**

    MWh/h is actually intended to show an average capacity. Output is measured in MWh. To determine average capacity, divide the output by the number of hours that the facility delivered the output. Consider, for illustrative purposes only, a facility that delivers 10 MWh in its first hour, 9 MWh in the next hour and then 11 MWh in the third hour. The average would be 10 plus 9 plus 11 – or 30 MWh – divided by 3 hours, resulting in 10 MWh/h.

23. **Will the Contracted Capacity calculations be based on fluctuations up and down hour by hour?**

    Please refer to the 2002/03 GPG Contracted Capacity Tutorial presentation available at www.bchydro.com/greenipp for examples of how to calculate Contracted Capacity.

24. **If a facility supplies more power than the 110% on an instantaneous basis, say for 2 or 3 hours in a day, can it count on Powerex buying that "extra" power?**

    You cannot count on Powerex or any other marketer to purchase your excess power unless you have some kind of arrangement with them. The 2002/03 GPG EPA only provides for sale of electricity to BC Hydro.

25. **The Contracted Capacity table does not include allowances for outages. Does this only apply to unplanned outages? What about planned outages needed, for example, for maintenance?**

    Planned outage hours during non-winter months are deducted from the calculation of monthly capacity factors. Planned outage hours are not deducted from the calculation of annual capacity factors. However, the 80% annual capacity factor should provide adequate leeway to accommodate planned outages. If that is not the case for a particular project, it is up to the bidder to allow for this in completing the Contracted Capacity profile. Note that planned outages do not require BC Hydro consent – except for planned outages during winter months.

26. **In a thermal plant, part of the energy generated by the generator is used for "parasitic" load in the plant, so that would not be available for sale to anybody. The metered electricity that BC Hydro would get would be metered at the transformer. Do you mean it's the metered electricity at the sub-station or the generator?**

The EPA provides that the revenue meter must be installed at a location as close as technically practical to the Seller's generator terminals and at a location such that the metering equipment will record the total amount of electricity generated by the Seller's Plant. Electricity is defined in Appendix 1 of the EPA as "electricity generated by the Seller's Plant net of Station Service." BC Hydro will not purchase electricity required for Station Service, and the meters will be located or calibrated to achieve that result.

27. Could we provide BC Hydro with an hourly profile and adhere to that, within plus or minus 10%?

No.

EPA Price & Examples

28. How are B.C. Statutory Holidays defined in the EPA?

For the purposes of the Electricity Purchase Agreement, the following are acknowledged as statutory holidays:

New Year's Day	Labour Day
Good Friday	Thanksgiving Day
Easter Monday	Remembrance Day
Victoria Day	Christmas Day
Dominion Day	Boxing Day
B.C. Day	

or days in lieu of these listed holidays and any other public holiday gazetted, declared or proclaimed by the Federal Government or the Government of the Province of British Columbia.

29. With respect to liquidated damages (LDs), is the Dow Jones Mid-C electricity price index representative of the cost that BC Hydro would suffer by IPPs not being able to deliver electricity? BC Hydro also sells to Alberta, and then there is also a situation where the BC Hydro system stores surplus water and is not in a shortage situation, so is the Dow Jones Mid-C price representative with respect to the LDs that you are defining here?

The Dow Jones Mid-C electricity price index adjusted for wheeling and losses to the BC border is the basis for calculating LDs because it provides the nearest, liquid and transparent hub for trading electricity. This transparency is crucial for all parties involved as it provides a consistent basis among the bidders for calculating damages, as well as certainty regarding the method of calculating those damages. Any electricity BC Hydro generates, such as putting water through its dams to make up for a shortfall from an IPP, is not available at a later date or time of day to generate electricity when the value of that electricity may be many times higher than when the water was used to make up the shortfall; as a result, BC Hydro may have to purchase electricity later at a higher price. Assigning a value to the water so used, and thereby quantifying the damages for the default, would be virtually impossible.

30. A Bid Price Adjustment of -$5.00 per MWh is made for Green Electricity. However, this seems to be neutralised by the +$5.00 Natural Resource Adjustment. Doesn't this imply that BC Hydro places a value of $0/MWh on green power that cannot supply power on demand?

No. The two adjustments are completely unrelated. The GPG Green Criteria Adjustment of is an incentive to attract green power. The Natural Resource Adjustment is an adjustment which recognises that projects dependent on a variable and unpredictable energy source cannot deliver electricity with the same firmness as other projects. The Natural Resource Adjustment is an option that is available to bidders with wind, wave, solar or hydrology projects. By electing this option, the successful bidder can avoid being subject to certain LD provisions of the EPA which relate to capacity short-falls. The Natural Resource Adjustment is necessary to recognise the comparatively lower value of less firm power and to be fair to bidders who can deliver firm green power.

31. **How is GHG Intensity measured for thermal projects? Does measurement rely on the Continuous Emission Monitoring Systems in the Plant, which, in practice, often seems prone to breakdown?**

For the purpose of calculating LDs, the actual GHG Intensity is estimated using the actual fuel consumption and Environment Canada's emission factors. The calculation methodology is detailed in Appendix 10 of the EPA.

32. If the BCUC concludes that BC Hydro's figures do not quite add up, and decides that your marginal cost may be, say, $60 per MWh rather than $55 per MWh, would BC Hydro replace its ceiling price with $60 per MWh?

No. Any decisions rendered by the BCUC will be taken into account in setting the pricing for future calls, but for the purpose of this call, the ceiling price is fixed at $55.00/MWh.

33. What is the rationale behind the System Upgrade Adjustment? Will proponents be advised of the System Upgrade Adjustment prior to tendering their Bid?

The System Adjustment accounts for system costs for changes that are required to the BC Hydro system in order to connect the project, but that are not to the account of the proponent as part of the Interconnection Process. The Adjustment is based on the costs that BC Hydro will absorb into its rate base for transmission upgrades. While these upgrades have a benefit to other users of the system, they are upgrades that may not ever have been incurred by BC Hydro or may not have been incurred at this time but for the interconnection of the IPP's project. If two projects are equal in every

other way but one, because of its location, will result in higher costs to BC Hydro to interconnect, this needs to be taken into consideration in the Bid Price Adjustment process. This Adjustment is for ranking purposes only.

Assuming the bidder filed a Generator Interconnection Preliminary Study Application with the Office of Generator Interconnections by April 25, 2003, the System Adjustment will be provided to the Bidder by July 17, 2003, prior to the deadline for Tender submission.

34. Is BC Hydro proposing to pay us on an hourly basis for the energy in a month? Do Sellers get paid if our hourly generation exceeds Contracted Capacity in given hours?

Proponents will be paid monthly based on the number of MWh delivered in each hour during the month. This is limited by the Eligible Electricity amount which defines the amount of energy which BC Hydro is obligated to accept in any hour. This amount is generally capped at 110% of the Contracted Capacity on an hourly basis.

35. Can proponents shape their energy delivery however they like within the month?

No. Bidders are required to nominate for each month of the year a fixed amount of energy that will be delivered in each hour during that month. The ability to shape the delivery of that energy is constrained by the cap on Eligible Electricity – the amount that BC Hydro is obligated to take – and by the standard of operation required by the EPA.

36. How are liquidated damages payable to BC Hydro? Are there provisions in the EPA to pay them back with energy per year or with future deductions on future generation over a number of months?

LDs will be deducted from the amount owing by BC Hydro to the Seller for Eligible Electricity delivered during the month. In circumstances where the LDs exceed the amount owing by BC Hydro to the Seller, the balance would be paid by the Seller to BC Hydro in cash.

There is no provision for making LD payments over time or for delivery of excess generation with a value equivalent to the LDs owing.

37. Small run of river hydro projects typically have a 1 to 5 multiplier for the variability of rainfall every year. BC Hydro is asking for firm energy, which doesn't work for a small hydro project. How will the small run of the river hydro projects be viable if they have to reduce their installed capacity to such a low amount?

The Natural Resource Adjustment is intended to address the uncertainty of the hydrology of run of river hydro projects. If you qualify for and choose to elect the Natural Resource Adjustment, you are relieved from LDs exposure in situations where the reason for the delivery shortfall is that the resource simply isn't available to permit generation at the Contracted Capacity that you contracted to provide in that month of that year in your Tender and EPA. Run of river projects should consider their hydrology data carefully when deciding whether or not to elect the Natural Resource Adjustment. For projects that elect the Natural Resource Adjustment and that are selling the full output to BC Hydro, BC Hydro will purchase the full amount of electricity generated by the plant up to 110% of the Plant Capacity.

Green Criteria in the EPA / GHG Intensity

38. How does the EPA treat the ownership of the Green Rights and the Emission Reduction Rights in a split bid situation?

BC Hydro owns the Green Rights and the Off-Site Emission Reduction Rights for the energy that we purchase. The Seller would maintain ownership of the Green Rights for the energy that is not sold to BC Hydro. (Please note that, under section 2.8 of Appendix 9 of the EPA, you are not entitled to rely on the BC Hydro determination of green for any form of certification or marketing to other parties).

As for any off-site emission reduction rights related to the energy the Seller is keeping or selling to a third party, the ownership and amount of those reductions would have to be determined and depend on the use of that energy. Those off-site emission reduction rights are unrelated to BC Hydro and our operations. The Seller owns all on-site emission reduction rights.

39. If a proponent were to get his/her project EcoLogo certified and maintained that certification, would BC Hydro view that as being sufficient to meet their ongoing Green Criteria requirements?

Currently the EPA requires compliance with the 2002/03 GPG Green Criteria. EcoLogo certification is not evidence of compliance to these criteria. Note, however, that under section 2.9 of Appendix 9 in the EPA, BC Hydro may request that you certify to a third-party standard, for example, EcoLogo.

40. If a biomass project displaces the use of propane for dry kilns, is there some sort of emission credit that could be monetised and applied to the tendered bid price?

This example of displacement of propane for dry kilns would be an on-site emission reduction. The Seller owns that on-site emission reduction and is free to market and sell those reductions separately from the 2002/03 GPG Call for Tenders.

41. Is it true that BC Hydro may require projects to adhere to EcoLogo in the future? Is this something BC Hydro would force projects to do or would there be an option?

Please refer to section 2.9 in Appendix 9 of the EPA. This section stipulates that BC Hydro can request that the Seller seek third-party certification unless the Seller can demonstrate to BC Hydro that they would suffer a material adverse financial impact from the transition. If this impact is demonstrated, then BC Hydro cannot require that you obtain third party certification.

42. Is BC Hydro interested in buying any on-site Emission Reduction Credits generated by a project that the proponent may not wish to attempt to sell in this emerging market?

At this point, BC Hydro is not interested; however, that could change in the future. Proponents interested in selling any on-site Emission Reductions can notify BC Hydro separately from the 2002/03 GPG Call for Tenders process.

43. How much non-renewable fuel can be used by a biomass project for that project to still be considered green?

The limit is listed in the 2002/03 GPG Green Criteria: Low Impact Biomass Facilities, attached to the 2002/03 GPG Request for Qualification. The criteria limit the use of non-renewable fuel to, typically, 1 to 3 percent of fuel heat input.

44. I would like to refer to the emissions intensity baseline referenced by BC Hydro; that is, a combined cycle gas turbine (CCGT). You said 0.36 tonnes per MWh. Is that the emissions just coming out of the plant itself, or is it a lifecycle emissions calculation? Specifically, doesn't the transmission of natural gas increase GHG emissions by about 15%, and shouldn't that be included as well?

The baseline reference of 0.36 tonnes per MWh represents the emissions coming out of the plant. It is the standard way Environment Canada suggests that the greenhouse gas emissions from thermal energy be calculated. The guidance provided by the federal government, in terms of calculating greenhouse gas emissions, indicates that if transmission-related emissions do occur they are to be captured in the inventory of the natural gas transmission company, which would be responsible for those emissions. That is why they are not considered in the CCGT emission factor.

Interconnection Process

45. In the interest of transparency, what opportunities do bidders have to review the Bulk Location and System Adjustments?

The Bulk Location Adjustments are provided on page 18 of the CFT document, which is posted on BC Hydro's web site. This adjustment reflects a planning forecast of the cost of adding additional firm transmission capacity in particular regions in order to facilitate movement of power to areas of increased load (e.g., the lower Mainland and Vancouver Island.) These costs have been unitised (i.e., converted to $/MWh) for purposes of comparison.

The System Adjustment accounts for system costs for changes that are required to the BC Hydro system in order to connect the project, but that are not to the account of the proponent as part of the Interconnection Process. The Adjustment is based on the costs that BC Hydro will absorb into its rate base for transmission upgrades. While these upgrades have a benefit to other users of the system, they are upgrades that may not ever have been incurred by BC Hydro or may not have been incurred at this time but for the interconnection of the IPP's project.

46. While the dollar value of the individual adjustments may seem small, in the examples shown in the presentation, the price differential is $4.20, or about 8% of the total bid price. In the case of the Area Location Adjustment, what sort of range might occur?

All examples in the presentation are hypothetical. The Area Location Adjustment is a function of line losses and this is a function of power flow. In an area with tremendous losses, the adjustment can be high; for example, if the average losses are 10% with a $55/MWh benchmark, the losses would be around $5.50/MWh. However, a very high line loss adjustment is highly unlikely; it would occur only in an area where the project increases the line loading to its maximum on a year-round basis. In such a case, the project would more likely trigger a line upgrade, which would drive up interconnection costs but actually reduce line losses.

47. **What sort of range might exist for the System Adjustment?**

The System Adjustment also depends on the project location. If a huge system upgrade is required, the System Adjustment will be very high – it could be as much as $5 - $6/MWh – but that would be very unusual.

48. What is the approximate cost for revenue metering on the 60kV system?

The table below provides further information on revenue metering.

Typical Capital Cost

	Load Profile Metering		Manually Read Metering	
Point-of-Metering:	VTs and CTs by BC Hydro	VTs and CTs by Power Generator	VTs and CTs by BC Hydro	VTs and CTs by Power Generator
600 V Indoor Switchgear	$15,200	NA	$7,100	NA
12 kV Indoor Switchgear	$22,300	$14,400	$14,200	$6,300
25 kV Indoor Switchgear	$25,300	$14,400	$17,200	$6,300
12 kV Outdoor Pole Top Meter Kit	$26,200	NA	$18,200	NA
25 kV Outdoor Pole Top Meter Kit	$31,200	NA	$23,100	NA
69 kV Outdoor	$59,400	$15,900	NA	NA
138 kV Outdoor	$82,800	$15,900	NA	NA

Typical Monthly Charge

	Load Profile Metering	Manually Read Metering
Meter Lease	$100/month	$15/month
Meter Reading Fee	$100/month	

Note:
For projects awarded an EPA in the GPG program, load profile meters will be required.

Costs can be reduced significantly if the load profile meters can utilise existing VT and CT. Some restrictions may apply.

49. Do the costs of revenue metering include any time of use metering that are associated with the load profile meter?

The load profile meter is a time of use meter. We typically download information based on 15 minute segments. It is a standard meter used at BC Hydro for most generation.

50. Will BC Hydro advise the IPP about the types of equipment that will be required on the bidder's side of the point of interconnection?

BC Hydro does not plan to provide bidders with a list of equipment that must be installed on their side of the point of interconnection. The immediate focus is to provide you with your bid adjustments and interconnection cost estimate by July 17th. It's important to realise that, typically, interconnection costs are not a large part of the overall project costs. If the bid is successful, BC Hydro's planners will go into more detail with you about equipment requirements. The requirements are based on the information we receive in the interconnection application and BC Hydro's applicable policies.

51. How will BC Hydro apportion the Bulk Location and System Location adjustments between projects, if there is more than one project in the same area?

The Bulk Location Adjustment is based on the location for a given project for which BC Hydro is buying electricity. It is independent of how many other projects are in the area.

With respect to the System Adjustment, BC Hydro generally assesses projects on an individual basis. There may be cases where individual projects or a combination of the projects planned for an area could trigger a major system upgrade. BC Hydro is currently reviewing the Generator Interconnection Preliminary Study Applications to determine which projects are in an area that could require a major system upgrade as a result of any or all of the projects proposed for that area. Proponents of those projects will be notified of this situation as early as possible in the CFT process. BC Hydro is also assessing whether any amendments are required to the CFT to address these situations. Any amendments will be posted as 2002/03 GPG CFT Addenda as early as possible in the CFT process.

52. If there are two or three projects in an area that will trigger a significant system upgrade, can proponents get together with these people to share the costs (and adjustment figure) of the system upgrade?

Condition 20 in the 2002/03 GPG CFT prohibits collusion with other bidders. This is a standard provision in tender processes. Generally, bidders should not be communicating with each other concerning their projects or the preparation of their

Tenders. Bidders who require further interpretation of the scope and effect of this provision should seek independent advice.

53. What about the situation where a new facility will actually result in BC Hydro not having to implement planned system improvements? Will that result in a negative System Adjustment?

Yes.

54. If a proponent is part of the Call for Tenders process, then decides to drop out because they wish to sell to Powerex or sell "point-to-point" would the interconnection cost estimate still hold or would we have to start all over again with a different study?

BC Hydro will provide a written response to how long the interconnection cost estimate will be valid in the July 17th answer.