

**BC HYDRO
GREEN POWER GENERATION**

**ELECTRICITY PURCHASE AGREEMENT
SUMMARY OF KEY PRINCIPLES
June 5, 2003**

INTRODUCTION

BC Hydro's GPG CFT stipulates a standard form of Electricity Purchase Agreement. The EPA is substantially similar to that stipulated for BC Hydro's recently-completed Customer-Based Generation program. The form is not negotiable. However, the CFT permits bidders to submit suggested project-specific changes for consideration by BC Hydro before bids are due.

The GPG EPA is more detailed than forms used by BC Hydro 10 or 15 years ago. But many things have changed since then in provincial energy policy and in the IPP industry. The EPA is comparable to documents in current use throughout North America. In addition, it offers options and benefits to IPPs, which are not available elsewhere.

In summary, the EPA defines:

- The conditions which must be fulfilled or waived before an IPP is obliged to proceed with its project,
- Subject to those conditions, the IPP's obligation to construct the plant and achieve commercial operation, including a requirement to provide development security for that obligation and the consequences of delay,
- The IPP's delivery commitment over a term of 10 to 20 years, as selected by the IPP, including circumstances when non-delivery is excusable, operating security for that obligation, consequences for inexcusable delivery failures and delivery priorities where less than full output is committed to BC Hydro,
- BC Hydro's take and pay commitment over the term, including circumstances where BC Hydro is excused from accepting deliveries,
- Price and payment terms, including price adjustments to capture certain variations affecting the value of delivered electricity,
- Greenness, and consequences for failing to achieve or maintain it,
- Rights and consequences of termination, *force majeure*, economic hardship, assignment and other legal concepts typical of long-term power purchase agreements.

This document provides a useful summary of the key principles of the EPA to assist bidders and their advisors in understanding and working with the EPA. ***However, bidders must carefully review the EPA and take such legal and other professional advice as is necessary for the bidder to have a complete understanding of the EPA and all risks associated with it. This document is provided for informational purposes only and may not be relied upon to vary or interpret the GPG EPA.***

KEY OBJECTIVES

The EPA reflects the influence of a *new energy policy* and a *continuing reality*.

The Energy Plan: In November 2002, the BC government released its “Energy for our Future: A Plan for BC” – the Energy Plan. The four cornerstones of the Energy Plan are: low electricity rates and public ownership of BC Hydro; secure, reliable supply; more private sector opportunities; and environmental responsibility and no nuclear power sources. On sourcing new generation, the plan states “IPPs will develop new generation, with BC Hydro’s role limited to undertaking efficiency improvements at existing facilities”.

BC Hydro’s Service Responsibility: While new generation will be sourced from IPPs, BC Hydro, under public ownership, will continue to be a regulated public utility. This means that BC Hydro continues to have a statutory obligation to serve. In doing so it must act prudently in securing reliable, competitively-priced generation.

Opportunity and Challenge: The Energy Plan assures new opportunities for IPPs, and particularly for green power generators. Seizing that opportunity requires that IPPs meet the challenge of offering not only *competitively-priced energy*, but also *physically and financially reliable energy*, so that BC Hydro can continue to discharge its obligations to ratepayers.

The EPA is *not a long-term option to supply power* to BC Hydro. It represents a *commitment to supply power*, which is firm – or as firm as the underlying natural energy source permits. Against this commitment, BC Hydro offers its long-term, creditworthy corporate commitment to take and pay.

A CONTRACT TO MEET THE OBJECTIVES

The GPG EPA is the result of a lengthy process of carefully thought out contract development. It is geared to meeting BC Hydro’s objectives within the framework of the Energy Plan, while offering IPPs a realistic opportunity to meet the challenge of the Energy Plan on competitive commercial terms.

Why a Detailed Agreement?

- **Responding to the Imperatives of the Energy Plan:** The Energy Plan encourages more private sector generation, but preserves BC Hydro’s obligation to provide reliable, cost-effective service. The EPA must therefore address physical and financial reliability in reasonable detail.
- **Level Playing Field:** BC Hydro is committed to purchasing competitively-priced electricity through an open tender process. Final selection from among qualified suppliers will be made on price alone. Fair and transparent, 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 also enables BC Hydro to lower transaction costs and to bring consistency and efficiency to the administration of a growing number of IPP contracts. A uniform contract must be sufficiently detailed to deal adequately with a range of energy sources, technologies, plant sizes and configurations and locations and other variables.
- **Better Definition of Risks/Benefits:** The EPA governs a long-term relationship – 10 to 20 years, as selected by the bidder. A key objective in long-term contracting is to reduce opportunities for disputes, which can threaten the strong working relationship both parties desire. This can best be done by comprehensive and detailed terms and conditions. A more detailed agreement better

defines the risks and benefits for both parties. It minimizes the risk of continuing disputes, which would arise under a shorter, but less specific, contract form.

- **More Flexibility:** The EPA includes a number of options and benefits for bidders. They are designed to offer maximum flexibility within a single tender process. The result is a more detailed contract. But it is also a better contract. Many of these options and benefits are not available elsewhere. For example:
 - *Split Bids:* Bidders need not commit their entire output to BC Hydro. They may “split” their output, and reserve a portion for sale to others or for self-consumption.
 - *Variable Capacity Profile:* Bidders are not limited to selling a flat block of power throughout the contract term – which may be 10 to 20 years as they select. The Contracted Capacity profile enables bidders to offer a variable profile within certain broad limitations.
 - *Post-signing Optimization:* Bidders may now increase their capacity profile by up to 20% even after the contract is signed in order to optimize their project based on final design.
 - *Recall Option:* The Energy Plan indicates that new opportunities for export and domestic merchant power sales are on the horizon. The GPG EPA enables bidders to recall 20% of the electricity committed to BC Hydro under the EPA, so they can exploit those opportunities. A price adjustment applies only if and when the option is exercised.
 - *Natural Resource Adjustment:* The GPG EPA permits bidders reliant on a variable natural energy source (e.g. run-of-river hydro) to elect relief from the delivery commitment to the extent that shortfalls result from natural fluctuations in that energy source. Of course, to be fair to other bidders, a price adjustment is made for bid comparison and ranking purposes to recognise the difference in value of the product between bidders who select the adjustment and those who do not.
 - *Relief for Economic Hardship:* Virtually all power purchase agreements contain a classic *force majeure* clause. But relief from the delivery commitment due to economic hardship is an unusual feature of the GPG EPA.
 - *Expedited Alternative Dispute Resolution for Green Criteria Disputes:* The EPA introduces an expedited, non-legalistic and simplified technical dispute resolution process relative to the Green Criteria.
 - *Stipulated Forms of Guarantee and Lender Consent Agreement:* In order to maintain substantial uniformity among bidders, and reduce transaction costs, standard forms of parent guarantee and lender consent agreement are included in all EPAs.
- **Developments in Green Power:** There have been very significant developments over the last 10 to 15 years relative to the definition of “green energy” and the recognition of its value. Unlike contracts in the early days of IPP development in BC, the GPG EPA includes extensive criteria for determining greenness, as well as other provisions, which recognise the value of low impact projects. Onsite and offsite emission credits as well as other green attributes are dealt with specifically. This detail is a necessary result of the growing maturity and sophistication of green power markets. It gives BC Hydro appropriate assurances of greenness. It also enables BC

Hydro to capture the emerging value of greenness. As markets continue to develop, there may be opportunities for some simplification of standard contracts – for example by adopting widely recognised independent certification.

- ***Independent Transmission Operator:*** The Energy Plan promises the establishment of an independent transmission operator - BCTC. The objective is to provide better access and more options for generators. At the same time, it is necessary to modify forms of long-term electricity purchase agreements to recognise the independence of the transmission operator in the relationship among generator, power purchaser and transmission authority. Connection requirements, which were previously included in the EPA, are now addressed by the Office of Generator Interconnections and documented in separate agreements.

UNDERSTANDING THE GPG EPA, ITS RISKS AND BENEFITS

The GPG EPA details the Seller’s commitment to design, build, finance and operate new generation facilities, and deliver output to BC Hydro at a competitively bid price. The following summarizes key principles relative to:

- The Seller’s commitment to develop new generation,
- The Seller’s commitment to deliver output,
- The Buyer’s commitment to take and pay for output,
- The consequences of delivery shortfalls and other defaults,
- Greenness and Emission Reduction Rights,
- Price,
- Termination and other key legal rights and obligations.

Capitalized terms are defined in the EPA. References in square brackets are to key sections of the EPA.

A *Conditional* Commitment to Proceed [3.1 to 3.3]

The Seller’s commitment to develop the project is conditional. It is dependent on the fulfillment or waiver of specified conditions subsequent. The Seller or the Buyer may terminate the contract if these conditions are not fulfilled or waived during an Initial Period:

- *Permits:* all Material Permits issued,
- *Site Acquired:* the site is secured by option, purchase, or long-term lease,
- *Regulatory Exemption:* the Seller is not a “public utility” under the *Utilities Commission Act*, which recognises that the program is for procurement of non-utility generation (Most projects will qualify for exemption under existing Ministerial Order #M22-0205),
- *Interconnection:* the Seller and the Transmission Authority, BCTC, conclude an Interconnection Agreement and if necessary, a Facilities Agreement,

- *Financing*: financing is obtained on terms satisfactory to the Seller.

The Seller may waive the last two conditions. Waiver of the other conditions must be mutually agreed.

The Initial Period is 180 days from signing. But it can be extended for up to a further 180 days if there is a reasonable prospect that the conditions can be fulfilled given further time.

The Seller does not guarantee fulfillment of the conditions. But it must use commercially reasonable efforts to achieve them. If the EPA is terminated because, despite those efforts, one or more conditions are not fulfilled or waived, the Development Security furnished to BC Hydro is returned and both parties walk away without liability.

These conditions ensure that neither party is obliged to proceed unless key project development components are in place within a reasonable time.

Either party may also terminate if there is an intervention during the Initial Period by the BCUC relative to the EPA, which has an adverse effect on the terminating party. The EPA assumes that no regulatory initiative during the Initial Period will undermine the benefit of the bargain for either party. [3.4]

The Development Commitment [4, 5]

Achieving COD: When the conditions described above are fulfilled or waived, the Seller assumes a commitment to diligently develop the project and achieve commercial operation. Commercial operation is achieved when the plant has generated electricity for 72 continuous hours at an uninterrupted rate of not less than 95% of Plant Capacity, there are no Seller contractual defaults and specified documents are delivered – the Commercial Operation Date or COD. [5.2] See below for an alternate COD standard for projects with unreliable natural energy sources, which select the Natural Resource Adjustment.

Pre-COD Electricity: The Seller must deliver pre-COD generation to the Buyer. However, limited pre-COD sales to Powerex are also permitted. The Buyer must accept pre-COD electricity, but payment is made only for pre-COD electricity delivered during a successful 72-hour COD test. [App. 3, Part II]

Delay in COD: The Buyer may terminate the EPA if COD is not achieved within 365 days after the Target COD specified by the Buyer and fixed in the contract. The period is extendible for up to a further 365 days for delays due to *force majeure*. [15.1(b)] If the Buyer terminates, a Termination Payment may become payable by the Seller. See below under “The Termination Payment”.

Development Security: The development commitment is secured by a Development Security. It must be delivered by the Seller when the EPA is signed. The Development Security must be in letter of credit form. The amount must be equal to the project’s maximum average annual Contracted Capacity multiplied by \$20,000 MWh/h. Letter of credit forms are specified in the CFT. [13]

Post COD Plant Modifications: Once the plant is constructed, subsequent modifications, which could materially and adversely affect the Seller’s ability to meet its contract obligations, including greenness, require the Buyer’s approval. [6.2]

Mutual Delivery and Take and Pay Commitments [7]

Mutual Commitments: It is critical to an understanding of the EPA to recognise that it represents mutual commitments – by the Seller to deliver an agreed quantity of electricity, and by the Buyer to take and pay

for it. And a commitment necessarily entails consequences for performance failures. The consequences in the GPG EPA are well defined and limited.

The Delivery Commitment

Term: The Seller may select a delivery Term of 10 to 20 years to run from COD. [2.1]

Delivery Commitment: The EPA is the Seller's commitment to deliver to the point of delivery (or POD) a specified quantity of electricity on an hourly basis over the Term. [7.2] The POD is the point of interconnection with the BC Hydro or BCTC distribution or transmission system and is specified in each EPA.

Contracted Capacity: The Seller's delivery commitment is determined by its Contracted Capacity, which is bid by the Seller and set out in tables by year and by month in the Seller's Tender. The tables are incorporated into the EPA. [App. 2]

The first table – Part I – specifies Contracted Capacity by each year of the Term, expressed in MWh/h. The lowest specified amount for any year in Part I must be not less than 50% of the highest specified amount for any year in that Part.

The second table – Part II specifies the Contracted Capacity for each month of each year, expressed as a percentage of the annual Contracted Capacity. The percentages in Part II must average 100%.

You can then determine the Contracted Capacity for each hour and month in any year by simply applying the applicable monthly percentage in Part II to the amount specified for the applicable year in Part I.

A firm, flat profile is the simplest. It would have the same Contracted Capacity for each year in Part I, and 100% for each month in Part II. However, bidders may specify a varied profile by year and/or month. See detailed instructions for completing the Contracted Capacity Profile set out in the Tender Forms.

Changing the Contracted Capacity: Once the Contracted Capacity is set by the bidder in its Tender, there are two ways in which it may be changed after the contract is signed:

- *Optimization:* The Seller may increase its Contracted Capacity by up to 20% and/or amend its monthly profile to optimize the project in light of final design. This must be done in the Initial Period before all conditions subsequent described above are satisfied. [3.5]
- *Recall:* At any time after COD, on one year's notice, the Seller may recall 20% of its Contracted Capacity. [7.6]

Applying the Contracted Capacity: The Seller must use commercially reasonable efforts to deliver its Contracted Capacity consistently within each hour and within a +/-10% range. (Where the Natural Resource Adjustment is elected, the top end of the range is 110% of Plant Capacity, rather than Contracted Capacity, if all output is contracted to BC Hydro under the EPA). However, liquidated damages are assessed for inexcusable delivery shortfalls only on a monthly and annual basis, not on an hourly basis. They are based on a monthly capacity factor of 90% and an annual capacity factor of 80%, both with reference to the Contracted Capacity. See below under "Liquidated Damages".

Relief from the Delivery Commitment: The Seller is excused from its delivery obligation, and associated liquidated damages, only in these circumstances [7.8(a)]:

- *Force majeure*,
- Hardship Event,
- Transmission constraint not attributable to the Seller.

Also, Sellers, which select the Natural Resource Adjustment, are relieved in the case of lack of Energy Source. [App. 11]

Take and Pay Commitment

The Buyer's Long-Term Commitment: The EPA is the Buyer's commitment to take and pay for a specified quantity of electricity, defined as Eligible Electricity, on an hourly basis over the Term. [7.3]

In most cases, Eligible Electricity is simply Metered Electricity to a maximum of 110% of Contracted Capacity for the hour. However, special rules apply in the case of split bids, periods of partial curtailment of generation and projects for which the Natural Resource Adjustment is selected. [App. 1, (z)].

Relief from Take and Pay Commitment: The Buyer is excused from its take and pay obligation only in these circumstances [7.8(b)]:

- *Force majeure*,
- Transmission constraint due to *force majeure* or Forced Outage, or pursuant to the Transmission Authority's right of curtailment of firm transmission under a filed tariff not caused by the Buyer (i.e. the Buyer must book adequate firm take-away transmission service),
- Disconnection of the plant under a legally enforceable right (e.g. under the Interconnection Agreement),
- Suspension due to certain Seller Defaults.

Force Majeure: The GPG EPA contains a typical *force majeure* clause. [10] Note that lack of the Energy Source and economic hardship are not considered *force majeure*.

Economic Hardship: The EPA, unlike most other long-term power purchase agreements, offers relief from the delivery commitment for defined economic hardship. [11 and App. 1, (pp)] The hardship provisions excuse the Seller from its delivery commitment where a specified, unanticipated post-tender condition has a significant material and adverse economic effect on plant operations. Relief is granted on these conditions:

- *Qualifying Event:* Hardship Events include changes in law or policy and, for thermal projects, a fuel shortage or price increase (subject to an initial 3-year moratorium), which are not anticipated and occur after the Tender Closing Date and which have a duration of at least 90 days,
- *Impact:* The Hardship Event must have a material and adverse economic effect on operations,
- *Notice:* A minimum 15 days notice is required. Relief takes effect when notice is given and continues for so long as the impact exists, provided the event itself continues for 90 days as indicated above.

Natural Resource Adjustment: The Natural Resource Adjustment is optional. It is available to bidders tendering generation from wind, solar, wave or small hydro projects. This adjustment recognises that projects dependent on a variable and unpredictable Energy Source cannot deliver electricity with the same firmness as other projects. If the Natural Resource Adjustment is elected, an adjustment is made to Bid Prices for bid comparison and ranking purposes. The adjustment is necessary to recognize the comparatively lower value of less firm power, and to be fair to bidders who can deliver firm green power.

When the Natural Resource Adjustment is elected, the EPA includes special conditions. [App. 11] These conditions:

- Modify the requirements of the 72-hour COD test,
- Excuse the Seller from liquidated damages for delivery shortfalls due to a lack of the Energy Source,
- Require the Buyer to take and pay for up to 110% of the Plant Capacity, rather than Contracted Capacity, where full output is committed to the Seller,
- Make certain other consequential amendments.

Operating Security [13]

The Seller's delivery commitment is secured by an Operating Security delivered on COD. The amount of the Operating Security, recalculated each year, must at all times be equal to \$2,000/MWh/h multiplied by the average annual Contracted Capacity for the particular year multiplied by the number of years remaining in the term. This amount is *not* adjusted for general inflation over the Term.

The Operating Security may be satisfied by a letter of credit or by a creditworthy corporate covenant or guaranty. Forms for both are specified. [App. 6 and 7]

Delivery Priority

In cases where less than 100% of Plant Capacity is committed to the Buyer under the EPA, and the plant operates at less than full capacity for some reason, it becomes necessary to define delivery priorities among the purchasers and consumers of plant output. The GPG EPA requires that deliveries to the Buyer be pro-rated according to the shortfall from Plant Capacity in the case of an Outage (other than an unauthorized winter Planned Outage), *force majeure*, a Hardship Event or transmission constraint or disconnection not caused by the Seller. In all other cases, delivery to the Buyer takes priority over other deliveries. [7.5]

Liquidated Damages

LDs – for Delivery Failures: If a Seller fails to meet its monthly or annual delivery commitment, LDs are assessed. [12, App. 4]

Monthly LDs are calculated based on a 90% capacity factor. Annual LDs are calculated based on an 80% capacity factor. In both cases, LDs are calculated by a formula, which reflects the market value of the shortfall based on the positive difference, if any, between the nearest available market price, Mid C, and the contract price. When no positive difference exists (i.e. the contract price exceeds the market price), no damages are payable.

In calculating the monthly shortfall, lost generation due to *force majeure*, transmission constraint and non-winter Planned Outages (i.e. scheduled maintenance) is excluded and not charged to the Seller's account. In calculating the annual shortfall, only lost generation due to *force majeure* and transmission constraint is excluded in recognition of the lower annual capacity factor (80% rather than 90%), which is intended to allow for scheduled maintenance.

Annual and monthly LDs are calculated without duplication. Any monthly LDs paid are credited towards any annual LDs that become payable.

Limiting LD Liability: Market prices can be volatile. The EPA addresses that risk by imposing fixed limits on the amount of LDs. The limitations apply, unless the delivery failure is a Deliberate Breach (e.g. unauthorized voluntary turndown or diversion of output). **[12.2]**

Annual LDs are limited to \$3,000/MWh/h of annual average Contracted Capacity, and monthly LDs are limited to \$1,000/MWh/h, annual average Contracted Capacity, adjusted for that month. These amounts are *not* adjusted for general inflation over the Term.

LDs – GHG Intensity: Liquidated damages are also stipulated for failures to achieve GHG Intensity Targets, which are specified in bid documents for each project. Again, the EPA specifies maximum LDs, which correspond to the GHG Intensity Adjustment made for bid comparison and ranking purposes. **[12.1, App. 4 and 10]**

Greenness [7.10, App. 9 and 10]

The GPG EPA contains detailed Green Criteria for various generating technologies. Independent certification is a possibility for the future, but for now the Green Criteria apply. If disputes arise on how the criteria are applied, they can be resolved by a special, expedited technical dispute resolution process. **[App. 9, Part V]**

If a project fails to comply with the Green Criteria, after a cure period, a price reduction applies on future deliveries. The full price is restored when compliance is achieved. Also, in the case of non-compliance, the Buyer can require, at its cost, corrective measures consistent with available technology and Good Operating Practice. **[App. 9, Part IV]**

The GPG EPA cannot be terminated for non-compliance with Green Criteria, unless non-compliance constitutes a breach of law, or the Seller fails to carry out corrective measures directed by the Buyer at its own cost or otherwise violates Appendix 9, which sets out green-related reporting and other obligations. In those circumstances a reasonable cure period applies before termination becomes effective. **15.1, App. 9, 4.5]**

Emission Reduction Rights and Green Rights

The GPG EPA reserves to the Buyer all Offsite Emission Reduction Rights and Green Rights associated with electricity committed to the Buyer, in recognition of the premium reflected in adjustments made for bid comparison and ranking purposes. The Seller retains all On-site Emission Reduction Rights. **[7.10]**

Price [CFT and EPA, App. 3]

Levelling the Playing Field: Electricity is essentially a fungible commodity. Its value is fundamentally determined by *firmness, delivery time, and delivery location*, and more recently by *greenness*. The GPG CFT and EPA include Bid Price adjustments to recognise these drivers of electricity value.

Some adjustments are made in the Tender phase for bid comparison and ranking purposes only. Decreases make a bid more competitive and increases impair competitiveness. Other adjustments and/or LDs are made under the EPA and affect what the Seller is paid or nets on deliveries.

The purpose of all these adjustments is to facilitate fair, competitive pricing among generators operating under differing conditions and in different locations.

Tender Phase Adjustments: Adjustments to Bid Prices for firmness – the Natural Resource Adjustment – and for delivery location – the Bulk Location, Area Location and System Adjustments – are made to Bid Prices for bid comparison and ranking purposes only during the Tender phase. The Natural Resource Adjustment is +\$5.00/MWh. Bulk, Area and System Adjustments vary, depending on location. Bulk Location Adjustments are fixed and specified in the CFT. Area and System Adjustments are project-specific and confirmed to bidders before the Tender Closing Date.

EPA Adjustments: Adjustments to Bid Prices for delivery time by hour and time of year are reflected in a table to the EPA. The table assigns a premium or discount for Heavy Load Hours and Light Load Hours and to reflect variations in normal seasonal demand.

Green/GHG Adjustments: Bid Prices are adjusted down for bid comparison and ranking purposes during the tender phase to reflect greenness and GHG Intensity, and then under the EPA, non-compliance attracts a corresponding price reduction and LDs, respectively. Green non-compliance attracts a reduction of \$5.00/MWh and shortfalls from GHG Intensity Targets attract LDs up to \$3.00/MWh, but not exceeding the adjustment made in the Tender phase.

Recall Adjustment: Bid prices are also subject to a one-time reduction of \$2.00/MWh if and when the 20% recall right is exercised.

General Inflation: Over the Term of the EPA, Bid Prices, and adjustments for recall, green non-compliance, and GHG Intensity factors are further adjusted annually for general inflation at a rate equal to 50% of the CPI change. No reductions are made in the case of general deflation.

“All-In” Price: Subject to these adjustments, the Seller’s Bid Price is an all-in energy price, expressed in \$/MWh.

Termination Rights and Risks [15]

The Right to Terminate: The GPG EPA contains rights of termination, which are fairly typical of those found in similar contracts. Both parties can terminate for defaults of the other (following a reasonable cure period), prolonged *force majeure* or economic hardship, and regulatory interventions against the Seller (i.e. Seller becoming subject to regulation as a “public utility”), which materially and adversely impact the benefit of the EPA to the terminating party. **[15.1, 15.2]**

Also, the Buyer may terminate if it becomes clear based on a delayed construction start or construction or commissioning delays that COD will be very significantly delayed, after allowing for a lengthy period of *force majeure*. **[15.1(a) and (b)]**

The Termination Payment [15.4, 15.5]: On termination, the parties walk away without liability, unless the EPA is terminated for default, or the Buyer terminates because it is clear that COD will be very significantly delayed. In those events, a Termination Payment may become payable to the innocent or terminating party.

The Termination Payment is calculated according to industry practice for long-term power purchase agreements. Termination payments are intended to capture the positive economic value, if any, of the EPA by comparison to the market at the time of termination – a so-called “mark to market” valuation. In the case of termination by the Buyer, if there is a positive difference between the value of the market price of electricity over the balance of the term and the present value of the contract price over that period, with appropriate adjustments to ensure comparability, then that amount is due as a Termination Payment. If the difference is negative (i.e. the contract price exceeds the market price), no payment is due.

Limitation of Liability [15.8]: Recognising the volatility and uncertainty of market prices, the Termination Payment is capped at an amount equal to \$3,000/MWh/h of average annual Contracted Capacity for the year in which termination occurs multiplied by the number of years remaining in the Term. The limitation does not apply in the case of a Deliberate Breach leading to termination. This limitation is *not* adjusted for general inflation over the Term.

Applying Required Security Amounts, LDs, and Liability Limitations – A Typical Example

It helps to get a sense of risk allocation and exposure under the EPA to consider a typical example.

For simplicity, assume a 10 MW plant with a capital cost of \$12 million, contracted to sell its full Plant Capacity to BC Hydro on a firm, flat profile over a 20-year term. At a price of \$53/MWh, and an annual capacity factor of 80%, projected annual revenues are \$3,714,240 (8,760 X 0.8 X 10 X 53). Assume that any delivery shortfall or other failure is not the result of a Deliberate Breach. Finally, assume that market prices are at all times sufficiently above the contract price that the liability limitations apply.

For this plant:

- The Development Security is \$200,000, or about 1.7% of capital cost.
- The Operating Security is \$400,000 at COD, or about 3.3% of capital cost or about 10.8% of projected annual revenues, declining on a straight-line basis throughout the Term.
- Maximum monthly LDs in any month are \$10,000, or about 0.27% of projected annual revenues, or about 2.8% of projected monthly revenues assuming a 90% capacity factor.
- Maximum annual LDs in any year are \$30,000, or about 0.8% of projected annual revenues.
- Maximum LDs (monthly and annual) in any year are \$120,000, or about 3.2% of projected annual revenues. This assumes that performance in every month is such that maximum LDs are payable in each month.
- A Termination Payment would not exceed \$600,000 at COD, or about 16.2% of projected annual revenues or about 0.8% of projected contract revenues over the Term. The maximum Termination Payment would reduce after COD on a straight-line basis.

Of course, the foregoing does not reflect any allowance for price increases at 50% of CPI over the Term or an operating plan reflecting anything greater than the minimum monthly and annual capacity factors stipulated in the EPA. Any such allowance would effectively reduce the maximum exposures insofar as they are expressed as a % of projected revenues.

Assignment [16, App. 8]

If a party wishes to assign the EPA, generally it must obtain the consent of the other party. Consent may not be withheld or delayed unreasonably. There are exceptions. Notice, but no consent, is required to assign the EPA to an Affiliate, for example to facilitate a corporate reorganization. Changes in control of the Seller or in ownership of the plant are considered assignments of the EPA for purposes of the consent requirement. [16]

Where assignments to a project lender are contemplated, a prescribed form of consent agreement is provided in the EPA. [App. 8]

Dispute Resolution [20.7]

Disputes, which cannot be resolved by agreement, are submitted to binding arbitration, rather than to the courts.

Joint and Several Liability

If the Seller entity is a general partnership or joint venture, as a general rule each partner or member is jointly and severally liable under the EPA. Minority participants holding an interest of 20% or less can limit their several liability to 20% of total liability, provided at least one partner or joint venturer holds more than 20% and is therefore subject to full joint and several liability.

In the case of Seller entities, which are corporations or limited partnerships, shareholders and limited partners are not individually liable under the EPA, unless liability is otherwise imposed by corporate or limited partnership law.

Special Conditions and Other Provisions

The EPA includes standard Special Terms and Conditions, which deal with particular circumstances applicable to only some projects. In addition to conditions applicable where the Natural Resource Adjustment is selected, conditions are included for circumstances where there is an electrical host and/or a steam host, where there is no GHG Intensity Adjustment specified during the Tender phase, and where the Energy Source is hydro. The EPA also contains other provisions normal to commercial agreements in general and power purchase agreements in particular. Refer to the detailed table of contents in the document.

CONCLUSION

A competitive tendering process requires a comprehensive, detailed and fair standard agreement. Differences in energy sources, technologies, plant sizes and configurations and locations all need to be accommodated within a single tender process, which is fair and transparent. The Energy Plan, BC Hydro's statutory obligation to serve and its duty to ratepayers require that long-term electricity suppliers offer a real supply commitment, with real consequences for failure. But risks need to be allocated and liabilities limited appropriately. The GPG EPA is designed to achieve all these objectives.