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**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER** G-176-06

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**IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473**

and

**A filing by British Columbia Hydro and Power Authority
of Energy Supply Contracts with Alcan Inc.
LTEPA Amending Agreement, Amended and Restated
Long-Term Electricity Purchase Agreement**

BEFORE: R.H. Hobbs, Chair
A.J. Pullman, Commissioner December 29, 2006
N.F. Nicholls, Commissioner

O R D E R

WHEREAS:

- A. On November 1, 2006, British Columbia Hydro and Power Authority ("BC Hydro"), pursuant to Section 71 of the Utilities Commission Act (the "Act"), filed the Long-Term Electricity Purchase Agreement ("LTEPA") Amending Agreement dated October 27, 2006 to which was attached the form of Amended and Restated LTEPA between Alcan Inc. ("Alcan") and BC Hydro, and a letter dated October 27, 2006 from Alcan to BC Hydro and the Province (the "October 27, 2006 letter"); and
- B. In its November 1, 2006 filing, BC Hydro requested that the Commission issue an Order accepting the LTEPA Amending Agreement and the Amended and Restated LTEPA as filed, pursuant to Section 71 of the Act ("the s. 71 Filing"); and
- C. In the s. 71 Filing, BC Hydro requested that the LTEPA Amending Agreement, the Amended and Restated LTEPA and the October 27, 2006 letter be kept confidential, for reasons of commercial sensitivity; and
- D. At the November 8, 2006 Third Procedural Conference concerning BC Hydro's 2006 Integrated Electricity Plan ("IEP") and Long-Term Acquisition Plan ("LTAP"), BC Hydro proposed possible review processes for the LTEPA Amending Agreement and the Amended and Restated LTEPA; and

- E. At the Third Procedural Conference, BC Hydro, with the support of Alcan, also withdrew its request that the LTEPA Amending Agreement and the Amended and Restated LTEPA be kept confidential. BC Hydro continued to maintain its claim for confidentiality over the October 27, 2006 letter pending discussions with the Province. By an attachment to its letter to the Commission Secretary dated November 17, 2006, BC Hydro disclosed a copy of the October 27, 2006 letter; and
- F. At the Third Procedural Conference, BC Hydro further requested that evidence filed to date in the 2006 IEP/LTAP proceeding with respect to the agreement with Alcan be accepted as evidence in the proceeding to review the s. 71 Filing; and
- G. By Order No. G-142-06 dated November 10, 2006, the Commission established an Oral Public Hearing and Regulatory Timetable for the regulatory review of the s. 71 Filing; and
- H. By letter dated November 10, 2006 accompanying Order No. G-142-06, the Commission concluded that the issues for the proceeding should not include the legality of the LTEPA Amending Agreement and the Amended and Restated LTEPA; and
- I. By letter dated November 17, 2006 the Commission issued Reasons for Decision regarding the issue of the legality of the LTEPA Amending Agreement and the Amended and Restated LTEPA; and
- J. An Oral Public Hearing was held on December 6, 7, 8 and 11, 2006; and
- K. BC Hydro, Alcan and the Ministries of Energy, Mines and Petroleum Resources and Economic Development (“the Ministries”) submitted Written Argument on December 14, 2006; and
- L. Other Intervenors submitted Written Argument on December 19, 2006; and
- M. BC Hydro, Alcan and the Ministries made Oral Reply Argument on December 21, 2006; and

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N. The Commission has considered the evidence and submissions, and concludes that it should make a determination on the s. 71 Filing.

NOW THEREFORE:

1. The Commission does not accept the LTEPA Amending Agreement and the Amended and Restated LTEPA that BC Hydro filed on November 1, 2006 (“the Contracts”), as Energy Supply Contracts filed pursuant to Section 71 of the Act, and finds, pursuant to subsection 71(2) of the Act that the Contracts are not in the public interest and, pursuant to subsection 71(3) of the Act, declares that the Contracts are wholly unenforceable.
2. The Commission will issue Reasons for Decision in the matter at a future date.

DATED at the City of Vancouver, in the Province of British Columbia, this 29th day of December 2006.

BY ORDER

Original signed by:

Robert H. Hobbs
Chair



IN THE MATTER OF

**A FILING BY
BRITISH COLUMBIA HYDRO AND POWER AUTHORITY
OF ENERGY SUPPLY CONTRACTS WITH ALCAN INC.
~ LTEPA AMENDING AGREEMENT
~ AMENDED AND RESTATED LONG-TERM
ELECTRICITY PURCHASE AGREEMENT**

**REASONS FOR DECISION
TO ORDER NO. G-176-06**

February 2, 2007

Before:

**Robert H. Hobbs, Chair
Nadine F. Nicholls, Commissioner
Anthony J. Pullman, Commissioner**

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APPENDICES

APPENDIX A	List of Appearances
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1.0 THE HEARING PROCESS

1.1 Pre-hearing Matters

On November 1, 2006, British Columbia Hydro and Power Authority (“BC Hydro”) filed with the British Columbia Utilities Commission (“Commission”, “BCUC”) the following documents pursuant to Section 71 of the Utilities Commission Act (“UCA”, the “Act”):

- the Long-Term Electricity Purchase Agreement Amending Agreement (“Amending Agreement”) dated October 27, 2006 to which is attached the form of Amended and Restated Long-Term Electricity Purchase Agreement (“Amended and Restated LTEPA”) (collectively “LTEPA+”) between Alcan Inc. (“Alcan”) and BC Hydro; and
- a letter dated October 27, 2006 from Alcan to BC Hydro and the Province of British Columbia (“Province”).

BC Hydro requested:

- (i) that the Commission issue an Order accepting the Amending Agreement and the Amended and Restated LTEPA resulting therefrom as filed as an energy supply contract pursuant to Section 71 of the UCA (“s.71 Filing”); and
- (ii) that pursuant to Section 1.9 of the Commission’s Rules regarding Electricity Supply Contracts, the Amending Agreement, the Amended and Restated LTEPA and the October 27, 2006 letter be kept confidential for reasons of commercial sensitivity.

At the November 8, 2006 Third Procedural Conference concerning BC Hydro’s 2006 Integrated Electricity Plan (“IEP”) and Long-Term Acquisition Plan (“LTAP”) (“2006 IEP/LTAP”) BC Hydro, with the support of Alcan, withdrew its request in the Application that LTEPA+ be kept confidential. In addition, the Commission heard BC Hydro’s proposals for the possible review processes for LTEPA+ and BC Hydro’s request that evidence filed to date in the 2006 IEP/LTAP proceeding with respect to LTEPA+ be accepted as evidence in the proceeding to review the s.71 Filing. The Commission Panel was advised that one of the conditions precedent to LTEPA+ becoming effective was the Commission’s acceptance of LTEPA+ by December 31, 2006 on conditions that were acceptable to each of BC Hydro and Alcan. Alcan advised the Commission

Panel that under the Replacement Electricity Supply Agreement (“RESA”) between it and the Province, it had an option to call up to 175 MW of power and that the option required Alcan to give notice by January 1, 2007 (2006 IEP/LTAP T4:421). Alcan indicated that the RESA issue and the effects on Alcan’s proposed modernization of its smelter at Kitimat were the two reasons why it wanted a decision by the end of 2006 (2006 IEP/LTAP T4:424).

Following the Third Procedural Conference the Commission issued Order No. G-142-06 on November 17, 2006 that established an Oral Public Hearing and a regulatory timetable. The Commission Panel also accepted BC Hydro’s evidence with respect to LTEPA+ filed to date in the 2006 IEP/LTAP proceeding in the evidentiary record, and agreed to hold confidential the letter dated October 27, 2006 from Alcan to BC Hydro and the Province filed by BC Hydro on November 1, 2006.

On November 15, 2006, BC Hydro filed Exhibit B-2 being Alcan-related materials from the 2006 IEP/LTAP hearing. By letter dated November 17, 2006, BC Hydro disclosed the letter dated October 27, 2006 from Alcan to BC Hydro and the Province (Exhibit B-7).

By letter dated November 24, 2006 the District of Kitimat (“DoK”) applied to the Commission for leave to file additional evidence in the proceeding (Exhibit C1-4). Attached to the DoK’s letter was a report dated July 2003 by Roslyn Kunin and Associates Inc. entitled “An Economic Study on the Use of Hydro Power in Kitimat for Aluminum Production as Opposed to Export”. The DoK advised the Commission that Dr. Kunin would not be available for cross-examination until December 18, 2006.

By Letter No. L-76-06 dated November 27, 2006 the Commission established a Procedural Conference, to be held on November 29, 2006 to consider the filing of evidence by the DoK and procedural rules for the making of submissions to the proceeding.

At the conclusion of the Procedural Conference, Order No. G-142-06 was revised from the bench as follows:

- a timetable was established for the filing of evidence by the DoK, the filing of Information Requests by Intervenor, and the filing of responses by the DoK;
- a timetable for rebuttal evidence was established;
- those parties who wished to cross-examine Dr Kunin were instructed to give notice within 24 hours of the closing of the public hearing; and
- rules for submissions by interested parties not otherwise participating in the hearing process were established.

By letter dated November 30, 2006 the Commission set out rules for presentations at the Oral Public Hearing (Exhibit A-8). It also noted that the only Intervenor to have sought leave to file evidence was the DoK. The evidence of Mr. McLaren was filed after the issue of this letter and was admitted as filed on the first day of the Oral Public Hearing following no objections from Intervenor (T2:42). By letter dated December 14, 2006 the Commission advised all parties that no participant had asked to cross-examine Dr. Kunin (Exhibit A-11).

1.2 The Legality of LTEPA+

By letter dated November 3, 2006 (2006 IEP/LTAP Exhibit B-24), BC Hydro informed the Commission that at the Third Procedural Conference it would request that the Commission rule out-of-scope the issue of the legality of LTEPA+ raised by the DoK's evidence (2006 IEP/LTAP Exhibit C37-3). BC Hydro had previously filed the Term Sheet for LTEPA+ as part of its amended LTAP as Appendix N to Exhibit B-1-E in the 2006 IEP/LTAP proceeding on August 31, 2006. The DoK evidence, which was filed on October 6, 2006, addressed Appendix N and provided notice that the DoK intended to submit that "...the power deliveries by Alcan contemplated by the amended and re-stated LTEPA are illegal to the extent that they contravene the *IDA* [*Industrial Development Act*, S.B.C. 1949, c.31] and the various agreements and permits held by Alcan pursuant to the *IDA*. As such, the LTAP should not be approved in its present form as it would 'result' in these illegal power sales" (2006 IEP/LTAP Exhibit C37-3, para. 3).

On November 6, 2006, in response to Exhibit B-24, the Commission established a process regarding the legality of LTEPA+, which provided for the filing of a written submission by the DoK by November 7, 2006 addressing the issue of the legality of the LTEPA+ raised by its evidence, and why it should fall within the scope of the proceeding (2006 IEP/LTAP Exhibit A-29). The process contemplated that BC Hydro and other participants would respond orally to the submissions at the Third Procedural Conference and that the DoK would have a right to reply. The DoK filed its written submission on November 7, 2006 (2006 IEP/LTAP Exhibit C37-6) and those participants who chose to do so responded orally at the Third Procedural Conference with the DoK replying to those oral submissions.

By letter dated November 10, 2006, the Commission advised all parties to the proceeding that the Commission Panel had concluded that the issues for the 2006 IEP/LTAP and the s.71 proceedings should not include the legality of the LTEPA+ (Exhibit A-2). By letter dated November 17, 2006, the Commission published its Reasons for Decision as part of Order No. G-142-06, wherein the Commission stated that:

“While the wording of Sections 45(6.2)(b) and 71(2)(e) arguably provide the Commission with the jurisdiction to consider the legality of contracts in arriving at any determination it may make under Section 45(6.2) or Section 71(3) respectively, the Commission concludes that it need not determine the issue of legality of the Amended and Restated LTEPA in arriving at its determinations in the BC Hydro LTAP and Section 71 proceedings and declines any jurisdiction it may have to do so.

First, although there appears to be disagreement as to the precise matters before the BC Supreme Court, the DoK has acknowledged that the declaratory relief sought in the BC Supreme Court, if granted, may have an impact on the issue of whether the Amended and Restated LTEPA is legal. For the Commission to determine an issue presently before the courts unnecessarily risks both duplication of process and inconsistency in outcomes. Second, the Commission agrees with BC Hydro that the issue of legality of contracts is just one of the many risks in the resources that make up the load resource balance. Third, the Commission is of the view that the Amended and Restated LTEPA is not material for the reasons expressed by BC Hydro. If Alcan does not have the capacity to enter into the contract, then BC Hydro will need to change its plan, but that is the inherent nature of plans. Finally, if the Commission accepts the Amended and Restated LTEPA for filing and the court determines that the contract is illegal, then the Commission can revisit the LTAP and consider alternative resources though the

Commission's reconsideration process pursuant to Section 99 of the *UCA*. Finally, the Commission agrees with BC Hydro that the Commission does not have the expertise to determine issues of capacity to contract.

The Commission is not prepared to accede to the DoK submissions that the issue of legality of the Amended and Restated LTEPA be held in abeyance pending the judgment of the Chief Justice. Contrary to the DoK submissions, prejudice to BC Hydro will occur if the issue is held in abeyance since the Amended and Restated LTEPA will expire if the Commission does not issue a Section 71 Order by December 31, 2006" (Exhibit A-4, p. 7).

1.3 Oral Public Hearing

The Oral Public Hearing commenced on December 6, 2006 and concluded on December 11, 2006. An opportunity was made available to interested persons to make oral submissions to the Commission Panel in the afternoon of December 6, 2006. Three interested persons made oral submissions to the Commission Panel.

At the commencement of the proceedings, BC Hydro submitted that its s.71 Filing in respect of Alcan should be handled in the same way by the Commission Panel as the s.71 decision with respect to the F2006 Call, namely, that the load resource balance and need were issues that should wait until the Commission had rendered its decision on the 2006 IEP/LTAP proceeding (T2:44-5). The Chair determined that the s.71 Filing should be dealt with on the evidence in the s.71 proceeding and that the issue of need would be open for the oral portion of the proceeding (T2:56). BC Hydro subsequently amended its request and sought approval to have two witnesses join its Panel to speak to issues of load supply balance, the need for supply, and load forecasts (T2:68). Having heard submissions from Intervenors, the Chair stated that the issue with respect to need would be within the scope of the oral portion of the proceeding and gave BC Hydro the opportunity to provide more evidence and the direct testimony of two witnesses with respect to the issue of need (T2:73). Accordingly, BC Hydro filed Exhibits B-18, B-19 and B-20.

BC Hydro described Exhibit B-20 as providing (i) an updated energy load and resource balance table reflecting the addition of domestic non-firm supply from the F2006 Call, Alcan and the proposed 2007 Call for the period of Fiscal 2006 to Fiscal 2015; and (ii) the updated 20-year energy

and capacity load-resource balances that demonstrate BC Hydro's existing supply demand outlook before LTAP directives (Exhibit B-20, p. 1).

During the 2006 IEP/LTAP proceeding, the Chair had ruled on the matter of rebuttal evidence, stating "If B.C. Hydro elects to seek leave to call its rebuttal panel, then it will need to persuade the Commission that such leave should be granted. Intervenor will be allowed to make submissions either in support of or against the application at that time for leave to call the rebuttal panel" (2006 IEP/LTAP T7: 612-13). This ruling was also established for the s.71 Filing. BC Hydro filed rebuttal evidence on December 5, 2006 and announced its intention to call its rebuttal panel (T3:455). Hearing no objections from Intervenor the Chair allowed the rebuttal evidence to remain on the record as Exhibit B-17 (T4:758) and the rebuttal panel was made available to be cross-examined on it.

Referring to Alcan's December 24, 2004 notice of recall of all the electricity to be made available under LTEPA effective December 31, 2009 ("Recall Notice"), the DoK expressed concern that the record before the Commission Panel on the recall issue was inadequate and made a motion that the Commission Panel require Alcan to appear before it so that the DoK might examine Alcan concerning the recall (T3:397). The Commission Panel heard submissions on this motion on December 8, 2006. BC Hydro submitted "The real question that arises on this issue of recall is why did B.C. Hydro, knowing of the notice of the recall and obviously having considered it so as to reserve their rights, why did B.C. Hydro then go ahead and enter into the LTEPA Plus? That's the issue that the Commission must consider. And I would submit that's the only issue that the Commission should consider" (T4:414) and "Well, I think it's not relevant, because if --even if you looked at it at its blackest, and if you confirmed that -- or if you came to the conclusion that it was invalid, that doesn't rule out looking at the merits of what Hydro did in terms of entering into the contract, and whether there was anything harmful about what they did" (T4:423). Alcan submitted that it was unable to shed any light on how BC Hydro reached its conclusions as to the validity of the recall and suggests that "If the Commission determines that it has to litigate the issue of the validity of the recall notice to get a -- make its own determination, then Alcan would like to call evidence or put evidence on the record to speak to that issue" (T4:426). The BC Old Age

Pensioners Organization *et al.* (“BCOAPO”) submitted that both Alcan and BC Hydro should be compelled to present evidence before the hearing to put the decision into context (T4:428).

The DoK in effect withdrew its motion to compel Alcan to present evidence and summarised as follows: “I’m not going to ask you to make a binding determination that would have effect as between these parties as a matter of law, but I may ask you to make a determination based on the evidence you have before you as relevant to whether or not this contract, at this time, in these terms, is in the public interest. That’s my submission” (T4:435). The Chair ruled as follows: “Given Mr. Hunter’s submissions, I am not going to direct Alcan to appear here on the issue of validity, but I am going to give you an opportunity to do so” (T4:438) and “the evidence yesterday raised the issue with respect to the validity of the recall notice. I have said that the validity of the recall notice is relevant, and I think that’s as far as I’m going to go in terms of the framing the issue for you. The balance will need to wait until argument” (T4:439).

Following the determination by the Commission Panel that the validity of the Recall Notice was an issue that was within the scope of the hearing, BC Hydro chose to file additional direct evidence concerning the recall (Exhibits B-38). Alcan reserved its right to call evidence until it had the opportunity to review BC Hydro’s additional direct evidence. Having done so, Alcan advised parties that it did not propose to call any evidence relating to the recall. BC Hydro’s evidence on the recall was heard together with its rebuttal evidence since no objections were voiced by any Intervenor (T5:579).

BCOAPO sought a ruling from the Commission Panel on the issue of the confidentiality of the discount from the Mid-Columbia (“Mid-C”) price at which Alcan was selling power to Powerex (T2:148). BCOAPO stated that it was attempting to examine the cost-effectiveness of LTEPA+ in comparison with the current arrangement that exists between Powerex and Alcan and sought information concerning the Mid-C discount. In this regard its position was supported by the DoK, the Commercial Energy Consumers’ Association of BC (“CECBC”), and the Sierra Club of Canada, BC Chapter *et al.* (“SCCBC *et al.*”). BC Hydro and Alcan opposed BCOAPO’s request on the grounds that the information was confidential, commercially sensitive and that its release would be harmful to both Powerex and Alcan. The Commission Panel sought an undertaking from BC Hydro

to provide illustrative data, to which BC Hydro responded with an undertaking framed in Exhibit B-23. BCOAPO stated that it was not abandoning its request and the Commission Panel denied the request on the grounds of Exhibit B-23, the commercial sensitivities and the harm to Powerex (T4:457).

Written argument was filed by BC Hydro, Alcan and the Ministries of Energy, Mines and Petroleum Resources and Economic Development (“the Ministries”) on Wednesday, December 13, 2006.

Seven Intervenors filed written argument on December 19, 2006. One Intervenor, Mr. Rankin, took no position on whether the Commission Panel should accept or deny the s.71 Application.

The Independent Power Producers Association of British Columbia (“IPPBC”) submitted that LTEPA+ is a very poor precedent for acquisition of electricity by BC Hydro from industrial producers in BC.

Two Intervenors, SCCBC *et al.* and CECBC, submitted that approval of LTEPA+ was in the public interest (“with some concern” and “on balance”, respectively).

Three Intervenors, Mr. McLaren, the DoK and BCOAPO, submitted that LTEPA+ was not in the public interest with BCOAPO arguing that the Commission Panel should “declare it unenforceable”.

BC Hydro, Alcan and the Ministries presented reply argument orally on December 21, 2006.

On December 29, 2006, the Commission issued Order No. G-172-06 stating that

- (i) the Commission did not accept the LTEPA Amending Agreement and the Amended and Restated LTEPA that BC Hydro filed on November 1, 2006, as Energy Supply Contracts filed pursuant to Section 71 of the Act, and found, pursuant to subsection 71(2) of the Act that the LTEPA Amending Agreement and the Amended and Restated LTEPA were not in the public interest and, pursuant to subsection 71(3) of the Act, declared that the LTEPA Amending Agreement and the Amended and Restated LTEPA were wholly unenforceable; and
- (ii) the Commission would issue Reasons for Decision in the matter at a future date.

2.0 BACKGROUND

2.1 Kemano and Kitimat Facilities

On December 29, 1950 the Province and Alcan executed an agreement under the *IDA* whereby Alcan obtained the use of the Nechako watershed to construct an 890 MW hydroelectric power facility at Kemano to supply a 275 thousand tonne (“kt”) aluminum smelter it would construct at Kitimat. Both the power plant and the smelter were started in 1950 and were built in tandem over the ensuing decade, reaching their present operating capacities in the late 1960s. The first official ingot pour was in 1954 (Exhibit C1-6, p. 10). Both the Kemano Generating Station and the smelter at Kitimat currently operate at their original design capacities of 890 MW and 275 kt respectively.

Kemano generates, on average, 793 average megawatts (“aMW”) and its peak capacity is 890 MW, but the peak capacity cannot be sustained for long periods of time (Exhibit C10-1, BCUC 1.2.3). The key factor in terms of peak capacity is the level of the Nechako Reservoir, which Alcan operates between 2,787 and 2,800 feet above sea level. In the usual operating range, the peak capacity is about 890 MW, but if the level of the Nechako Reservoir falls to around the minimum operating level of approximately 2,787 feet above sea level, the available peak capacity decreases to approximately 850 MW because of constraints on Alcan’s physical facilities (Exhibit C10-5, SCCBC *et al.* 1.1.1). Alcan states that it had all eight generators completely rewound in the 1980s-1990s and has subsequently invested \$45 million in generation improvements. In Alcan’s view it is now one of the most reliable electrical generating stations in Canada, with a forced outage rate, on a station basis, in most years of less than 1 percent (Exhibit C10-11, BCUC 1.2.2).

Alcan provides generation data for the years 1976 to 2005. Since spilling water is not an option, all water goes to the turbines. In recent years production has ranged from a high of 850 aMW in 2005 to a low of 619 aMW in 2001. Line losses between Kemano and Kitimat are approximately 20 aMW. Currently, the smelter consumes 540 aMW plus 20 aMW losses for a total of approximately 560 aMW, which Alcan expects to increase in steps to 675 aMW after the Modernization Project (as defined in the LTEPA+) (Exhibit C10-1, BCUC 1.2.3).

During the 1960s, BC Hydro developed a regional grid and connected this to Alcan's system. The transmission line from Terrace to Prince George was completed in 1978 and currently has a take-away capacity of 380 MW.

2.2 Kemano Completion Project

The DoK states that in 1978 Alcan announced the Kemano Completion Project ("KCP"), which was intended to be a substantial expansion of the Kemano generating station which was required to provide power for the proposed expansion of Alcan's smelter in Kitimat. The KCP required the diversion of more water from the Nechako River and other rivers. Concern about the environmental effects of the project led to several years of litigation. A settlement of this litigation was reached in 1987 and in 1988 Alcan began construction of the project (Exhibit C1-6, Evidence of Trafford Hall, A7).

The Long-Term Electricity Supply Agreement ("LTEPA") was executed by BC Hydro and Alcan on February 27, 1990. It contemplated that Alcan would have surplus power as a result of the KCP and contractually bound Alcan to supply BC Hydro with 285 aMW for 20 years from its effective date of January 1, 1995. The agreement also contained a recall clause whereby on certain anniversaries of the effective date, Alcan could recall some or all of the volumes for its own industrial use (Exhibit C1-6, Attachment to the Evidence of Trafford Hall).

The DoK states that the original LTEPA signed in 1990 was expressly for the purpose of increasing aluminum production. At that time, Alcan was proposing to build a new smelter and was constructing an increase in the capacity of the Kemano generating facilities in order to supply power for the new smelter. LTEPA was designed to give Alcan a market for the additional power in the period after the KCP had been completed and before the new smelter had been constructed (Exhibit C1-6, Evidence of Richard Wozney, A18).

2.3 KCP Cancellation

The commencement of the KCP led to further controversy, which eventually resulted in the cancellation of the project by the Province in 1995, following which Alcan commenced legal action against the Province for damages. In addition, the cancellation of KCP raised issues about how Alcan would meet its supply obligations under LTEPA.

On August 5, 1997, as part of the KCP settlement between Alcan and the Province, Alcan and BC Hydro executed the Memorandum of Consent and Agreement pursuant to the Long-Term Electricity Purchase Agreement (“LTEPA Memorandum”) (Exhibit C1-6). The purpose of the LTEPA Memorandum was to enable Alcan to fulfill its obligations under the 1990 LTEPA and to realize the market value of the benefits that contract would provide without any power being diverted from its smelter operations (Exhibit C1-5, p. 2). It set out the terms by which 167 aMW of Alcan’s total supply obligation under LTEPA could be assigned by Alcan to another party, and could be delivered at the California-Oregon Border (“COB”) instead of the North Coast interconnect (Exhibit C1-10, p. 11)

BC Hydro testified that Alcan assigned its rights to deliver a portion of the 167 aMW to a subsidiary of Enron Inc. with the balance of the delivery obligation being assigned to the Columbia Power Corporation for the Arrow Lakes Hydro Generating Station (T4:469). In 2001 the Enron subsidiary defaulted as a result of which Alcan was obliged to pay BC Hydro/Powerex US\$110 million (CAN\$175 million) which it did on December 23, 2004 (T4:470; Exhibit B-7, BCUC 1.12.1).

2.4 The Impact of the Water Shortage of 2000/2001

The DoK states that a water shortage in the Nechako Reservoir in 2000 reduced the amount of power that could be produced at Kemano and that Alcan elected to reduce smelter operations by allowing approximately 50 “pots” (vessels where alumina is smelted with electricity to produce aluminum) to go down throughout the plant, so that it could sell power to B.C. Hydro. The plant never resumed full production (Exhibit C1-6, Evidence of Richard Wozney A8).

The DoK states that Alcan issued a press release dated June 8, 2001 announcing that:

“Due to low water levels, the Company will further reduce aluminum production at its Kitimat, British Columbia smelter. This additional reduction will raise the total closure up to 50 percent of the smelter’s capacity of 275 thousand tones (kt). This will allow the Company to honour its contractual obligations and scheduled deliveries to BC Hydro, as well as sell additional available power to Powerex, a division of the provincial utility” (Exhibit C1-6, Attachment to Evidence of Richard Wozney).

3.0 ELECTRICITY SALE AND PURCHASE AGREEMENTS

This section reviews the major terms and conditions of LTEPA+, as well as a number of electricity sales and purchase agreements concerning Alcan that were submitted as evidence in this proceeding, those being LTEPA as originally executed on February 27, 1990, an amendment to LTEPA and RESA, both dated August 5, 1997, and the Power Purchase Framework Agreement (“PPFA”) dated September 28, 2001.

3.1 Previous Agreements

LTEPA specified that the amount of energy to be delivered to BC Hydro was 285 aMW at a price of \$24/MW.h referenced as of January 1, 1988, with annual price escalations. The net effect of the annual price escalations resulted in nominal prices of \$46.44/MW.h in 2007 which increases to \$57.12/MW.h by 2014. These prices are inclusive of estimated water rental fees, which the terms of LTEPA specified that BC Hydro would reimburse to Alcan (Exhibit C1-6, LTEPA, Appendix A). LTEPA’s termination date was originally December 31, 2014, or such earlier date that could be effected by the activation of certain recall or termination provisions (Exhibit C1-6, LTEPA, Section 2.1). Certain of the recall provisions in LTEPA are discussed in Section 7 of these Reasons for Decision.

The LTEPA Memorandum, executed on August 5, 1997 between Alcan and BC Hydro as part of the KCP settlement, amended LTEPA as follows:

- Volumes for 1997 would be 140 aMW.
- Volumes for 1998 onwards would be 307 aMW, split as follows:
 - 167 aMW would be delivered at either Kitimat or the COB at Alcan’s election, subject to certain conditions.
 - 140 aMW would be delivered at Kitimat, up to January 1, 2003, after which date it could be delivered at the COB, at Alcan’s election, subject to certain conditions.

- Alcan could assign its obligations to deliver power at the COB to a third party, subject to BC Hydro's approval and matching rights. Alcan would remain liable for the obligations in the event of default by the assignee.

(Exhibit C1-6, LTEPA Memorandum, Section 3)

RESA was also executed on August 5, 1997 as part of the settlement between the Province and Alcan, and was intended to provide Alcan with a source of electric power to replace in part the electric power Alcan would have generated from the KCP (Exhibit C1-6). The annual amount of energy to be supplied under RESA was up to 115 aMW of "Base Electricity" and 60 aMW of "Supplemental Electricity" both of which had to be used for meeting load requirements of Alcan's smelting facilities. The price to be paid by Alcan for the energy delivered under RESA was to be calculated by reference to the price of aluminum. BC Hydro states that in 2004 it estimated the cost of RESA would have a net present value ("NPV") of \$415 million using the following assumptions:

- Alcan had elected to take the full amounts of Base and Supplemental Electricity;
- prices of the energy delivered under RESA of \$22/MW.h (real) for the Base Electricity and \$1.74/MW.h (real) for the Supplemental Electricity;
- aluminum price of US\$1,560 per ton (real);
- Canadian \$1.00 equals US\$0.77; and
- the energy to fulfill these deliveries was available to the Province at a cost of \$54/MW.h (real) (Exhibit B-7, BCUC 1.15.6).

Under RESA, Alcan was required to give notice to the Province by January 1, 2007 of RESA supply commencement, which could occur no later than January 1, 2010. RESA required Alcan either to start construction of a new smelter by January 1, 2007 or to start operation of a new smelter by January 1, 2010. For the purposes of administering the performance of RESA, the Province appointed BC Hydro as its agent (Exhibit C1-6, RESA, Section 2.1). Alcan submits that as agent of the Province, BC Hydro is contingently liable for the Province's obligations under RESA (Alcan Argument, para. 17-18).

The PPFA, dated September 28, 2001 between Alcan and Powerex, enabled the sale of variable amounts of annual surplus energy of up to 160 aMW by Alcan to Powerex (Exhibit B-13, DoK 1.4.1, Attachment 1) and expired on December 31, 2006 (BC Hydro Argument, para. 67). BC Hydro stated that the actual average annual sales under this agreement have been approximately 94 aMW for the three years F2004 to F2006, priced at an average of Cdn\$44.22/MW.h (Exhibit B-48).

3.2 The Modernization Project and the Project Agreement

The Modernization Project is defined in LTEPA+ as the modernization and expansion of Alcan's Kitimat aluminum smelter, specifically replacing the VS Soderberg aluminum smelting technology with AP aluminum smelting technology and increasing the annual rated production capacity from its present level of 275 kt to between 350 kt and 410 kt of aluminum per year.

The Project Agreement between Alcan and the Province was executed on November 16, 2006 and would cause the termination of RESA on January 1, 2007 upon the Commission's acceptance of LTEPA+ (Exhibit B-13, DoK 1.5.1, Attachment 2). The Project Agreement contemplates the Modernization Project, but refers the remedies for not completing the Modernization Project back to LTEPA+.

BC Hydro testified that remedies for Alcan's failure to complete the Modernization Project, as contemplated in the Project Agreement, were assigned by the Province to BC Hydro for BC Hydro to implement in LTEPA+ (T3:288).

3.3 LTEPA+

3.3.1 Parties and Purpose

LTEPA+ was executed on October 27, 2006 between Alcan and BC Hydro. Its purpose as set out in the recitals was to reinstate a significant portion of the electricity recalled under certain provisions of LTEPA and to give BC Hydro exclusive access to other electricity generated at Kemano (Exhibit B-4).

BC Hydro submits that Alcan may not assign LTEPA+ (other than assignment to affiliates or assignments of receivables) without BC Hydro's consent, which is not to be unreasonably withheld. Alcan is not released upon an assignment until the earlier of (i) the date when it has achieved the start of construction of the Modernization Project and 20% progress, and (ii) December 31, 2014. In any event, Alcan is never released upon an assignment from any contingent liability to repay the Reinstatement Fee. Subject to the foregoing, Alcan is released, provided that the assignee demonstrates financial and technical capability (BC Hydro Argument, para. 26).

3.3.2 Condition Precedent

Section 3.1 of the Amending Agreement sets out a condition precedent, that being the acceptance by the Commission or the approval by both parties of any terms and conditions the Commission may impose on acceptance. Failure will cause the Amending Agreement to terminate 60 days after January 1, 2007. If LTEPA+ terminates pursuant to this section, LTEPA+ does not come into effect, and LTEPA continues in full force and effect without amendment pursuant to the Amending Agreement. Furthermore, the rights, obligations and positions of the parties under, and in relation to, LTEPA are not affected or prejudiced in any manner whatsoever by LTEPA+ or the negotiation of LTEPA+, and the parties will have no further liabilities or obligations under, or in relation to, LTEPA+ (Exhibit B-4, Amending Agreement, Sections 3.1 and 3.2).

3.3.3 Term

The term of LTEPA+ runs until December 31, 2024 if Alcan completes its Modernization Project by December 31, 2014. If Alcan starts the Modernization Project, but does not complete it by December 31, 2014, the term is extended by one day for each day that the completion of the Modernization Project is delayed past December 31, 2014. At the end of this LTEPA+ term, BC Hydro also has the option to further extend the term and pricing provisions of LTEPA+ to December 31, 2029. After the effect of all extensions attributable to possible delays in the completion of the Modernization Project or BC Hydro's election of its option, LTEPA+ will terminate no later than December 31, 2029 (Exhibit B-4, Amended and Restated LTEPA Section 2).

3.3.4 Energy Volumes

The energy deliveries under LTEPA+ are distinguished as “Tier 1” energy and “Tier 2” energy. The annual Tier 1 energy amounts are 170 aMW from 2007 through 2009, 120 aMW in 2010 and 2011, 80 aMW from 2012 through 2014, and 55 aMW from 2015 to the end of the term of LTEPA+, as discussed above. These amounts replace the original LTEPA deliveries; LTEPA+ Tier 1 energy is greater than the original LTEPA energy commitment of 140 aMW in 2007, 2008 and 2009, and less in 2010 through 2014.

Mr. McLaren observes that the stepped changes in the Tier 1 energy amounts reflect the difference between the estimated upper end of firm capability of Kemano of 730 aMW as stated by BC Hydro, and the requirements of the Kitimat smelter load, including the modernization and ultimate operation of the new aluminum smelter (McLaren Argument, pp. 5-6).

LTEPA+ gives Alcan the ability to change the annual Tier 1 energy amount by plus or minus 15 aMW following the completion of the new smelter in order to reflect its actual operating load. On two years’ notice, Alcan can invoke an increase, but only once, of the annual Tier 1 energy amount by up to 20 aMW starting no earlier than January 1, 2015. On one year’s notice, Alcan can recall, no more frequently than once per year, any amount of Tier 1 energy, solely for the purposes of smelting aluminum, commencing no earlier than January 1, 2016 (Exhibit B-4, Amended and Restated LTEPA Section 4).

BC Hydro describes LTEPA+ having a “smelter-first priority” characteristic. This takes the form of relief from the delivery of Tier 1 energy when water levels are insufficient for Kemano generation to meet smelter load and the full Tier 1 deliveries, and simultaneously remain in compliance with permit obligations (BC Hydro Argument, p. 15). BC Hydro stated that the maximum estimated smelter loads could represent between 92 percent and 96 percent of Kemano generation under low water conditions (Exhibit B-14, SCCBC *et al.* 1.11.3).

BC Hydro states that under LTEPA+, it has an exclusive take or pay right and obligation to all of the power generated at Kemano that is surplus to the Kitimat smelter load, and is within the limit of the transfer capability of the existing transmission system, or as it may be re-rated from time to time (Exhibit B-7, BCUC 1.1.1). BC Hydro must take or pay for all Tier 1 energy, and all Tier 2 energy scheduled by Alcan, subject to the take-away capability of the existing transmission system.

BC Hydro also states that the transfer capability of the existing transmission system is a maximum of 380 MW, and only under certain operating conditions. This represents a hard limit in BC Hydro's take or pay obligation. LTEPA+ allows Alcan to make third party sales after the delivery limit of the existing transmission system is reached (Exhibit B-12, BCOAPO 1.3.1).

BC Hydro states that shortfalls in the delivery of Tier 1 energy volumes for any reason, including force majeure, through December 31, 2014 must be made up within three years at the price prevailing at the time of shortfall, failing which the Reinstatement Fee is adjusted or refunded (BC Hydro Argument, para. 24). After December 31, 2014, the remedy for delivery shortfalls of Tier 1 energy volumes is limited to a formulaic financial liquidated damages payment with certain caps on the maximum payment (Exhibit B-4, Section 11).

BC Hydro estimates the annual Tier 2 energy amounts as 55 aMW for 2007-2009 and 60 aMW thereafter (Exhibit B-17, Attachment D). Tier 2 energy is all that energy generated at Kemano in excess of Alcan's Kitimat smelter load the Tier 1 commitments, including make-up power, up to the delivery limit, which is the take-away capacity of the existing transmission system. The estimated volumes of Tier 2 energy are discussed further in Section 5.3.2.

3.3.5 Reinstatement Fee

BC Hydro states that a guiding principle during the negotiation of LTEPA+ was that the agreement had to be a sound commercial transaction on its own merits, but that it could incorporate characteristics such as front-end lump sum payments (Exhibit B-15, p. 1).

For the reinstatement of a portion of the recalled power under the original LTEPA, that being the Tier 1 energy volumes for 2010 through 2014 as described in Section 3.3.4, and for the incremental 30 aMW over the original LTEPA volumes in 2007, 2008, and 2009, BC Hydro agreed to pay to Alcan the sum of \$111 million (the “Reinstatement Fee”) in two installments: 1) \$45 million payable within 30 days of LTEPA+ becoming effective, and 2) \$66 million payable on the later of December 31, 2011 or 30 days after the start of the Modernization Project. The Reinstatement Fee has a Present Value (“PV”) of approximately \$90 million in 2006 (Exhibit B-4, Section 7; Exhibit B-16, McLaren 1.2.0, Attachment 1).

The PV of \$90 million is equivalent to the difference between the original LTEPA prices and a “notional” LTEPA+ price applied to the incremental 30 aMW of new energy in LTEPA+ in 2007 to 2009 (accounting for a PV of approximately \$18 million) and that portion of recalled power that is restated by LTEPA+ for the period of the recall, which is 2010 through 2014 (accounting for a PV of approximately \$72 million). As described in Section 3.3.6, the pricing for each megawatt-hour of energy delivered under both LTEPA and LTEPA+ is the same until at least December 31, 2014, but for the purposes of this described calculation, the notional LTEPA+ price is \$71.30/MW.h in 2006 escalated at 2 percent per year (Exhibit B-16, McLaren 1.2.0, Attachment 1).

The Reinstatement Fee may be increased or decreased if the volume of Tier 1 energy is changed before December 31, 2014, and is also subject to repayment provisions if the Modernization Project is not completed by December 31, 2014. In the prior instance, the PV of the Reinstatement Fee is to be increased or decreased by an amount equal to the PV of the change in energy volumes multiplied by difference in the applicable LTEPA and notional LTEPA+ prices. In the second instance, if the Modernization Project is not completed by December 31, 2014, LTEPA pricing is extended beyond December 31, 2014 until the earlier of Modernization Project is completed or until the PV of the savings to BC Hydro (calculated as the difference between the applicable LTEPA and notional LTEPA+ prices multiplied by energy deliveries beyond December 31, 2014) is equal to the PV of all or any portion of the Reinstatement Fee that has been paid to Alcan. BC Hydro testified that this would take “probably more like” six years than the three years suggested by Mr. McLaren in his evidence (Exhibit C17-2, p. 6) for Alcan to repay the entire Reinstatement Fee based on projected

energy volumes and price differences (T4:477). If the Modernization Project is never started, the second installment of the Reinstatement Fee is never made, and the LTEPA pricing continues beyond December 31, 2014 until the PV of the first payment of \$45 million is recovered.

3.3.6 Energy Pricing

The prices for Tier 1 and Tier 2 energy are based on the original term of LTEPA, and extend to at least December 31, 2014, and can extend beyond this date if the Modernization Project has not been commenced or completed. Until December 31, 2014, the Tier 1 energy is priced at the LTEPA price, including 3 percent per year escalation, plus a “Surcharge” amount of \$5.25/MW.h escalated at 2 percent per year to reflect water rental fees. The Surcharge amount received by Alcan for water fees is reconciled each year until December 31, 2014, with Alcan refunding to or receiving from BC Hydro the amount by which actual water fees are lesser or greater, respectively, than the Surcharge amount.

After December 31, 2014, if the Modernization Project is not completed, then the aforementioned Tier 1 pricing continues until such time that the Modernization Project is completed or the Reinstatement Fee is recovered. A price changing event occurs if the Modernization Project is completed by December 31, 2014, or upon either its later completion or BC Hydro’s recovery of the Reinstatement Fee. Upon activation of the price changing event, the price of the Tier 1 energy changes to reflect a January 1, 2006 base price of \$80.39/MW.h, and escalated annually at 50 percent of the annual Consumer Price Index (“CPI”). The recovery of the Reinstatement Fee is based on the difference between this new price and the lower price in effect before the price changing event as described above (Exhibit B-4, Appendix 2).

BC Hydro stated that the basis for the Tier 1 price after the price changing event is based on a negotiated amount (T5:791), which was set to obtain a real levelized price of \$79/MW.h which was derived from comparisons to certain undisclosed bids from the F2006 Call with similar characteristics. The adjustments applicable under the F2006 Call were then applied to the negotiated amount to arrive at a real levelized price at LTEPA+ delivery point of \$71.3/MW.h (Exhibit B-49). The initial January 1, 2006 base price of \$80.39/MW.h yields the same real levelized price when

subjected to the escalation and delivery time adjustment provisions in LTEPA+, triggered at January 1, 2015 (Exhibit B-4, Appendix 2; Exhibit B-7, BCUC 1.9.2; Exhibit B-7-1, BCUC 1.11.1, Attachment 2 revised).

BC Hydro states that the Tier 2 energy is priced the same as Tier 1 energy until the price changing event. After the price changing event, the Tier 2 price follows the Tier 1 price in effect at that time, except discounted by \$8/MW.h escalated and further adjusted in the same manner as the “Discount Amount” in BC Hydro’s Standard Electricity Purchase Agreement – Large Projects (the “F2006 EPA”) (Exhibit B-4, Appendix 2).

3.3.7 Other Terms and Conditions

BC Hydro submits that the commercial terms of LTEPA+ generally reflect terms applicable to new suppliers and that other contractual terms were linked to those specified for the F2006 Call for Power – Large Project EPA, but that revisions to those terms were necessary to accommodate unique features of the negotiating principles – such as “smelter first priority”, and to reflect some value-added features of Alcan’s supply, such as BC Hydro’s scheduling rights to firm power (Tier 1) and other project-specific revisions to the contract form to address the unique circumstances of Alcan’s supply requirements for the modernized smelter (Exhibit B-15, p. 2).

BC Hydro notes a number of material differences between the F2006 Large Project EPA and LTEPA+ (Exhibit B-13, DoK 1.1.1).

IPPBC cites differences in terms and conditions including provisions with respect to requirements for the delivery of firm energy and resulting liquidated damages, payment security and upfront payment, ability to extend the contract (via delay in the modernization project), exclusivity of sales, increase in quantities delivered, insurance, payment of liquidated damages, flow-through of water rental increases, and assistance by BC Hydro to expedite an interconnection agreement between Alcan and BCTC.

4.0 JURISDICTION AND OTHER LEGAL ISSUES

This section will consider issues related to the jurisdiction of the Commission pursuant to Section 71 of the *UCA* and whether adverse inferences should be drawn against BC Hydro and Alcan.

Ratepayer interests arising from the pricing provisions of LTEPA+ and the recall of LTEPA as considered in Sections 6 and 7 are determinative and are also aligned with other interests.

Therefore, little or no weight is given to interests other than ratepayer interests, including the impacts of LTEPA+ on the DoK. For similar reasons, an adverse inference is not drawn against BC Hydro or Alcan.

4.1 Section 71 of the *UCA* and the Public Interest

Pursuant to Section 71 of the *UCA*, the Commission has the authority to determine, following a hearing, that an energy supply contract is not in the public interest and to declare the contract or portions of it unenforceable or make any Order it considers advisable in the circumstances.

Section 71 follows:

Energy supply contracts

71 (1) Subject to subsection (1.1), a person who, after this section comes into force, enters into an energy supply contract must

(a) file a copy of the contract with the commission under rules and within the time it specifies, and

(b) provide to the commission any information it considers necessary to determine whether the contract is in the public interest.

(1.1) Subsection (1) does not apply to an energy supply contract for the sale of natural gas unless the sale is to a public utility.

(2) The commission may make an order under subsection (3) if the commission, after a hearing, finds that a contract to which subsection (1) applies is not in the public interest by reason of

(a) the quantity of the energy to be supplied under the contract,

(b) the availability of supplies of the energy referred to in paragraph (a),

(c) the price and availability of any other form of energy, including but not limited to petroleum products, coal or biomass, that could be used instead of the energy referred to in paragraph (a),

(d) in the case only of an energy supply contract that is entered into by a public utility, the price of the energy referred to in paragraph (a), or

(e) any other factor that the commission considers relevant to the public interest.

(3) If subsection (2) applies, the commission may

(a) by order, declare the contract unenforceable, either wholly or to the extent the commission considers proper, and the contract is then unenforceable to the extent specified, or

(b) make any other order it considers advisable in the circumstances.

(4) If an energy supply contract is, under subsection (3) (a), declared unenforceable either wholly or in part, the commission may order that rights accrued before the date of the order under that subsection be preserved, and those rights may then be enforced as fully as if no proceedings had been taken under this section.

(5) An energy supply contract or other information filed with the commission under this section must be made available to the public unless the commission considers that disclosure is not in the public interest.

Alcan submits that provisions of Section 71(2)(a) to (d) list the specific factors the Commission is to consider when assessing whether an energy supply contract is in the public interest. Alcan also submits that while Section 71(2)(e) gives the Commission the discretion to consider any other factor relevant to the public interest, those other factors should be narrowly interpreted in the context of the types of factors listed in Subsections 71(2)(a) to (d). In the case of LTEPA+, the “public interest” should relate to the implications of LTEPA+ for BC Hydro and its ratepayers in terms of just and reasonable rates, reliable service, and quality of service. The Commission should be careful to avoid being drawn into debates about socioeconomic impacts related to the operation of the Alcan smelter (Alcan Argument, para. 30-39).

Alcan relies on the Supreme Court of Canada decision in *Union des Employés de Service, Local 298 v. Bibeault*, [1998] 2 S.C.R. 1048, at paragraph 123, regarding the pragmatic and functional analysis to be undertaken to determine the extent of an administrative tribunal’s jurisdiction. The approach outlined in *Bibeault* was followed by the B.C. Court of Appeal in *British Columbia Hydro and Power Authority v. British Columbia Utilities Commission*, [1996] B.C.J. No. 379.

Alcan also places reliance on the Supreme Court of Canada decision in *ATCO Gas and Pipelines Ltd. v. Alberta (Energy and Utilities Board)*, [2006] 1 S.C.R. 140. The issue in *ATCO* was whether the Board had the prerogative to decide on the distribution of the net gain from the sale of assets of a utility. The Supreme Court of Canada, at paragraph 7, stated:

“The Board’s seemingly broad powers to make any Order and to impose any additional conditions that are necessary in the public interest has to be interpreted within the entire context of the statutes which are meant to balance the need to protect consumers as well as the property rights retained by owners, as recognized in a free market economy. The limits of the powers of the Board are grounded in its main function of fixing just and reasonable rates (“rate setting”) and in protecting the integrity and dependability of the supply system” (Alcan Argument, para. 34).

Alcan submits that public interest considerations under Section 71 in relation to an energy supply contract are much narrower than public interest considerations in relation to the issuance of Certificates of Public Convenience and Necessity (Alcan Argument, para. 37). And, as stated above, the public interests should relate to the implication of LTEPA+ for BC Hydro and its ratepayers in terms of just and reasonable rates, reliable service, and quality of service (Alcan Argument, para. 38).

BC Hydro submits that the meaning to be given to public interest should be ascertained by reference to the context and to the objects and purposes of the *UCA*. BC Hydro submits that the limited class rule should be followed in determining the factors to be taken into account under Section 71(2)(e) (T6: 819). BC Hydro further submits that the scope of public interest in the context of Section 45 and Section 71 of the Act needs to be distinguished.

BC Hydro believes that the most important consideration should be whether the energy is being purchased at a cost-effective price and whether the energy is needed and what BC Hydro has done is reasonable in the circumstances (T6: 822, 828, 830-831). Although BC Hydro accepts that the Commission has considerable discretion as to the meaning to be given to public interest, in BC Hydro’s view, matters such as the impact on the DoK are entitled to very little, if any, weight when balanced against the other very important issues which the Commission must consider (BC Hydro Argument, para. 160, T6:838).

SCCBC *et al.* submit that the linkage between LTEPA+ and the Project Agreement warrants consideration as a factor going to whether LTEPA+ is in the public interest under Section 71 (SCCBC *et al.* Argument, para. 30-36). SCCBC *et al.* submit that the fundamental question is whether the energy supply contract meets the Section 71 public interest test. Where the energy supply contract includes incentives or disincentives regarding a collateral matter, namely the Modernization Project, the utility has the burden of convincing the Commission that the energy supply contract, including such incentives or disincentives, meets the Section 71 public interest test (SCCBC *et al.* Argument, para. 44). SCCBC *et al.* submit that there is no statutory basis for separating an energy supply contract's impact on BC Hydro and its ratepayers from the impact of those provisions on the Section 71 public interest test. The *UCA* contemplates that it is the whole energy supply contract – not just those portions that are not excluded because they do not directly relate to the supply of energy and they are favourable or neutral to BC Hydro – that must meet the Section 71 public interest test (SCCBC *et al.* Argument, para. 47).

Whether the incentives or disincentives are adequate to accomplish the Modernization Project objective are not material to whether LTEPA+ meets the Section 71 public interest test (SCCBC *et al.* Argument, para. 55).

BCOAPO submits that energy supply contracts may validly incorporate provisions that impose penalties or provide incentives that relate to the delivery of utility services to ratepayers at fair and reasonable prices. However, an energy supply contract that would impose cost onto ratepayers, whose objects are not directly related to providing ratepayer value, is contrary to the *UCA*. The “public interest” jurisdiction of the Commission incorporates a complex array of factors and may incorporate considerations that are peripheral to ensuring that rates are just and reasonable, but not ones that are foreign to it (BCOAPO Argument, para. 41-42).

BCOAPO further submits that captive customers of monopoly utilities are required to pay fair and reasonable prices for the services they receive. Utilities may not extract from them the payment of costs that arise from other purposes. The only exception is, in the case of BC Hydro and the British Columbia Transmission Corporation (“BCTC”), where imported purposes are mandated by a Special

Direction under Section 3 of the *UCA*. To the extent that the proposed Agreement [LTEPA+] seeks to recover from ratepayers the cost of incentives to Alcan to modernize its smelter, it violates the provisions of the *UCA* and the Commission would commit a jurisdictional error were it to permit BC Hydro to recover the cost of the Agreement in its electricity rates (BCOAPO Argument, para. 45, 48).

The DoK submits that as a matter of good public policy, the Commission should not approve long-term firm energy contracts from industrial producers who have built power generation facilities to support their industrial operations (DoK Argument, para. 1). The Commission Panel notes that the DoK later stated that it was not asking the Commission to embark on a policy-making exercise (T6:953).

The DoK submits that the question for the Commission is whether it is in the public interest for BC Hydro to sign a long-term contract with Alcan which has the effect of diverting power from the Kemano plant to the provincial grid at the almost certain expense of the Kitimat smelter. That in turn raises the question as to whether the Commission has the jurisdiction to consider the impact of the power sales agreement on the Kitimat smelter in the community of Kitimat as an element of the public interest (DoK Argument, para. 9).

The DoK submits that the statutory jurisdiction to determine whether the contract is in the public interest is a broad one. Under Section 71(2)(e), the Commission must consider such factors as the original intended use of the power and impact on the local community of a diversion from that use (DoK Argument, para. 12). The DoK relies on the Commission's Reasons for Decision in BCTC's Certificate of Public Convenience and Necessity Application for the Vancouver Island Transmission Reinforcement Project (July 7, 2006) at page 15, where the Commission Panel stated:

“The Commission Panel accepts the submissions of BCTC that there is a broad range of interest that should be considered in determining whether an applied for project is in the public convenience and necessity. The Commission Panel concludes, as is stated in *Memorial Gardens*, that it is both impractical and undesirable to attempt a precise definition of general application as to what constitutes public convenience and necessity. As the Commission concluded in the VIGP Decision, the test of what constitutes public convenience and necessity is a flexible test” (DoK Argument, para 13).

The DoK submits that the Commission's approach to the public interest was approved by the B.C. Court of Appeal in an application seeking leave to appeal from the Commission's decision (*Tsawwassen Residents against Higher Voltage Overhead Lines Society v. British Columbia (Utilities Commission)*), [2006] B.C.J. No. 3066).

Madam Justice Levine stated, at paragraph 29 of *Tsawwassen Residents*:

“The Commission's discussion and conclusion of the content of the public interest and the test of public convenience and necessity are relevant to the claims by Seabreeze, TRAHVOL, and IRAHVOL that the Commission erred in holding that the public convenience and necessity is to be determined by the most cost-effective option rather than what is in the public interest (Appendix A, 1). The Commission was clearly alive to its obligation to consider all relevant factors and to determine the appropriate balance in the context of identifying a viable alternative to meet the needs of Vancouver Island residents. An analysis of the Decision as a whole demonstrates that it did so. Had the Commission limited its consideration of the factors put before it by the participants in the proceedings to matters of cost only, that would have been an error of law as demonstrated by *Nakina*, and a question of general importance as to the jurisdiction of the Commission. However, the discussion of the relevant factors in determining public convenience and necessity in chapter two and the consideration of socioeconomic and other non-financial factors in subsequent chapters, described below, demonstrates that there are no substantial questions to be argued that the Commission failed to consider any relevant factor.”

In *Nakina (Township) v. Canadian National Railway Co.*, [1986] F.C.J. No. 426 (S.C.A.), the Federal Court of Appeal found that it was an error for the Committee to hold that it would not take into consideration the effects of the closure of the railway station on the Township and commented as follows:

“After extensively reviewing the case law on the question, none of which it found directly on point, the Committee concluded as follows:

On balance, then the Committee is of the opinion that is not entitled, by the words of Section 120 of the *Railway Act*, to take into consideration the effects of a runthrough on the Township of Nakina.

I find this conclusion startling. The Committee concedes that it must have regard to the public interest. I would have thought that, by definition, the term “public interest” includes the interests of all the affected members of the public. If the determination of what is in the public interest involves the weighing and balancing of competing considerations. Some may be given little or no weight; others much. But surely a body charged with deciding in the public interest is “entitled” to consider the effects of what is proposed on all members of the public. To exclude from consideration any class or category of interest which form part of the totality of the general public interest is accordingly, in my view, an error of law justifying intervention of this Court. ...

If evidence is relevant to the determination of public interest, it must be admitted and considered. From my part, I find it impossible to say that evidence dealing with the probable economic effects of the proposed changes on the surrounding communities would not be relevant to the question of public interest. By the same token, I cannot say that, for example evidence as to the probable environmental effects of the proposed changes would not be relevant. Relevance is, of course, always a matter of degree and will vary from case to case depending on the surrounding circumstances; that, however, goes to weight rather than admissibility” (p. 2-3).

Mr. McLaren submits that the Commission should take the broadest possible interpretation of Section 71(2)(e) of the *UCA* so that the effects of the approval of LTEPA+ on the aluminum smelter and the local economy are included as relevant considerations (McLaren Argument, pp. 13, 16).

CECBC submits that it may be appropriate for economic development incentives or disincentives to be in an energy supply contract so long as those incentives or disincentives do not inappropriately impact on ratepayers in a negative way. CECBC adopts the argument of BC Hydro at paragraphs 159 to 169 with regard to the factors to be included in consideration of the public interest (CECBC Argument, para. 12).

IPPBC submits that the public interest determination should consider whether any incentives or disincentives contained in an agreement made in the public interest must be related to real, identifiable risks and whenever possible those risks should be borne in the most cost-effective manner (IPPBC Argument, p. 11).

Commission Determination

The Commission accepts that there is a broad range of interests that should be considered in determining whether an energy supply contract is in the public interest. The Commission Panel concludes that it is both impractical and undesirable to attempt a precise definition of general application as to what constitutes the public interest. The test of what constitutes the public interest is a flexible test.

The Commission Panel agrees with the submissions of Alcan that the key issue in this proceeding is the reasonableness of the price in relation to the value that LTEPA+ offers to BC Hydro and its ratepayers (T6:895).

The Commission Panel does not agree with the submissions made by Alcan regarding the comments made in *ATCO* as to what defines the public interest. The decision in *ATCO* and the comments contained therein must be read in the context of what was being decided in that case. The public interest in deciding whether ratepayers should be entitled to share in the profit from sale of utility assets is necessarily different from the public interest being served as a result of acceptance of an energy supply contract.

The Commission Panel is guided by the comments made in *Nakina*. The Commission Panel should not exclude from consideration in determining the public interest any class or category of interests which form part of the totality of the general public interest. In particular, the Commission Panel is of the view that evidence dealing with probable economic effects flowing from the approval of LTEPA+ on the surrounding community is a relevant consideration in determining the public interest.

The Commission Panel is also of the view that it should give greater weight to cogent evidence relating to the specific factors enumerated in Section 71(2)(a) to (d) than to the broader public interest concerns to be addressed under Section 71(2)(e). However, the Commission Panel believes that it is entitled to consider factors apart from those listed in Section 71(2)(a) to (d) such as the

possible impact upon the DoK and the release of the Province from its obligations under RESA if LTEPA+ was approved.

The Commission Panel does not agree that as a matter of good public policy it should not approve long-term firm energy contracts from industrial producers who have built generation facilities to support their industrial operations (DoK Argument, para. 1). Further, the Commission Panel does not agree with the DoK that a determination of the public interest in this proceeding requires the Commission to decide whether or not LTEPA+ has the effect of diverting power from Kemano to the provincial grid at the almost certain expense of the Kitimat smelter. The Commission Panel does agree with the DoK that the probable economic effect of LTEPA+ on the DoK is a proper factor to consider in determining the public interest.

In these Reasons for Decision, the Commission Panel has placed little or no weight on the effects of the impact of LTEPA+ on the DoK because the decision to deny acceptance of LTEPA+ is based on issues related to pricing provisions of LTEPA+ and the recall under LTEPA. However, the Commission Panel is of the view that in determining the public interest, it is entitled to consider the impacts flowing from approval of LTEPA+, be they positive or negative, on the DoK.

The Commission Panel is also of the view that the adequacy of the incentives or disincentives to achieve the objective of the Modernization Project is not within the scope of the public interest determination the Commission Panel has to make. However, the Commission Panel expressly rejects the assertion made by BCOAPO in paragraph 48 of its Argument that to the extent an agreement seeks to recover from ratepayers the cost of incentives for industrial developments, the Commission would commit a jurisdictional error. There may well be unique circumstances under which costs of incentives for industrial development should be borne by ratepayers. Whether such unique circumstances exist will be a matter for future Commission Panels when determining what constitutes the public interest.

The Commission Panel is of the further view that the termination of RESA and its effect upon the taxpayers of British Columbia is also a factor it is entitled to consider in determining what is in the public interest. The Commission Panel expressly rejects Alcan's argument that RESA imposes a contingent liability on BC Hydro (Alcan Argument, para. 17-18).

Although in this section the Commission Panel has commented on many of the interests and arguments raised by participants in this proceeding, little or no weight is given to interests other than ratepayer interests. If ratepayer interests were not determinative and were also not aligned with other interests, namely those of the DoK, then other interests may have been given more weight in this Decision. Although the interest of the Province in the termination of RESA is not aligned with ratepayer interests, this interest is given little or no weight for reasons explained in Section 8.

Given the determinations made elsewhere in these Reasons for Decision, it is not necessary for the Commission Panel to decide whether it could modify the contractual terms in LTEPA+ pursuant to the provisions of Section 71(3) of the *UCA*.

4.2 Adverse Inference Against BC Hydro and Alcan

BCOAPO submits that the Commission should draw an adverse inference from the makeup of the witness panel BC Hydro produced to explain its position and course of conduct concerning the Recall Notice. BCOAPO also submits that the Commission could draw an adverse inference against Alcan as a result of Alcan declining to produce any witnesses in this proceeding and leaving participants in the hearing unable to probe into any aspects of the transactions from Alcan's point of view (BCOAPO Argument, para. 108-114).

The DoK submits that an adverse inference should be drawn from the failure of Alcan to address the allegation that its Recall Notice was invalid and simply a ruse to gain a higher price from a compliant BC Hydro (DoK Argument, para. 52-54, 100-101).

As outlined at the start of this Section, BCOAPO and the DoK have requested that the Commission Panel draw an adverse inference as a result of Alcan's failure to call any witnesses at the hearing and in the case of BC Hydro for its failure to include a particular witness as part of its witness panels. The parties agree that drawing an adverse inference is a discretionary matter. The Commission has also previously determined that drawing an adverse inference is a discretionary matter.

For the purpose of this proceeding, the Commission Panel does not need to determine whether the inferences sought to be drawn by some parties should be made. The application for approval of LTEPA+ fails for other reasons which make the determination of an adverse inference unnecessary.

However, the Commission Panel does not accept the explanation provided by Alcan in paragraph 22 of its Argument wherein it states that it did not file evidence on the Recall Notice as it related to LTEPA+ negotiations because Alcan was not in a position to explain the reasons underlying BC Hydro's response to the recall of the LTEPA power. Nor does the Commission Panel accept Alcan's assertion that it was not calling witnesses because it did not believe that the evidence of Alcan would shed light on BC Hydro's motivations at the time and on the reasons why BC Hydro decided the package under LTEPA+ was a good deal for its ratepayers (T6:918).

The Commission Panel is of the view that evidence from witnesses appearing on behalf of Alcan may have been beneficial to understanding issues surrounding the impacts of LTEPA+ on the DoK. At the commencement of the hearing, it was reasonable to assume that the impacts of LTEPA+ on the DoK would be an issue within the scope of the proceeding. However, little or no weight has been given to those impacts in these Reasons for Decision so nothing turns on Alcan's decision not to call evidence.

5.0 NEED, SELF-SUFFICIENCY, AND CAPABILITY

BC Hydro supports the s.71 Filing with arguments that the energy provided through LTEPA+ will help achieve a load and resource balance and reduce reliance on market purchases. BC Hydro does not rely on the Provincial policy objective of self-sufficiency to justify acceptance of LTEPA+. This section addresses these issues.

5.1 BC Hydro's Load and Resource Balance

After the commencement of the oral public hearing, BC Hydro was permitted to call two witnesses and to file evidence to address the issue of need, and filed Exhibits B-18, B-19 and B-20. BC Hydro submits that LTEPA+ would provide much-needed energy to the BC Hydro system in the years before the F2006 Call resources have come on line (BC Hydro Argument, para. 143). In its Reply Evidence, BC Hydro states that from its response in Exhibit B-12, BCOAPO 1.8.1, for the period up to and including F2010 the additional supply from LTEPA+ will displace Burrard operation and/or market purchases, after which the energy from the F2006 Call is assumed to come on line. From F2016 to F2025, BC Hydro states that without the energy from LTEPA+, the forecast energy deficiency between load growth and supply would grow to 8000 GW.h when only existing and committed resources are considered (Exhibit B-17, p. 3 and Attachment I).

SCCBC *et al.* submit that LTEPA+ is desirable because it brings on firm energy immediately and thereby creates a backstop in the event of delayed or reduced demand side management savings (SCCBC *et al.* Argument, para. 14), which form an important component of BC Hydro's LTAP (BC Hydro Argument, para. 144).

The DoK submits that the decision to acquire power from Alcan is an economic one, not one of necessity (Exhibit C1-5, para. 8). BC Hydro testified that when its committed and planned long-term acquisitions are taken into account, LTEPA+ is not required to meet its reliability planning criteria and confirmed that it "does not need Alcan" (T4:467).

Commission Determination

The Commission Panel determines that from the perspective of need, LTEPA+ is not required for strict conformance to BC Hydro's planning criteria given other existing, committed and planned resources and therefore must be justified on other bases.

5.2 Self-sufficiency

The Province submits that meeting the goal of electricity self-sufficiency is an especially crucial issue for the Province and that the energy provided by LTEPA+ will assist BC Hydro in meeting this goal (Ministries Argument, para. 3). The Province references further comments on self-sufficiency made by BC Hydro, but does not itself offer specific guidance regarding the interpretation of electricity self-sufficiency.

The DoK submits that LTEPA+ does not actually contribute to the provincial objective of electricity self-sufficiency because from a provincial perspective there is no net increase in generation associated with the continued operation of Kemano, but rather LTEPA+ represents a shift in the use of this existing provincial resource (DoK Argument, para. 67).

BC Hydro submits that spot market purchases and imports of power for long-term supply would not be in compliance with the self-sufficiency objectives of the Province (BC Hydro Argument, para. 53). Further, in reference to other benchmarks for LTEPA+, BC Hydro claims one of the distinctions of LTEPA+ is its firm energy and associated capacity (BC Hydro Argument, para. 50). However, BC Hydro does not expressly state that LTEPA+ supports the Provincial policy objective of self-sufficiency.

BC Hydro states that absent any agreement with Alcan, the Kemano power would physically serve load local to the North Coast, but contractually it would flow south towards the Kelly Lake Substation if Alcan chose to export this power. Contractually, other BC Hydro northern generation would then serve the North Coast load, but the net effect would be that the flows on the Williston-

Kelly Lake (“WSN-KLY”) transmission path would not change if the Alcan exports were at the same level as the incremental deliveries to BC Hydro in LTEPA+ (Exhibit B-46).

Dr. Shaffer testified that the interpretation of electricity self-sufficiency is dependent on several assumptions including a distinction between capacity and energy self-sufficiency, or use of critical water versus average water conditions, because of the 4,000 GW.h difference between those two levels, and suggested that there are strong economic arguments for using average water conditions (T5:674). BCOAPO urges the Commission not to make any final decision with respect to self-sufficiency and other issues absent a Special Direction from the Province, and not to use this reason as a basis for accepting LTEPA+ (BCOAPO Argument, para. 103, 106).

Commission Determination

The Commission Panel agrees with submissions from the DoK that LTEPA+ will not contribute to self-sufficiency because there is no net increase in generation from a provincial perspective. The Commission Panel notes that a sale by Alcan to a non-domestic purchaser could potentially, although infrequently, change power flows on the interties. However, given a reasonable expectation that Kemano will continue to supply local load and the limited, infrequent occurrence of changes on the interties, the Commission Panel finds no basis for a requirement to accept LTEPA+ from a self-sufficiency perspective.

5.3 Capability of Kemano to Supply LTEPA+ Volumes

5.3.1 Tier 1 Energy

As described in Section 3.3.4, the Tier 1 stepped energy deliveries reflect the difference between the estimated firm capability of Kemano of 730 aMW, and the requirements of the Kitimat smelter load, including the planned Modernization Project. Specifically, the maximum Kitimat smelter load is identified as 565 aMW before the start of construction of the Modernization Project, 610 aMW during the construction of the Modernization Project and ramping up to a maximum of 675 aMW after completion of the Modernization Project, subject to completion adjustment procedures as

provided by LTEPA+. As Mr. McLaren summarizes, the difference of the 610 aMW and 675 aMW smelter load values with the estimated Kemano firm capability of 730 aMW compares favourably with the 120 aMW Tier 1 deliveries from January 1, 2010 through December 31, 2011 and the 55 aMW Tier 1 deliveries after January 1, 2015.

PERIOD	aMW SMELTER MAX ⁽¹⁾	aMW TOTAL	aMW TIER 1 ⁽²⁾	PERIOD
Prior to start of construction	565	735	170	Years 2007-2009 inclusive
From start of construction to prior to completion	610	730	120	Years 2010-2011 inclusive
From completion to December 31, 2014	650	730	80	Years 2012-2014 inclusive
After December 31, 2014	675	730	55	After December 31, 2014

(1) Per BC Hydro Argument, para. 81

(2) Per BC Hydro Argument, para. 86
(McLaren Argument, p. 6)

The table above provides some indication of Alcan's anticipated construction, start-up and operation schedule of the Modernization Project. As the Modernization Project is constructed and brought on-stream, the available Tier 1 energy volumes decrease. BC Hydro estimates that Kemano's annual firm energy capability is in the range of 700 to 730 aMW (BC Hydro Argument, para. 19).

For reliability planning purposes, BC Hydro uses a period of critical water levels to determine the heritage hydroelectric system's firm energy capability (T4:459). If the same critical water criteria are applied at Kemano, the firm energy capability would be closer to 700 aMW (T4:461), thereby reducing the annual available Tier 1 energy delivery schedules identified above by 30 aMW. Also, if the smelter load after the Modernization Project is completed is higher than anticipated, LTEPA+ provides Alcan with the opportunity to reduce annual Tier 1 energy deliveries by up to 15 aMW which would reduce Tier 1 energy deliveries to 40 aMW, implying a smelter load of 690 aMW. As noted earlier, the application of BC Hydro's critical water criteria to Kemano yields a firm energy

capability of 700 aMW. Therefore, annual Tier 1 energy deliveries could be reduced to 10 aMW in a critical water period, or recalled entirely on 12 months notice after January 1, 2016 or completion of the Modernization Project.

Commission Determination

The Commission Panel is concerned that Tier 1 energy volumes in LTEPA+ are overstated because they are calculated from an estimated value of Kemano's annual firm energy capability that is not based on the same criteria that BC Hydro uses in the evaluation of its own resources.

As noted elsewhere in these Reasons for Decision, the Commission Panel is also concerned with other provisions in the contract that may reduce further Tier 1 energy volumes on fairly short notice relative to long-term resource planning requirements.

5.3.2 Tier 2 Energy

BC Hydro submits that its estimate of the expected amount of Tier 2 electricity is based on its assessment of the annual average energy output of Kemano, less Alcan's reserved amount for Kitimat smelter load and less the amount of Tier 1 electricity. BC Hydro estimates that Kemano's average annual output is 793 aMW (BC Hydro Argument, para. 19). The annual Tier 2 energy amounts are estimated to be 55 aMW in the years 2007-2009 and 60 aMW thereafter (Exhibit B-17 Attachment).

The actual output of Kemano (Exhibit C10-15; Exhibit C10-1, BCUC 1.2.1) does not appear to support BC Hydro's estimate of 793 aMW of average annual energy output. Specifically, Exhibit C10-1, BCUC 1.2.1 yields an average of 765 aMW for the 17 years since 1990, when LTEPA was originally executed. Alcan stated that it does not use actual past generation as a basis for forecasting future generation for a number of reasons. These reasons include the construction of the intertie to BC Hydro's transmission system in 1978, major labour strikes, and other events of force majeure, all of which affect actual generation (Exhibit C10-1, BCUC 1.2.3). Rather, Alcan uses historical water inflows to the Nechako Reservoir and simulates future generation assuming

today's infrastructure, operating rules and constraints, and anticipated smelter load (Exhibit C10-4, BCUC 2.4.1). On closer examination and correlation with Kemano historical inflows (Exhibit B-14, SCCBC *et al.* 1.11.4), the average of the inflows for the five years from 1995 to 1999, the last year for which flow data were provided, is very close to the long-term average inflow, and the average annual Kemano generation for this period is 771 aMW (Exhibit C10-1, BCUC 1.2.1) , although this is negatively affected by one of the eight Kemano generators being out of service between April 1996 and February 1997 (Exhibit C10-11, BCUC 1.2.2).

	Kemano Inflows (average cms) (Exhibit B-14, SCCBC <i>et al.</i> 1.11.4)	Kemano Generation (aMW) (Exhibit C10-1, BCUC 1.2.1)
1995	162	795
1996	230	741
1997	238	773
1998	160	785
1999	188	762
Average	196	771
Long-Term Average	196	

The table above suggests that the average annual amount of Tier 2 energy available is approximately 40 aMW (770aMW less 730 aMW) rather than BC Hydro's estimate of 55 aMW to 60 aMW.

Commission Determination

As with Tier 1 energy, the Commission Panel is concerned that the estimated Tier 2 energy volumes in LTEPA+ are overstated for average water conditions. It will consider the impact of this over-estimation on the benefits of LTEPA+ in Section 7 of these Reasons for Decision.

6.0 APPROPRIATE BENCHMARKS FOR ECONOMIC ANALYSIS

This section first considers the basis for determining the cost-effectiveness of a negotiated energy supply contract, and then reviews the evidence concerning appropriate benchmarks for the value of LTEPA+ to BC Hydro and for Alcan's opportunity cost.

6.1 The Basis for Determining Cost-effectiveness

Cost-effectiveness is a key consideration in determining the public interest of an energy supply contract under Section 71 of the *UCA*. An evaluation of cost-effectiveness must consider, among other things, the quality and price of the product relative to the needs of ratepayers and other options available to ratepayers. It must also consider the risks associated with the energy supply contract. A competitive tender process for a clearly defined and needed product with sufficient competitors can provide compelling evidence of cost-effectiveness. However, the price and terms of LTEPA+ were determined by negotiation.

BC Hydro chooses to rely solely on the price and terms of the F2006 Call as a benchmark for negotiating LTEPA+ and to demonstrate the cost-effectiveness of LTEPA+ within the s.71 Filing. Alcan, the Ministries, CECBC and SCCBC *et al.* support this approach. The DoK, IPPBC and BCOAPO submit that the F2006 Call is not the only or necessarily most appropriate benchmark for evaluating the cost-effectiveness of LTEPA+.

BCOAPO notes that BC Hydro did not consider Alcan's opportunity cost (BCOAPO Argument, para. 38). SCCBC *et al.* "...support the view that an alternative, or additional, approach would have been to negotiate a price based on each party's view of the other party's opportunity cost of entering the agreement" and suggest that "...each party's opportunity cost is not restricted to the same product as the one being negotiated..." (SCCBC *et al.* Argument, para. 21). However, SCCBC *et al.* also submit that "...an opportunity cost approach would look only at Alcan's opportunity cost. BC Hydro too has an opportunity cost that would have to be examined" (SCCBC *et al.* Argument, para. 22). However, SCCBC *et al.* submit: "On balance, SCCBC, *et al.* do not believe that there is sufficient evidence for the Commission to conclude that BC Hydro's primary use of a market price

proxy approach to the LTEPA+ negotiations indicates a result that would not be in the public interest” (SCCBC *et al.* Argument, para. 23).

CECBC submits “...there is no convincing evidence to suggest the customers can be assured that an agreement with the terms and conditions which better served ratepayers, or any other impacted shareholder, would be executed by the parties in the event the Commission did not grant the Section 71 approval” (CECBC Argument, para. 7).

BC Hydro submits that “further attempts at negotiating a lower price for Tier 1 would not likely have been successful” and that “[t]here was no transparent way for BC Hydro to determine Alcan’s opportunity cost” (BC Hydro Argument, para. 74). BC Hydro states:

“Even if such behaviour were considered to be appropriate, it is unlikely that BC Hydro could have used its monopsonistic position to prevent Alcan from bidding a fair market price into future calls for tender (either within or outside BC). Assuming that Alcan would sell its firm surplus into the Mid-C spot market on a long-term basis (*i.e.* like a merchant plant) is probably unrealistic” (BC Hydro Argument, para. 74).

BC Hydro states that it has not attempted to estimate the value of other options available to Alcan for the sale of its power (Exhibit B-14, SCCBC *et al.* 1.7.3).

During cross-examination by SCCBC *et al.*, BC Hydro testified as follows:

“Mr. Andrews: Q: Are you suggesting, then, that BC Hydro did evaluate Alcan’s opportunity costs?

Ms. Van Ruyven: A: No, but we knew Alcan had options, and we knew that those options were potentially a contract with a third party, and that, looking around in the Pacific Northwest, and what other utilities have been purchasing power for, we knew that our Call was certainly within the range of what other parties were paying for long-term firm power for a similar product. ... Potentially one could even think of a future where Alcan could bid into one of our Calls. We took that into account as well. So in future calls, if they potentially could bid in, they would be competing with BC-based generation, and we had a current snapshot of that with the outcome of the ‘06 Call.”

(T3:279-82).

During cross-examination by BCOAPO, BC Hydro testified as follows:

“ ... Alcan had an option, they didn’t have to do a deal with B.C. Hydro, they had some other options, they’re going to want to get fair market price for the deal that they’re about to do. So they would look to the market to set what they would probably go in with an opening negotiation point, or set it higher, to negotiate the best possible price they could get, based on their opportunity cost of what they could get elsewhere by going to another supplier or a different part of the market. So, Alcan did have other options, and they could have negotiated other deals. So they were looking to some kind of market proxy that they would obviously hope to get.

Ms. Worth: Q: Okay, and you’ve mentioned that Alcan had options for other contracts involving a fair market price. What was that price, to your understanding?

Ms. Van Ruyven: A: Well, Alcan didn’t have to sign a deal with B.C. Hydro for long-term firm power. They could, for example, continue to do short-term deals. They could sell that power to other third parties. So they had other options besides a long-term deal with B.C. Hydro. So they would be looking to get whatever the best fair market price they could for their product.”

(T2:174-75).

BCOAPO suggests that Ms. Van Ruyven’s admission “...brings in to question this agreement’s “arms length commercial” status so often referred to BC Hydro” and further notes “[I]t is hard to imagine an arms length commercial negotiations where opportunity value is not considered” (BCOAPO Argument, para. 38).

In reply argument, BC Hydro submits that it did not have an onus to provide evidence of Alcan’s opportunity costs in this proceeding (T6:877-79).

Commission Determination

The Commission Panel notes that while a competitive tender process can provide compelling evidence of cost-effectiveness, relying on a competitive tender process is not always possible or useful. Bilateral negotiations of energy supply contracts may be reasonable in some circumstances.

However, in a negotiated agreement the Commission Panel expects the Applicant to demonstrate cost-effectiveness.

The Commission Panel considers that the value of energy to BC Hydro is not the only relevant consideration in a negotiation or in demonstrating the cost-effectiveness of the resulting contract. It is also reasonable for the purchaser to consider the opportunity costs of the seller, particularly where the product is unique and/or the acquisition is not subject to a competitive tender process. The Commission Panel disagrees with BC Hydro's characterization of this approach as "monopsonistic". BC Hydro made numerous references to the fact that Alcan had other options. BC Hydro is not preventing Alcan from bidding into calls for tender from outside the province and limited evidence was provided concerning Alcan's likely eligibility as an existing generator for future calls for power within the province.

Given LTEPA+ is the outcome of a negotiation, the Commission Panel expects BC Hydro would have conducted an analysis of Alcan's opportunity costs to support its negotiations. Furthermore, the Commission Panel finds that BC Hydro should have demonstrated it had done so. The Commission Panel was provided with insufficient evidence by BC Hydro of Alcan's opportunity costs, and indeed heard evidence that BC Hydro did not even consider Alcan's opportunity costs in its negotiations. The Commission Panel also rejects BC Hydro's submissions that there was "no transparent way for BCH to determine Alcan's opportunity cost" (BC Hydro Argument, para. 74; T6:876-77). The determination of Alcan's opportunity costs does not require special insights on Alcan's production costs, financial status or corporate strategy. A reasonable assessment of Alcan's opportunity costs (albeit with some inevitable uncertainty) is available with reference to external facts readily available to BC Hydro.

The Commission Panel finds that given LTEPA+ is the outcome of a negotiation rather than a competitive tender process, the price should have reflected consideration of both the value of the product to BC Hydro as well as the opportunity costs of Alcan. Negotiations should also have considered the unique risks and circumstances associated with this particular contract.

The remainder of this section considers the evidence concerning appropriate benchmarks for the value of LTEPA+ to BC Hydro and for Alcan's opportunity costs, and provides a final determination with respect to the cost-effectiveness of LTEPA+.

6.2 Value of the Energy to BC Hydro

6.2.1 F2006 Call

BC Hydro indicated LTEPA+ was evaluated against a few unspecified bids accepted in the 2006 Call (T5:791). BC Hydro submits "LTEPA+ is cost effective because the \$71.30 per MWh real levelized price for incremental Tier 1 electricity compares favourably with F2006 Call prices and prices for new supply in other jurisdictions" (BC Hydro Argument, para. 71). Specifically, BC Hydro notes that:

"The levelized adjusted bid price for Tier 1 electricity is \$79.00 per MWh, which is \$8.50 per MWh below the average of \$87.50 per MWh of the levelized adjusted bid prices for contracts awarded under the F2006 Call. It is also well within the range of prices for the first 2,500 GWh of awards under the F2006 Call" (BC Hydro Argument, para. 72).

BC Hydro submits the contractual terms were linked to those specified for the F2006 EPA, with some modifications to reflect project-specific issues, and that the F2006 Call was based on commercial terms and conditions and as such it provided a "highly relevant indicator of the competitive market price for energy in BC" (BC Hydro Argument, para. 37). BC Hydro also submits that the awards under the F2006 Call were in line with recent experience in the Pacific Northwest (BC Hydro Argument, para. 39). Finally, BC Hydro submits that the F2006 Call is an appropriate benchmark because the product provided by LTEPA+ is equal to or better than that acquired through the F2006 Call (BC Hydro Argument, para. 44).

BC Hydro notes the following material differences between F2006 Large Project EPA and LTEPA+:

- Provisions pertaining to development of the generation facilities and the commercial operation date (“COD”), including liquidated damages and other remedies pertaining to COD are deleted;
- Provision is made for a reinstatement fee, including make up power and fee refund and/or reduction in the case of Tier 1 energy delivery shortfalls prior to December 31, 2014;
- Stepped pricing is included, with lower pricing under the original LTEPA (inclusive of water rentals) reinstated through December 31, 2014, followed by higher pricing fixed referenced to market prices indicated by the F2006 call awards;
- A smelter first priority is recognized in that (i) Tier 1 energy shortfalls due to insufficient water to meet smelter load, permit and similar requirements and Tier 1 quantities does not attract liquidated damages, although shortfalls prior to December 31, 2014 continue to trigger make-up power and reinstatement fee refund and/or reduction remedies, and (ii) provision is made for Tier 1 energy recall rights exercisable after completion of the smelter modernization project;
- Delay in construction of the smelter modernization project for reasons other than *force majeure* is addressed, in that such delay in the start of construction defers payment of the second installment of the reinstatement fee, and such delay in the completion of construction extends the lower old LTEPA pricing beyond December 31, 2014 for a limited period;
- Provision is made for BC Hydro to have scheduling rights for Tier 1 energy deliveries;
- A renewal right, exercisable by BC Hydro is included;
- A credit maintenance provision is substituted for letter of credit performance security;
- Provision is included for the Seller, Alcan, to maintain required operating reserves;
- Provision is made for a joint operating committee; and
- Assignment provisions are modified to require Alcan to remain responsible under LTEPA+ until significant progress is made in the construction of the smelter modernization project, and in any event for any refund of the reinstatement fee that may arise relative to pre-2015 Tier 1 energy delivery shortfalls.

(Exhibit B-13, DoK 1.1.1)

Alcan submits it “should be paid a fair market price for its power” and that it and BC Hydro “negotiated a commercial price for Alcan’s power using the 2006 Call as a proxy for the fair market price” (Alcan Argument, para. 45). Alcan submits that LTEPA+ is modeled on the F2006 Call

Large Project EPA, the price for LTEPA+ is below the mid-point of the 2006 Call prices, and that Alcan's Kemano Powerhouse is the only significant source of generation available to BC Hydro in the North Coast region (Alcan Argument, para. 46).

SCCBC *et al.* submit there is no other realistic alternative to using the results of the F2006 Call as a proxy for market price (SCCBC *et al.* Argument, para. 24). SCCBC *et al.* submit:

“...the results of the F2006 Call form a relatively wide range of prices. Given the numerous differences between the “product” under LTEPA+ and the “product” under the F2006 Call, the challenge for each party (BC Hydro and Alcan) would have been to quantify and negotiate the financial impact of these differences” (SCCBC *et al.* Argument, para. 25).

However, SCCBC *et al.* also note “[t]here is no evidence regarding the *details* of how BC Hydro and Alcan arrived at the final negotiated price...from within the range of F2006 Call prices” (SCCBC *et al.* Argument, para. 26).

IPPBC submits that “the results of the F2006 Call, including price, should not be used as the benchmark for evaluating the LTEPA [LTEPA+] because of the significant differences in the contract terms and conditions and because there was no competitive bidding” (IPPBC Argument, p. 12). Some of the differences in terms and conditions cited by IPPBC include provisions with respect to requirements for the delivery of firm energy and resulting liquidated damages, payment security and upfront payment, ability to extend the contract (via delay in the modernization project), exclusivity of sales, increase in quantities delivered, insurance, payment of liquidated damages, flow-through of water rental increases, and assistance by BC Hydro to expedite an interconnection agreement between Alcan and BCTC.

IPPBC observes that the 15 aMW adjustment allowed beyond 2015 after the completion of the Modernization Project represents 27.3 percent of the Tier 1 energy volume, as compared to a 10 percent adjustment allowed in the F2006 EPA (IPPBC Argument, pp. 7-8). As discussed in Section 5 critical low water flows can also reduce the firm generation of Kemano from 730 aMW to 700 aMW, potentially reducing Tier 1 energy deliveries by 30 aMW and triggering LTEPA+

liquidated damages provisions. Until December 31, 2014, the remedy in LTEPA+ is replacement within 3 years. Beyond December 31, 2014, the remedy for shortfalls is financial, as discussed in Section 3.3.4 of the Decision. The IPPBC argues that allowing three years to replace shortfalls prior to December 31, 2014 leaves BC Hydro exposed to the actual costs of replacing the shortfalls in the “firm” amount that has not been delivered. In comparison, IPPBC observes that the F2006 EPA liquidated damages provisions require defaulting suppliers to pay damages based on the Mid-C market index value of the quantity of shortfall within 15 days from the end of the month in which the shortfall occurred (Exhibit C5-2, pp. 20-21; IPPBC Argument, pp. 5, 10). IPPBC suggests that LTEPA+ Tier 1 energy volumes are not firm, but are instead uncertain because they are subject to the availability of water and the smelter load (IPPBC Argument, p. 5).

The DoK also submits that the F2006 Call is not a good benchmark and suggests several reasons for this conclusion. First, the DoK submits that the increase in the call award from 2,500 GW.h to 7,000 GW.h, inevitably drove up the price, particularly as the prices were driven by higher-cost resources such as wind. Second, the DoK cites differences in the terms and conditions, which may have limited potential bidders. In particular, the DoK notes that no gas-fired energy producers bid into the F2006 Call, and based on evidence Dr. Shaffer, the DoK submits that the development of gas-fired generation could be significantly lower in cost than LTEPA+. Finally, the DoK cites differences in the timing of deliveries from LTEPA+ and the F2006 Call resources as an important consideration in making price comparisons (DoK Argument, pp. 22-25).

The DoK’s witness, Dr. Shaffer testified:

“I think one of the things that I would have recommended for B.C. Hydro though, rather than just use the results of the F2006 Call as a benchmark, is to look at more benchmarks, be concerned about the spot price. It is the forecasts of it at least are lower. I’d be looking at the estimates for gas-fired generation. None were bid into the 2006 Call. And I would be looking at more flexible and open, if you like, terms and conditions under the 2007 Call. Some of the allocations of risk, some of the factors that drove up the price in the 2006 Call, to see if I couldn’t get better prices” (T4:596).

The DoK submits the Commission should rely on more benchmarks than simply the F2006 Call (DoK Argument, para. 75). Even if the F2006 Call is considered an appropriate benchmark, the DoK also notes that “B.C. Hydro offered no justification for paying Alcan at the mid-point rather than at the very lowest in the range of prices, having in mind that this power was not new power, no capital construction was necessary and the cost of production can be taken as nominal” (DoK Argument, para. 71).

BCOAPO submits that the F2006 Call produced a broad range of contract prices and “...reflects the outcome of a very specific tendering process that cannot be reasonably likened to the trilateral negotiation process between BC Hydro, the Province and Alcan in relation to a long-standing energy purchase arrangement” (BCOAPO Argument, para. 27). BCOAPO goes on to note:

“There has not been a determination by the Commission that the F2006 Call price has some sort of privileged status and should be treated as a universal yardstick to evaluate the cost-effectiveness of every kind of resource that BC Hydro might create or obtain. This is a “hot-button,” unresolved issue in the ongoing BC Hydro IEP/LTAP process and to rely upon it as though it was resolved would be ill-advised and premature. This is an issue that can only be decided in the IEP/LTAP and future Call design proceedings and it should always remain an “open question” to avoid locking-in ratepayers to price standards that reflect a snapshot flowing from a single tendering process” (BCOAPO Argument, para. 28).

6.2.2 Spot Prices

BC Hydro submits that “spot markets cannot be relied upon as a reliable comparator to electricity obtained *via* long-term EPAs” (BC Hydro Argument, para. 40). BC Hydro testified that the product in LTEPA+ is quite different from spot energy purchased at Mid-C or the B.C. border (T2:200); and that the price at which Powerex purchases electricity from Alcan is for a short-term, non-firm product based on spot prices and this is not an appropriate benchmark for a fixed-price, long-term firm supply (T2:169). These concerns notwithstanding, BC Hydro did compare the adjusted prices from the F2006 Call (to the Lower Mainland) with its electricity price forecasts (for the BC Border) and found that the price for the Large Project awards is higher than the High Gas and EIA Reference

price forecasts at the beginning of the term but lower than High Gas price forecast by 2019 and the EIA Reference price by approximately 2031 (Exhibit B-12, BCOAPO 1.1.1).

SCCBC *et al.* suggest that the Mid-C price is not a long-term product, limiting its usefulness as an appropriate benchmark (SCCBC *et al.* Argument, para. 28).

Referring to Exhibit B-12, BCOAPO 1.1.1, BCOAPO submits that the comparison of LTEPA+ with various market price scenarios indicates that ratepayers would be better off with LTEPA+ only under BC Hydro's high price scenario (BCOAPO Argument, para. 36). BCOAPO submits that while LTEPA+ reduces ratepayers' exposure to high market prices, it also "prevents ratepayers from realizing the benefits that occur when market prices are low" (BCOAPO Argument, para. 37).

6.2.3 New Combined Cycle Gas Turbine

The DoK submits that the cost of a new Combined Cycle Gas Turbine ("CCGT") is a useful benchmark to consider in the evaluation of LTEPA+. Dr. Shaffer characterized the costs of a new CCGT as follows:

"BC Hydro's forecast of natural gas prices indicate that the development of gas-fired thermal generation would also be significantly lower in cost than LTEPA+. In its 2006 IEP (Figure 3-8, p. 3-18), BC Hydro's reference case forecast shows the price of gas falling and remaining below \$5 Cdn/GJ (in 2005\$) most years over the mid to long term. Even at \$6/GJ the unit energy cost of gas-fired thermal generation would be less than \$65/MWh. There would be GHG offset costs to consider; at \$25/tonne these could add some \$8/MWh to the total cost. On the other hand, strategic siting of these plants could significantly reduce transmission costs with both environmental and economic savings" (Exhibit C1-5, A7).

SCCBC *et al.* submit that "...repowering the Burrard Thermal Plant or developing a ('Duke Point') CCGT on Vancouver Island both carry substantial gas price risk and development risk" limiting their use as a benchmark for LTEPA+ (SCCBC *et al.* Argument, para. 28).

In Argument, BC Hydro notes:

“The delivered cost of Tier 1 electricity to the Lower Mainland of \$79 per MWh (including the hourly firm credit of \$3 per MWh) is also cost effective relative to the cost of new CCGT generation considering gas price risk, development risk, and greenhouse gas (“GHG”) mitigation cost uncertainties. The CCGT unit energy cost estimates include \$2.40 per MWh for GHG mitigation costs, and have been reduced by the \$3 per MWh “hourly firm credit”, so are comparable to Alcan LTEPA+ Tier 1 price and the F2006 Call adjusted bid prices. The range of unit energy costs under the EIA forecast are \$70.50 to \$78.40, and \$114.60 to \$122.40 under the High Gas forecast, compared to the Tier 1 price of \$79” (BC Hydro Argument, para. 73).

6.2.4 Downstream Benefits

BCOAPO submits that comparing LTEPA+ to the Downstream Benefits (“DSBs”) [being the Canadian Entitlement arising from the Columbia River Treaty] provides a better basis for evaluating LTEPA+. BCOAPO suggests that the DSBs have the following characteristics that make them a better basis on which to evaluate LTEPA+:

- “a) BC Hydro could easily replace the LTEPA+ purchase with electricity available under the DSBs;
- b) The DSB’s provide firm capacity delivered to the BC/US border. In fact the DSB capacity can be provided over a number of transmission lines. LTEPA+ capacity is available over a single line; (T3: 241-42)
- c) Term DSBs are essentially the same product as that being proposed for LTEPA+; and
- d) The DSB’s are provided from existing generation facilities, as is LTEPA+ energy.”

(BCOAPO Argument, para. 33)

BCOAPO submits that the significant difference between the DSBs and LTEPA+ is that the DSBs are priced on the basis of a volatile Mid-C spot price rather than a fixed price as under LTEPA+. However, BCOAPO submits that the “Mid-C price is determined in a market with numerous buyers and provides a much better competitive market measure to determine whether or not ratepayers are getting good value under LTEPA+” (BCOAPO Argument, para. 34).

Commission Determination

The Commission Panel finds that comparisons of prices based on particular points in time are not useful for evaluating cost-effectiveness. A more appropriate way to compare the cost of an energy supply contract relative to other options available to BC Hydro is to levelize prices over the relevant term of the energy supply contract.

The Commission Panel agrees with BC Hydro that spot market prices alone are not an appropriate indicator of the value of long-term firm purchases, although the Commission Panel does consider spot prices an important reference point for quantifying and justifying any premium for long-term firm purchases and for any contract that fixes the price for non-firm purchases.

In Section 5, the Commission Panel found that BC Hydro does not require additional firm purchases in the near-term for reliability purposes. In the near-term, LTEPA+ could reduce reliance on BC Hydro's non-firm/market allowance. The Commission Panel therefore finds that spot prices are a more reasonable benchmark for the value of the LTEPA+ purchases in the near-term. The Commission Panel accepts that some premium may be justified over spot prices in recognition of reduced exposure to market volatility. However, the Commission Panel does not consider a premium equal to the cost of long-term firm purchases from new generation an appropriate benchmark for the value of reducing reliance on the market allowance in the near-term.

In Section 5, the Commission Panel found that BC Hydro does not require LTEPA+ if all existing, committed and planned firm resources in the LTAP are taken into account. However, the Commission Panel acknowledges that LTEPA+ could displace future planned firm resource additions in the LTAP. Thus, the Commission Panel accepts that long-term firm purchases or resources would be a better benchmark of the value of LTEPA+ in the mid- to long-term.

The Commission Panel finds there are several possible benchmarks for the value of long-term firm energy to BC Hydro. The F2006 Call is one possible reference point. However, the Commission Panel agrees with Intervenors such as IPPBC and BCOAPO that the terms and conditions of LTEPA+ are sufficiently different from the terms and conditions in the F2006 Call to make direct

comparison of LTEPA+ to the prices in the F2006 Call difficult, without adjustments to reflect those differences. The Commission Panel also agrees with the DoK that there is no compelling reason provided by BC Hydro as to why the mid-point of a call with a considerable range of prices is somehow the most appropriate benchmark for the value of Alcan's generation to BC Hydro. The Commission Panel agrees with the DoK that the cost of a new CCGT is also a useful benchmark for long-term firm purchases. The cost estimate for a new CCGT provided by Dr. Shaffer is within the range provided by BC Hydro under the EIA Forecast. While the High Gas Forecast is a valid tool for exploring risk, the Commission Panel gives less weight to this forecast than the other forecasts in terms of assessing expected costs. The remaining range of expected CCGT costs is somewhat less than prices in the F2006 Call, which did not include provisions that encouraged bids from gas-fired generation.

The Commission Panel finds that given their firm capacity, the DSBs could have additional benefits over reliance solely on spot purchases as a benchmark for the cost-effectiveness of long-term firm purchases. However, the cost of the DSBs is still based on a fluctuating spot price. The Commission Panel accepts that some premium over spot prices could be acceptable in a long-term firm purchase contract in recognition of reduced exposure to market volatility. However, BC Hydro is still required to estimate and justify any premium.

Finally, the Commission Panel considers that further adjustments to the value of LTEPA+ to BC Hydro in the mid- to long-term may be justified based on the characteristics of LTEPA+ energy. The Commission Panel is concerned about BC Hydro's estimate of Tier 1 energy and its characterization of this energy as firm for valuation purposes. In particular, the Commission Panel notes concerns regarding available energy under critical water flows and the recall provisions in LTEPA+.

6.3 Alcan's Opportunity Cost

BCOAPO submits that BC Hydro should have considered Alcan's opportunity cost. BCOAPO submits the following facts with respect to Alcan's opportunity cost:

- “a) Alcan could complete third party sales to the US under BCTC’s Transmission Tariff and BPA’s Transmission Tariff. BC Hydro would not be part of these negotiations and would not be in a position to exert any monopoly power. Exhibit B-46 confirms that BC Hydro’s NITS [Network Integration Transmission Service] transmission request would give BC Hydro rights to all the current transfer capability on the WSN-KLY path beyond 2015.
- b) An Alcan request for firm transmission would follow BC Hydro’s NITS request. In order to sell its surplus on a long-term firm basis, Alcan would be required to pay for any upgrade required to provide additional transfer capability above that allocated to BC Hydro. In addition Alcan would have to obtain Long-Term Firm [“LTF”] Point to Point [“PTP”] transmission service in the US. Alternatively, Alcan could negotiate with a generator to provide re-dispatch service during periods when transmission constraints could occur.
- c) Since obtaining firm transmission capability would be cumbersome and possibly expensive, it’s likely that if Alcan were to negotiate a sale to a party other than BC Hydro, the sale would likely be for non-firm energy. Exhibit B-47 shows that the cost of wheeling the non-firm power would be in the order of \$16/MWh (23.1 percent of \$68.97/MWh).
- d) Selling its surplus as non-firm reflects the basis on which Alcan is currently selling power to Powerex. The price for the sales to Powerex is based on a discount to the price at Mid-C.
- e) The price for a long-term non-firm sale product would be based on the expected future cost of spot sales. In order to assess Alcan’s opportunity cost at the plant gate under various market price scenarios, \$10/MWh (BCTC Wheeling costs) needs to be deducted from BC Hydro’s BC/US border price scenarios. A review of the graph showing various market price scenarios included in Exhibit B-12 BCOAPO IR 1.01.1 indicates that it is only during the later contract years under the High Gas scenario that Alcan’s opportunity cost would be greater than the LTEPA+ \$71.00/MWh plant gate cost. Alcan’s plant gate opportunity cost is well below the \$71/ MWh under all other price scenarios. Attachment F of Exhibit B-17 indicates that the current one year forward price for sales at Mid-C is near \$60/ MWh US or \$68/ MWh Canadian. This would produce an Alcan plant gate price of \$52/MWh (\$68/MWh less \$16/MWh wheeling costs) for any sales to Mid-C over the next year” (BCOAPO Argument, para. 39).

BC Hydro states that Alcan could request Firm PTP transmission service from BCTC in order to commit LTF Exports (Exhibit B-46). With respect to the availability of Firm PTP Service, BC Hydro noted as follows:

“The LTAP base case shown in [2006 IEP/LTAP] Exhibit C7-7, Figure 3 shows a drop in ATC between Williston (WSN) and Kelly Lake (KLY) substations in F2015. The sudden drop is due to the 518 MW supercritical coal plant added in the North Interior in F2015. If the LTAP becomes the basis of the NITS Agreement, BCTC would implement plans to upgrade this WSN-KLY path by F2015.

Alcan deliveries to BCH under NITS are modeled in the LTAP analysis and included in Figure 3 already. Note that Alcan deliveries at the historical and at the future amounts shown in LTAP offset regional North Coast load and do not directly result in transfers on the WSN-KLY path. They indirectly result in loading on that path, because generation from plants in the Peace region that would otherwise flow west to serve North Coast load, would flow south instead.

If Alcan had no agreement with BCH and wanted to deliver energy to a third party in the US they would have to request LTF PTP service from BCTC. Physically their power would still serve local load, but contractually it would flow south towards KLY and on to the Lower Mainland and the U.S. Contractually, other BC Hydro Northern generation would then serve North Coast load, the net effect being that the flows on the WSN-KLY path wouldn't change if the Alcan exports were at the same level as the incremental deliveries to BC Hydro in the LTEPA+. The Alcan request for LTF PTP service would trigger a study by BCTC that would include all prior tariff reservations for transmission service to determine the actual ATC [Available Transfer Capability] available for delivery of energy to the U.S.” (Exhibit B-46).

BC Hydro states that the transmission path between Kitimat and Williston Substation prevents Alcan from acquiring Firm PTP Service:

“BC Hydro understands from BCTC that the ATC on the Kitimat to Kelly Lake portion of the transmission system is not available as Long-Term Firm transmission capacity.

As indicated in the response to BCOAPO 1.3.1 in Exhibit B-12, there is no "firm" capability on the Kitimat to Williston portion of the system from the standard single contingency system reliability perspective, since the Kitimat to Williston portion is a series of single radial lines. In terms of the contractual definition of Long-Term Firm ATC under the BCTC's Open-Access Transmission Tariff (OATT), this has not been determined for the Kitimat to Kelly Lake portion of the transmission system since it not a defined path at the present time.

Also, as described in the response to BCOAPO 1.2.1 in Exhibit B-12, the ATC on the Williston-Kelly path is not available as Long-Term Firm transmission capacity. The 480 MW value indicated is an estimate of the present ATC and does not take into account the future use of the transmission system by other users that have submitted

requests for transmission that would use ATC between Williston and Kelly. A determination of Long-Term Firm ATC is not possible until the completion of studies related to the results of the F2006 Open Call for Power and any other interconnection service requests that may be queued.” (Exhibit B-40)

BC Hydro calculates the total estimated cost of firm transmission service and losses for a 263 GW.h/yr transfer from the Alcan plant to Mid-C to be about \$4.1 million per year or 23 percent of the Mid-C price of Cdn\$68.97/MW.h (Exhibit B-47).

The DoK submits:

“Hydro does not appear to have paid any attention to the opportunity cost of Alcan for this power. On several occasions, Hydro witnesses asserted that Alcan had “options” although no concrete illustrations were given of these options other than smelting aluminum. There were no suggestions of long-term supply options and the fact is that Alcan has never sold power on a long-term basis to anyone other than B.C. Hydro. Even assuming that Alcan was entitled to sell power [footnote reference eliminated], the best indication of the opportunity cost for Alcan is the RESA value, which Dr. Shaffer calculated at about \$26 per MWh.” (DoK Argument, para. 80 citing Exhibit C1-5, Evidence of Dr. Shaffer, A7, and Exhibit C10-6).

In reply argument, BC Hydro acknowledges “[i]f that [spot sales] was the only option [for Alcan], that price would be relevant from an opportunity cost perspective” (T6:871-72). However, as stated earlier in this section, BC Hydro also submits that it did not have an onus to provide evidence of Alcan’s opportunity costs in this proceeding (T6:877-79).

Commission Determination

The Commission Panel accepts the views expressed by Dr. Shaffer, and re-stated by BC Hydro at paragraph 64 of its argument, that Alcan’s cost of production is not relevant in the determination of Alcan’s opportunity costs.

The Commission Panel accepts the facts outlined above in paragraph 39 of BCOAPO's argument. Specifically, the Commission Panel finds that a transmission reinforcement would be required by BCTC in order for Alcan to sell a firm product to another party, and that Alcan would need to pay for such a reinforcement. In the absence of a reinforcement, Alcan does not have the option to sell a LTEPA+ type of product to any other party with the result that its opportunity costs would be non-firm sales, likely priced as spot. Furthermore, Alcan would be subject to the additional costs of transmission service to wheel power to Mid-C. For these reasons, the Commission Panel finds that Alcan's opportunity costs are closer to spot prices, net of applicable wheeling costs.

In summary, the Commission Panel concludes that BC Hydro should not have agreed to the pricing provisions of LTEPA+, and in particular should not have agreed to pricing provisions based solely on the F2006 Call. Prices from the F2006 Call were obtained through a competitive process for a specific product with pre-determined terms and conditions. Furthermore, that Call was limited to new generation and existing facilities were expressly prohibited from bidding. The evidence suggests the levelized price of LTEPA+ exceeds the expected value of the energy to BC Hydro over the term of the contract. Furthermore, the evidence suggests the price of LTEPA+ also exceeds the likely opportunity costs of Alcan for sales to other parties. LTEPA+ was negotiated in a tri-lateral environment with no pre-determined terms and conditions, and the Commission Panel concludes that the pricing should have reflected both the expected value of the energy to BC Hydro and Alcan's likely opportunity costs. As discussed in other sections, the price should also reflect the unique risks to both Alcan and BC Hydro arising from uncertainty with respect to the validity of the Recall Notice, as well as other impacts considered important for the public interest.

7.0 THE RECALL NOTICE

This section will consider Alcan's right under LTEPA to recall volumes for certain purposes which it exercised in December 2004, and its offer as part of the 2006 negotiations for LTEPA+ of almost 70 percent of the volumes it had recalled back to BC Hydro at higher prices. It will examine BC Hydro's contention that, even if the Recall Notice was invalid, the benefits of LTEPA+ offset the incremental costs and that its customers are "essentially" kept whole.

7.1 The Recall Notice

Clause 5.4 of LTEPA gave Alcan the following rights:

- 5.4 For the purpose of using electricity generated by Alcan's System in accordance with the rights granted to Alcan by the Government of the Province of British Columbia pursuant to the 1950 Agreement, Alcan shall be entitled to recall from sale all or any part of the electricity to be made available to B.C. Hydro under this Agreement, subject as follows:
 - 5.4.1 At any time, *and* from time to time, before the tenth anniversary of the Effective Date, Alcan may give notice to B.C. Hydro that Alcan wishes to recall from sale electricity to be made available to B.C. Hydro under this Agreement. Alcan's notice shall specify the amount of electricity subject to recall and the date that Alcan wishes the recall to commence. Following each such notice, Alcan and B.C. Hydro shall enter into negotiations in good faith for an agreement to provide for recall in accordance with Alcan's notice under this subparagraph 5.4.1 on terms and conditions agreeable to the parties, and, in each case, such recall shall become effective if such agreement is reached by the parties;
 - 5.4.2 At any time, and from time to time, on or after the tenth anniversary of the Effective Date, Alcan may give notice to B.C. Hydro recalling from sale all or any part of the electricity to be made available to B.C. Hydro under this Agreement effective, in each case, on the fifth anniversary of the date of Alcan's notice of recall. Each such notice shall specify the amount of electricity subject to recall under that notice and the date that the recall shall commence, and in each case, recall under this subparagraph 5.4.2 shall become effective in accordance with Alcan's notice without further agreement between the parties; and
 - 5.4.3 Alcan may recall electricity under subparagraphs 5.4.1 and 5.4.2 only for Alcan's own industrial purposes in British Columbia without limitation aluminum manufacturing (Exhibit C1-6, LTEPA Section 5.4).

Alcan issued its Recall Notice of all the electricity to be made available under LTEPA by letter to BC Hydro dated December 24, 2004, to be effective December 31, 2009 (Exhibit B-16, McLaren 1.3.0, Attachment 1). BC Hydro states that upon receipt of the Recall Notice from Alcan it responded by letter to Alcan reserving its rights with respect to all aspects of the recall question (Exhibit B-37, p. 1; Exhibit B-38, McLaren 1.2.4).

BC Hydro testified that it did not invoke the dispute resolution mechanism in the LTEPA which was for two senior executives to attempt to resolve the issue, failing which it would be referred to binding arbitration. The senior executives did not meet and consequently the issue could not be referred to binding arbitration (T5:786); "... we didn't action this between '04 and then when we entered into negotiations [for LTEPA+] in basically May of '06" (T5:788); and "if there may be no need to reinstate the volumes -- or pay a fee to reinstate the volumes after 2009, ... we would end up with a significantly different contract than the one we have now" (T3:313).

7.2 The Validity of the Recall Notice

BC Hydro submits that "where the contractual terms of the recall are uncertain in light of the facts known to BC Hydro, as a result of which the recall may be, or become, valid, then it was reasonable for BC Hydro to take the course that it did in the negotiations" (BC Hydro Argument, para. 101).

BC Hydro submits, "without acknowledging the validity of the recall, that the question of validity is fraught with considerable uncertainty, and that there is a real risk that the recall may be, or may become, valid, a risk that must be taken into account in assessing whether the portion of the Reinstatement Fee calculated by reference to recalled power is reasonable and appropriate in the circumstances" (BC Hydro Argument, para. 135).

BC Hydro submits that it is unnecessary and undesirable for the Commission to make any final determination as to the validity of the recall because:

- “the matter is not ripe for determination, because:
 - There is a reasonable interpretation of the recall provisions suggesting that the matter is not ripe for determination, and will not be so until 2010 or later; and
 - The full impact of the lead-in to s. 5.4 of the 1990 LTEPA cannot fairly be considered until the question of the nature and scope of the rights granted to Alcan under the 1950 Agreement have been finally determined by the currently pending litigation and the exhaustion or expiry of any appeal rights associated with it;
- as the litigation is pending, the best evidence on the question is not before the Commission in this proceeding, and BC Hydro should not be disadvantaged in the outcome as a result of that;
- a s.71 proceeding is ill-suited to the determination of potentially complex contractual disputes involving a private, unregulated party” (BC Hydro Argument, para. 139).

BC Hydro considers arguments that support the validity of the recall, and submits that “[s]pecifically, it may be said that recall was necessary to enable Alcan to secure some of the recalled power to service the modernized smelter, and some of it to remarket in order to establish the economic conditions it considered necessary for the Modernization Project to proceed; that in all of this there was one purpose - modernizing the smelter; and that the entire recall, including the surplus volumes resold on a long-term basis, served a qualifying purpose under subsection 5.4.3” (BC Hydro Argument, para. 127).

In the following exchange between the Chair and BC Hydro an appropriate decision-making criterion for consideration of the issues related to the recall of LTEPA was discussed:

“THE CHAIRPERSON: -- what you’re suggesting, then, is that for the volumes under LTEPA Plus, you’re acknowledging that the recall notice was not valid, and giving them the benefit of the higher pricing, the 71-30 on that, but your submission is that they’re fully offset by the benefits that are in the agreement, and in that way you’re keeping the customers whole.

MR. SIMPSON: A: Essentially. And I would also like to point out there was uncertainty around the recall. So we didn’t know necessarily that we were going to get full recovery on the 72 million.

THE CHAIRPERSON: So in the sense that if it wasn't a full offset, one might then turn to whether or not the recall was in fact valid or invalid, because there may be some doubt with respect to that it doesn't necessarily need to be fully offset, that loss to customers.

MR. SIMPSON: A: That's correct, yes." (T5:797-98; quoted verbatim by BC Hydro Argument, para. 105).

Alcan submits that the Commission should not make a determination as to the validity of the Recall Notice. Instead, Alcan submits that the Commission should decide whether BC Hydro acted reasonably in agreeing to pay a higher price for Tier 1 electricity during the period 2010 through 2014 than it would have paid under LTEPA (Alcan Argument, para 20). In answering this question, Alcan submits that the Commission must consider all of the benefits of LTEPA+ relative to LTEPA. The Commission must also bear in mind that the recall of LTEPA power is not relevant to the additional 30 MW of Tier 1 power Alcan commits to delivery from 2007 through 2009, nor to the power delivery commitments from 2015 and after because this is power that BC Hydro was not entitled to under the original LTEPA (Alcan Argument, para. 20-21).

The DoK submits it is "manifestly obvious" that the recall was not valid and that there is no evidence that Alcan had any intention in 2004 of building smelter capacity that would have required the recalled power. The DoK further submits that Alcan was expressly given the opportunity to respond to the inevitable conclusion that the Recall Notice was just a device to increase the price that it would receive for the 2010-2014 power, but declined to do so. In these circumstances, the DoK submits that it is appropriate that the Commission draw an adverse inference from the failure of Alcan to address the allegation that its Recall Notice was invalid and simply a ruse to gain a higher price from a compliant BC Hydro (DoK Argument, para. 52).

The DoK further submits that Alcan has not offered to explain why it did not call a witness to rebut the natural inference that the Recall Notice, which was issued the day before Alcan paid Powerex \$111 million in respect of what it terms the "Enron fiasco", was illegitimate and made for the sole purpose of increasing the price on the very power it was asserting it needed for aluminum smelting (DoK Argument, para. 54).

The DoK submits that BC Hydro's argument (para. 89) that "BC Hydro has never acknowledged the validity of the recall, nor has it relinquished its rights to challenge the recall if that becomes necessary or desirable" is somewhat "ephemeral", since BC Hydro is presenting for filing an agreement which would supersede the recall provisions of the 1990 LTEPA and make them redundant. The DoK believes that BC Hydro has given away a \$70 million asset without making the most perfunctory investigation into the merits of Alcan's position (DoK Argument, para. 57).

BCOAPO comments on BC Hydro's argument (at paragraph 127) that Alcan's recall may have been valid and submits that "It defies common sense, and it defies the logic of the arrangement, to imagine that the parties intended that Alcan could recall firm power in order to engage in electricity trading to take advantage of better prices than it could obtain from [BC] Hydro: this would have undermined the entire purpose of the firm power arrangement, from [BC] Hydro's standpoint, to the point where power delivered under those terms could hardly be rated as "firm" – rather, it would be deliverable at the whim of Alcan" (BCOAPO Argument, para. 70).

Commission Determination

Although the Commission Panel is satisfied that the validity of the recall fell within the scope of the hearing, it agrees with BC Hydro and Alcan that it is not appropriate in this proceeding for the Commission Panel to adjudicate on the interpretation of a specific term within a contract or to determine whether or not a party to that contract breached it or not; the validity of the Recall Notice is a contractual matter for the courts. The Commission Panel finds that BC Hydro acted appropriately following the issue of the Recall Notice by Alcan by reserving its rights and by preparing to wait until the end of 2009 when the issue would have been suitably "ripe" for determination. The offer by Alcan in 2006 to negotiate LTEPA+ whereby almost 70 percent of the recalled volumes were offered back to BC Hydro at prices which were higher than the LTEPA prices, and whereby BC Hydro would be obliged to sign away those rights it had reserved under LTEPA, precipitated the issue for BC Hydro.

The Commission Panel finds the appropriate criterion for determining the issues relating to the recall of LTEPA to be set out in BC Hydro’s Argument at paragraph 105, quoted above. The Commission Panel finds that the question it must resolve is whether BC Hydro acted reasonably in agreeing to pay a higher price for Tier 1 electricity during the period 2010 through 2014 than it would have paid under LTEPA and whether the benefits realized by BC Hydro offset in whole or in substantial part the incremental costs incurred.

7.3 The Extra Cost

BC Hydro filed supplementary direct evidence on the LTEPA recall (Exhibit B-37). It discussed “that portion of recalled power that is reinstated by LTEPA+ for the period of the recall, which is 2010 through 2014” (Exhibit B-37, p. 1). The volumes in question are as follows:

Year	aMW Originally Recalled	aMW Reinstated	aMW Retained by Alcan
2010	140	120	20
2011	140	120	20
2012	140	80	60
2013	140	80	60
2014	140	80	60
Total	700	480	220
Percentage	100%	68.6%	31.4%

BC Hydro testified “I don’t think it’s a matter of question by anyone that they [Alcan] had the right to recall the 20 megawatts in 2010 and 2011, and the 60 megawatts in the other years” (T3:473), and “because they are using that for the purpose of smelting aluminum. They have indicated that that will be used in the modernization project” (T3:473).

BC Hydro calculates, at a 8 percent discount rate, the PV of the incremental cost of the volumes reinstated by LTEPA+ between 2010 to 2014 to be \$72 million. The incremental cost reflects the difference between a plant gate price of \$71.30/MW.h in 2006 dollars and the price for deliveries under LTEPA, which continue under LTEPA+ during the calculation period (Exhibit B-37, pp. 1-2,

4, Part B). BC Hydro states that the calculation was only part of BC Hydro's rationale for ultimately accepting the amount of the Reinstatement Fee and was a useful framework for negotiations. It was consistent with the Recall Notice having been given and avoided lengthy discussion with Alcan as to the value BC Hydro placed on other attributes of LTEPA+, which formed part of its analysis in arriving at a commercially reasonable Reinstatement Fee (Exhibit B-37, p. 2).

7.4 The Benefits

BC Hydro states that the comparative benefits of LTEPA+ over LTEPA include the following:

- Scheduling rights

BC Hydro states that under LTEPA+ it acquires Tier 1 energy scheduling rights which, by comparing the energy value difference between shaped (capacity factor of 85 percent) and flat (capacity factor of 100 percent) deliveries, it estimates to have a PV of approximately \$15 million to \$20 million. BC Hydro's calculation includes the 30 aMW of additional volumes and values the power at \$71.30 per MW.h (Exhibit B-7, BCUC 1.7.1, Attachment 1).

- Non-firm energy

BC Hydro states that Alcan commits approximately 60 aMW of non-firm energy for the period 2007 through 2014 at the price applicable under the original LTEPA and that its estimate of the PV of this commitment ranges from approximately \$7 million to \$50 million, depending upon whether the contract price is compared to the scenario average of the 2006 Electricity Price Forecast at the BC/US border, or the non-firm price payable under the F2006 Call (Exhibit B-37, p. 2). BC Hydro sets out the BC border prices for the 2006 Electricity Price forecast for the fiscal years 2009-2025 under the Confer, EIA and High Gas cases (Exhibit B-12, BCOAPO 1.1.1).

BC Hydro testified that "the most likely thing that would happen there is the ... non-firm from Alcan would either displace Burrard or reduce our market purchases" (T5:774) and that the value of such reduction would range from \$7 million derived by BC Hydro by averaging its three gas price

forecasts, namely the EIA reference case, Confer case and the High Gas case (T5:777); “Using the High Gas case you would come up close to this \$50 million” (T5:777).

- Operating reserves

BC Hydro states that Alcan is obliged to maintain required operating reserves on all Tier 1 energy and calculates that the PV of this attribute is approximately \$2 million, based on the incremental cost to BC Hydro of new capacity. Neither the benefit nor the amount was challenged by any Intervenor (Exhibit B-37, p. 3).

- Other benefits

In addition to these benefits, BC Hydro states that it also took into consideration other comparative benefits under, or associated with, LTEPA+, the values of which are more subjective and less easily valued, but nevertheless significant, including:

- access to a secure supply of reliable firm power with price certainty over an extended term, plus the optionality of a unilateral renewal right;
- the largest annual volumes of energy deliverable under LTEPA+ occur in 2010 and 2011, which will assist in meeting the short to mid-term load/resource energy balance;
- LTEPA+ is modelled on the F2006 Call Large Project EPA. This form, by comparison with the original LTEPA, offers a range of operational, commercial and legal benefits to BC Hydro in addition to those noted above. These include meaningful legal remedies, including liquidated damages, for delivery and other contractual failures, access to considerable operating data relative to the reservoir and related matters, credit maintenance provisions, and generally a modern, more detailed agreement allocating risks, which enhances certainty and minimizes the risk of disputes; and
- effectively a final resolution of any dispute that may otherwise have arisen relative to the recall, in respect of which it recognized uncertainty (Exhibit B-37, pp. 2-3; BC Hydro Argument, para. 110)

While the incremental costs have an PV of \$72 million, the value of the offsetting benefits claimed by BC Hydro is set out below:

Scheduling rights	\$15 - \$20million
Non-firm energy	\$ 7 - \$50 million
Operating reserves	\$ 2 million
Total	\$24 - \$74 million

BCOAPO submits that the burden of proof rests on BC Hydro's shoulders; it cannot take advantage of the uncertainty of its own evidence, and rely on the upper range of its valuations, noting that a quick tally based on BC Hydro's own evidence shows that the monetized benefits are projected to be worth as little as \$24 million, in return for an outlay of \$111 million [in nominal dollars]. BCOAPO also submits that BC Hydro appropriately did not attempt to attach estimated values to the "non-monetized" benefits, and that many of the "non-monetized" benefits are soft in the extreme and have the appearance of being ex-post facto rationalizations in response to unexpectedly severe criticism of the Agreement (BCOAPO Argument, para. 57-59)

Commission Determination

The Commission Panel finds that BC Hydro erred in its calculation of scheduling rights benefits by including the additional 30 aMW for the years 2007-2009 as these volumes are not part of the reinstated volumes.

The scheduling requirements for LTEPA and LTEPA+ are constrained by capacity factors of 95 percent and 85 percent, respectively. The Commission Panel finds that BC Hydro erred in its calculation of scheduling rights benefits by calculating the full impact of scheduling at 85 percent rather than the difference between 85 percent (in LTEPA+) and 95 percent (in LTEPA) on the reinstated volumes.

The Commission Panel makes these adjustments and estimates the PV of the scheduling rights to be approximately \$11 million.

The Commission Panel notes that while BC Hydro's evidence speaks of calculating Tier 2 benefits by comparing the prices in LTEPA+ with the non-firm price payable under the F2006 Call, all its testimony in this regard speaks to a comparison of prices in LTEPA+ with the scenario average of the 2006 Electricity Price Forecast at the BC/US border. The Commission Panel considers that a comparison with the non-firm price payable under the F2006 Call would be inappropriate since BC Hydro must take as tendered and pay for all non-firm volumes of power offered to it under the F2006 Call and would not be able to displace any of those volumes with Tier 2 volumes under LTEPA+. The Commission Panel finds that the scenario average of the 2006 Electricity Price Forecast at the BC/US border is a more suitable comparator to calculate the Tier 2 benefits subject to its comments below.

The Commission Panel notes that the Tier 2 benefits of \$7 million were calculated by BC Hydro as the average of its three gas price forecasts. Since one forecast produced a PV of \$50 million and the average produces \$7 million it follows that the application of at least one of the forecasts (if not both) will yield negative PVs. The Commission notes that in the 2006 IEP/LTAP proceeding BC Hydro has not used a reference forecast and agrees with its approach in this instance. In addition the Commission Panel has found in Section 5 that the volumes of Tier 2 power have been optimistically forecast, and finds that such an overstatement of Tier 2 volumes by approximately 35 percent will also commensurately overstate the Tier 2 benefits claimed by BC Hydro. The Commission Panel accordingly reduces the benefit to approximately \$5 million.

The Commission Panel accepts the benefit of the Reserves that Alcan must provide as approximately \$2 million.

The Commission Panel finds that BC Hydro's benefits from LTEPA+ are more properly estimated as follows:

Scheduling rights	~\$11 million
Non-firm energy	~\$ 5 million
Operating reserves	~\$ 2 million
Total	~\$18 million

The Commission Panel has accepted the criterion proposed by BC Hydro that the benefits fully offset the extra costs or that, if the benefits do not provide full recovery of the extra costs, the amount of the under-recovery can be justified to the extent that uncertainty existed as to whether BC Hydro would prevail in its assertion that the recall was invalid.

The adjusted benefits claimed by BC Hydro are approximately \$18 million and represent only approximately 25 percent of the extra costs. Accordingly, the Commission Panel finds that BC Hydro has failed to demonstrate that the benefits from LTEPA+ would fully or in substantial part offset the additional costs that LTEPA+ would have obliged it to pay for the reinstated volumes in the five year period 2010 through 2014. Further, the shortfall in benefits required to offset the extra cost of LTEPA is not justified by the uncertainty of the validity of the Recall Notice. Therefore, the Commission Panel concludes that BC Hydro did not act reasonably in agreeing to pay a much higher price for the reinstated volumes of Tier 1 electricity during the period 2010 through 2014 than it would have paid under LTEPA.

8.0 RELATED ISSUES

Several related issues were raised in this proceeding, but found by the Commission Panel to be outside the parameters of its review of the LTEPA+ filing. Given other determinations in these Reasons for Decision the Commission Panel finds it unnecessary at this time to make determinations regarding Alcan's commitment to the Modernization Project, the adequacy of the Modernization Project incentive or disincentive provisions in LTEPA+, and the potential cost of RESA to the Province.

8.1 Alcan's Commitment to the Modernization Project

In their Arguments, the DoK and Mr. McLaren describe the history of Alcan's operations in Kitimat (DoK Argument, para. 3-9, 21-28; McLaren Argument, pp. 7-9). They submit that Alcan has a record of breaking commitments to maintain full operations and/or upgrade its smelter, and that one can infer from Alcan's past behaviour that it may not be committed to its most recent plans for the Modernization Project (DoK Argument, para. 34-35, 41; McLaren Argument, p. 9).

The DoK evidence describes the impact of Alcan's decision to reduce smelter production while maintaining electricity sales during the low water levels in 2000/01, stating that the economic impact of these events was that Alcan immediately dismissed over 40 workers, who were not protected by a "no layoff" agreement, and later in 2001 announced 200 more direct jobs would be lost.

Immediately prior to June 2001, Alcan had employed about 1,900 people but current employment levels are now down to about 1,553 at its Kitimat smelter and the Kemano generating station (Exhibit C1-6, Evidence of Richard Wozney, A7-A14).

LTEPA+ provides for a reserved amount of electricity to be available for the smelter load, which is given priority over firm Tier 1 energy deliveries such that if Kemano output falls below the amount required for both smelter load and Tier 1 energy deliveries, Alcan can elect to interrupt Tier 1 energy deliveries. However, there is no requirement in LTEPA+ for Alcan to take a minimum amount of electricity.

Intervenors express different concerns regarding this lack of a requirement for a minimum load directed toward aluminum production. On the one hand, SCCBC *et al.* submit that it would be unreasonable for Alcan to make irrevocable commitments to undertake the Modernization Project, especially before the final outcome of the DoK's litigation regarding the extent of Alcan's legal authority to sell Kemano power is known (SCCBC *et al.* Argument, para. 40(b)). On the other hand, Mr. McLaren submits that, whereas the RESA was directly linked to the use of electricity for aluminum smelting, there is no similar requirement in LTEPA+ (Exhibit C17-2, pp. 2-3). Mr. McLaren describes earlier attempts to have Alcan increase production at its Kitimat operations, and concludes that "Alcan's previous commitments to run at full capacity have proven to be temporary at best" (Exhibit C17-2, p. 3). Mr. McLaren suggests that without a commitment to a minimum smelter load and a minimum operating rate for the smelter, power sales will once again take precedence over smelter operations. He states that "Alcan has said that the modernization will not proceed without this power sales agreement. I am afraid that the power sales agreement will proceed without the modernization, which is what happened with the 1997 Agreement" (Exhibit C17-2, p. 5).

BC Hydro submits that the merits of speculation regarding Alcan's commitment to the Modernization Project should not be decided in this proceeding (BC Hydro Argument, para. 80). BC Hydro further submits that the remedies related to the Project Agreement cause its ratepayers to be better off if Alcan does not proceed with the Modernization Project, because then BC Hydro will receive a "windfall" in the form of lower electricity prices because of the required repayment of the Reinstatement Fee (BC Hydro Argument, para. 78; T2:189-90).

Given other determinations in these Reasons for Decision, the Commission Panel finds it unnecessary to speculate on the likelihood that Alcan would proceed with the Modernization Project if LTEPA+ were approved. The total payments to Alcan will indeed be lower if the Modernization Project is not completed, but the cost of LTEPA+ if the Modernization Project is completed also needs to be reasonable before LTEPA+ can be accepted for filing, and in Sections 6 and 7, the Commission Panel concludes that it is not.

8.2 The Adequacy of Incentives or Disincentives

Alcan submits that the \$111 million Reinstatement Fee in LTEPA+, along with the companion Project Agreement between Alcan and the Province, provides a strong incentive to proceed with the Modernization Project (Exhibit C10-9, BCUC 1.7.1; T6:930-31).

The DoK and Mr. McLaren submit that LTEPA+ provides a disincentive for Alcan either to build the Modernization Project or to resume full smelter operations. The DoK submits that, at the proposed electricity prices, LTEPA+ seems to provide a disincentive for Alcan to direct power to its smelter operations (Exhibit C1-6, Evidence of Richard Wozney, A18). The DoK submits that “the only recourse to Alcan if the new smelter is not built is that they may not receive the \$111 reinstatement fee in LTEPA+. That consequence may well be immaterial to Alcan, particularly at the prices in the Remainder Term of the agreement” (DoK Argument, para. 36).

The DoK submits that the “smelter-first” priority might better be described as an “Alcan first” provision because it does not require Alcan to run the smelter at any specific load, and Alcan could choose to run the smelter at lower loads if resulting incremental power sales under LTEPA+ are more profitable than smelting aluminum (DoK Argument, para. 33). The DoK submits that “the lack of a fixed commitment for the smelter combined with high prices if the power is sold to B.C. Hydro provides a powerful incentive for Alcan either to not build the new smelter or build the smallest smelter they can construct and use it as a “swing” smelter” (DoK Argument, para. 38).

Mr. McLaren also submits that LTEPA+ creates a great incentive for Alcan to operate the Kitimat smelter as its swing smelter in its worldwide system and to sell power (Exhibit C17-2, p. 5), and further submits that “in this new LTEPA+, there is absolutely no link between power sales and an obligation to run the smelter at full production, either explicit or implied” and that “the smelter load can be anything Alcan wants it to be from zero up to that maximum” (McLaren Argument, p. 11).

Several Intervenors submit that the incentives are structured in a way that may result in Alcan starting, but not completing, the Modernization Project (Exhibit C17-2, p. 3; BCOAPO Argument, para. 46; DoK Argument, para. 37). BCOAPO describes the potential outcome as “the worst of both

worlds; higher electricity rates to pay for a hole in the ground” (BCOAPO Argument, para. 46). BC Hydro confirmed that power sales under LTEPA+ would continue if Alcan failed to start, or complete, the new smelter (T3:290-92).

IPPBC points to another incentive implicit in LTEPA+, and submits that LTEPA+ “sets a dangerous precedent for industrial generators in B.C. because it encourages the curtailment of electricity otherwise used for industrial production, to be sold to BC Hydro at prices reflective of new generation development” (IPPBC Argument, p. 3).

The Commission Panel concludes that there are two issues related to industrial incentive payments before it: first, whether an energy supply contract can include an incentive payment; and second, whether the Commission should determine if the incentive is adequate to achieve its collateral purpose.

The Commission Panel observes that the Province’s interest in LTEPA+ was focused on the definition of certain remedies in the event that Alcan did not complete the Modernization Project, and that these remedies might be construed as a potential benefit, rather than a risk, to BC Hydro and its ratepayers. The inclusion of a Reinstatement Fee per se in LTEPA+ is not a determining factor in this proceeding because the decision regarding the reasonableness of the LTEPA+ price is based on the levelized cost of all payments, rather than the form and timing of the payments. Therefore, the Commission Panel finds that it is not a significant consideration that portions of the payments were to be made upfront.

The Commission Panel also finds that it is not necessary to determine whether or not the incentives or disincentives in LTEPA+ are adequate to cause Alcan to complete the Modernization Project. The Commission Panel concluded in Section 4.1 that the adequacy of the incentives or disincentives to achieve the collateral purpose is not within the scope of the public interest determination the Commission Panel has to make in this proceeding. Depending on the particular circumstances, the Commission could accept an energy supply contract that includes an incentive payment it considers inadequate to achieve its collateral purpose.

8.3 The Cost of RESA to the Province

As discussed in Section 3.1, BC Hydro estimated that the cost to the Province of RESA could have a PV of \$415 million (Exhibit B-7, BCUC 1.15.6). Alcan submits that RESA also imposes a contingent liability on BC Hydro and that, if RESA is terminated by the Commission's acceptance of LTEPA+, the contingent obligations of BC Hydro and the Province are extinguished (Alcan Argument, para. 17-18).

BCOAPO submits that LTEPA+ extinguishes government liability with respect to RESA at a cost to ratepayers (BCOAPO Argument, para. 24), an argument that BC Hydro expressly rejects (T6:865).

The Commission Panel concludes that there is a benefit to the Province from extinguishing its liability with respect to RESA but, as stated in Section 4.1, expressly rejects the assertion by Alcan that RESA imposes a contingent liability on BC Hydro. Therefore, any benefit to be derived from the termination of RESA would go to the Province, rather than to BC Hydro and its ratepayers.

In assessing the magnitude of the benefit to the Province it is relevant to look at both the PV of the potential cost to the Province and the probability that Alcan would exercise its rights under RESA. The Commission Panel finds that there is insufficient evidence that Alcan intends to proceed with construction of a smelter of the size, and in the time frame, required by RESA. Therefore, it concludes that there is a very low probability that Alcan would exercise its option to acquire the RESA energy and, consequently, the expected value of the benefit would be far less than the amount cited by BC Hydro. The Commission Panel concludes that any resulting benefit would not make a significant difference to the estimated gap between LTEPA+ costs and benefits that is discussed in Section 7 and therefore gives little weight to the potential benefit of extinguishing the Province's liability with respect to RESA. Furthermore, although the Commission Panel found in Section 4.1 that the benefit to the Province is a factor to consider in determining what is in the public interest, ratepayer interests are, as discussed earlier, determinative in this Decision.

9.0 CONCLUSION

In its review of the LTEPA+ filing, the Commission Panel has considered many factors in determining whether the agreements are cost-effective and in the public interest. Central to the decision are the issues of whether BC Hydro has established a need for the Alcan electricity, the reasonableness of the price under LTEPA+, and whether it is a sound commercial arrangement.

Several parties addressed these issues in some detail. BC Hydro submitted throughout the proceeding that the agreements comprise a sound commercial arrangement that helps fill a supply gap, and listed the advantages of LTEPA+ in its opening statement and Argument (Exhibit B-15, pp. 2-3; BC Hydro Argument, para. 30). The Ministries and CECBC support BC Hydro's submissions and conclude that LTEPA+ is of benefit to BC Hydro and its ratepayers (Ministries Argument, para. 2; CECBC Argument, para. 6).

The DoK Argument provides a succinct summary of the contrary view that need has not been established, the price is unreasonably high, and LTEPA+ is not a sound commercial arrangement (DoK Argument, para. 44). BCOAPO and IPPBC both point out issues with the pricing of LTEPA+, in particular important differences between LTEPA+ and the F2006 EPA, other relevant benchmarks for the value of LTEPA+ to BC Hydro, and the lack of consideration of Alcan's opportunity costs in the agreed pricing (BCOAPO Argument, para. 25-39; IPPBC Argument, pp. 3-10).

The Commission Panel considered these and other issues in its analysis of the agreements and concluded in Section 5 of these Reasons for Decision that, from the perspective of need, LTEPA+ is not required for strict conformance to BC Hydro's planning criteria given other existing, committed and planned resources, although the Commission Panel acknowledges LTEPA+ could displace other planned resources in the medium- to long-term. In Sections 6 and 7, the Commission Panel addressed the reasonableness of the contracted price and considered whether BC Hydro had reached a sound commercial arrangement with Alcan. The Commission Panel concluded that BC Hydro erred in relying solely on the F2006 Call prices as a benchmark and, as a result, failed to establish the cost-effectiveness of LTEPA+. The Commission Panel further concluded that BC Hydro failed

to demonstrate that the benefits from LTEPA+ would fully, or in substantial part, offset the additional costs that it would have been obliged to pay for the reinstated volumes in the 2010 through 2014 period. The Commission Panel considers that either flaw would have been fatal to the s.71 Filing.

The Commission Panel has not accepted LTEPA+ for filing because of concerns related to the pricing provisions of LTEPA+ that are unrelated to the incentive or disincentive for the Modernization Project. The Commission Panel is of the view that an energy supply contract may, in unique circumstances, include terms, conditions and /or pricing provisions that provide incentives for industrial development. However, the Commission will need to consider and weigh ratepayer interests and other public interests in the context of a specific energy supply contract.

The Commission does not accept the LTEPA Amending Agreement and the Amended and Restated LTEPA that BC Hydro filed on November 1, 2006 (“the Contracts”), as Energy Supply Contracts filed pursuant to Section 71 of the Act, and finds, pursuant to subsection 71(2) of the Act that the Contracts are not in the public interest and, pursuant to subsection 71(3) of the Act, declares that the Contracts are wholly unenforceable.

DATED at the City of Vancouver, in the Province of British Columbia, this 2nd day of February 2007.

Original signed by:

ROBERT H. HOBBS
CHAIR

Original signed by:

NADINE F. NICHOLLS
COMMISSIONER

Original signed by:

ANTHONY J. PULLMAN
COMMISSIONER

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**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER** G-176-06

TELEPHONE: (604) 660-4700
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**IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473**

and

**A filing by British Columbia Hydro and Power Authority
of Energy Supply Contracts with Alcan Inc.
LTEPA Amending Agreement, Amended and Restated
Long-Term Electricity Purchase Agreement**

BEFORE: R.H. Hobbs, Chair
A.J. Pullman, Commissioner December 29, 2006
N.F. Nicholls, Commissioner

O R D E R

WHEREAS:

- A. On November 1, 2006, British Columbia Hydro and Power Authority ("BC Hydro"), pursuant to Section 71 of the Utilities Commission Act (the "Act"), filed the Long-Term Electricity Purchase Agreement ("LTEPA") Amending Agreement dated October 27, 2006 to which was attached the form of Amended and Restated LTEPA between Alcan Inc. ("Alcan") and BC Hydro, and a letter dated October 27, 2006 from Alcan to BC Hydro and the Province (the "October 27, 2006 letter"); and
- B. In its November 1, 2006 filing, BC Hydro requested that the Commission issue an Order accepting the LTEPA Amending Agreement and the Amended and Restated LTEPA as filed, pursuant to Section 71 of the Act ("the s. 71 Filing"); and
- C. In the s. 71 Filing, BC Hydro requested that the LTEPA Amending Agreement, the Amended and Restated LTEPA and the October 27, 2006 letter be kept confidential, for reasons of commercial sensitivity; and
- D. At the November 8, 2006 Third Procedural Conference concerning BC Hydro's 2006 Integrated Electricity Plan ("IEP") and Long-Term Acquisition Plan ("LTAP"), BC Hydro proposed possible review processes for the LTEPA Amending Agreement and the Amended and Restated LTEPA; and

- E. At the Third Procedural Conference, BC Hydro, with the support of Alcan, also withdrew its request that the LTEPA Amending Agreement and the Amended and Restated LTEPA be kept confidential. BC Hydro continued to maintain its claim for confidentiality over the October 27, 2006 letter pending discussions with the Province. By an attachment to its letter to the Commission Secretary dated November 17, 2006, BC Hydro disclosed a copy of the October 27, 2006 letter; and
- F. At the Third Procedural Conference, BC Hydro further requested that evidence filed to date in the 2006 IEP/LTAP proceeding with respect to the agreement with Alcan be accepted as evidence in the proceeding to review the s. 71 Filing; and
- G. By Order No. G-142-06 dated November 10, 2006, the Commission established an Oral Public Hearing and Regulatory Timetable for the regulatory review of the s. 71 Filing; and
- H. By letter dated November 10, 2006 accompanying Order No. G-142-06, the Commission concluded that the issues for the proceeding should not include the legality of the LTEPA Amending Agreement and the Amended and Restated LTEPA; and
- I. By letter dated November 17, 2006 the Commission issued Reasons for Decision regarding the issue of the legality of the LTEPA Amending Agreement and the Amended and Restated LTEPA; and
- J. An Oral Public Hearing was held on December 6, 7, 8 and 11, 2006; and
- K. BC Hydro, Alcan and the Ministries of Energy, Mines and Petroleum Resources and Economic Development (“the Ministries”) submitted Written Argument on December 14, 2006; and
- L. Other Intervenors submitted Written Argument on December 19, 2006; and
- M. BC Hydro, Alcan and the Ministries made Oral Reply Argument on December 21, 2006; and

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER** G-176-06

N. The Commission has considered the evidence and submissions, and concludes that it should make a determination on the s. 71 Filing.

NOW THEREFORE:

1. The Commission does not accept the LTEPA Amending Agreement and the Amended and Restated LTEPA that BC Hydro filed on November 1, 2006 (“the Contracts”), as Energy Supply Contracts filed pursuant to Section 71 of the Act, and finds, pursuant to subsection 71(2) of the Act that the Contracts are not in the public interest and, pursuant to subsection 71(3) of the Act, declares that the Contracts are wholly unenforceable.
2. The Commission will issue Reasons for Decision in the matter at a future date.

DATED at the City of Vancouver, in the Province of British Columbia, this 29th day of December 2006.

BY ORDER

Original signed by:

Robert H. Hobbs
Chair

LIST OF APPEARANCES

G.A. FULTON, Q.C.	Commission Counsel
R.W. LUSK, Q.C. C. WHITMAN	British Columbia Hydro and Power Authority
D. BURSEY K. DUKE	Alcan Primary Metal Group
C.H. JONES	Ministry of Energy, Mines and Petroleum Resources and Ministry of Economic Development
J. HUNTER P. CYR M. OULTON	District of Kitimat
I. CHANG	Joint Industry Electricity Steering Committee
D. AUSTIN	Independent Power Producers of British Columbia
C. WEAVER	Commercial Energy Consumers' Association of British Columbia
J. QUAIL L. WORTH	B.C. Old Age Pensioners' Organization, the Active Support Against Poverty, B.C. Coalition of People with Disabilities, Council of Seniors' Organizations of B.C., End Legislated Poverty, Federated Anti- Poverty Groups of B.C., and the Tenants' Rights Action Coalition
W. ANDREWS	Sierra Club of Canada, B.C. Chapter; B.C. Sustainable Energy Association; and Peace Valley Environmental Association
R. McLAREN	Himself
R. AUSTIN	MLA - Skeena
J. HORGAN	MLA - Malahat-Juan de Fuca
H. NICHOL, MD	Himself
J. VENITTELLI	Brotherhood of Humanity

LIST OF WITNESSES

BRITISH COLUMBIA HYDRO AND POWER AUTHORITY

B. Van Ruyven
G. Simpson
C. Matheson
K. Tiedemann

DISTRICT OF KITIMAT

R. Wozney, Mayor
T. Hall
M. Shaffer, PhD., Consulting Economist

IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

British Columbia Hydro and Power Authority
Amended and Restated Long-Term Electricity Purchase Agreement (LTEPA)

EXHIBIT LIST

Exhibit No.	Description
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COMMISSION DOCUMENTS

- | | |
|------|--|
| A-1 | Letter dated November 8, 2006 issuing Information Request No. 1 to BC Hydro |
| A-2 | Letter dated November 10, 2006 issuing Order No. G-142-06, Notice of Energy Supply Contracts with Alcan Inc. and Notice of the Oral Public Hearing |
| A-3 | Letter dated November 10, 2006 issuing Information Request No. 1 to BC Hydro, further to letter dated November 8, 2006 (Exhibit A-1) |
| A-4 | Letter dated November 17, 2006 issuing Reasons for Decision |
| A-5 | Letter dated November 20, 2006 to Ken Duke, Legal Counsel for Alcan Primary Metal Group issuing Information Request No. 2 |
| A-6 | Letter dated November 20, 2006 to BC Hydro issuing Information Request No. 2 |
| A-7 | Letter dated November 27, 2006 to Participants establishing a Procedural Conference to review the District of Kitimat's request for leave to file evidence |
| A-8 | Letter dated December 1, 2006 outlining and establishing guidelines for presentations at the Oral Public Hearing |
| A-9 | Letter dated December 4, 2006 to the District of Kitimat filing Information Request No. 1 on Evidence of Marvin Shaffer |
| A-10 | Letter dated December 4, 2006 to Alcan Primary Metal Group filing Information Request No. 3 on Evidence of Marvin Shaffer |
| A-11 | Letter dated December 14, 2006 regarding the cross-examination of Dr. Kunin and noting the date and time of the Oral Reply Argument |

Exhibit No.	Description
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COMMISSION COUNSEL DOCUMENTS

- | | |
|------|---|
| A2-1 | SUBMITTED AT HEARING – Document entitled “Attachment E, BC Hydro 2006 IEP/LTAP Hearing – Exhibit B-47” |
| A2-2 | SUBMITTED AT HEARING – BCUC Information Requests No. 4.451.3 dated September 8, 2006 – 2006 IEP/LTAP Hearing – Amended LTAP, Attachments G & H |
| A2-3 | SUBMITTED AT HEARING – Attachment A, Executive Summary |
| A2-4 | SUBMITTED AT HEARING – BC Hydro 2006 IEP/LTAP Hearing Exhibit B-55 |
| A2-5 | SUBMITTED AT HEARING – Table 1-2, Load and Resource Data from Figure 8-1 and Figure 8-2, page 8-11, BC Hydro 2006 IEP/LTAP Hearing |

APPLICANT - BC HYDRO & POWER AUTHORITY DOCUMENTS

- | | |
|------|---|
| B-1A | Letter dated November 1, 2006 from BC Hydro filing Long-Term Electricity Purchase Agreement Amending Agreement with Confidential letter from Alcan removed |
| B-1B | CONFIDENTIAL - Letter dated October 27, 2006 from Alcan Inc. to BC Hydro and Province, confirming common interpretation of the Project Agreement and LTEP A. The letter is no longer confidential and is included in Exhibit B-7 |
| B-2 | Document entitled “2006 IEP/LTAP ALCAN – Related Materials” (Reference Doc # BCH-IEP B-28) |
| B2-A | SUBMITTED AT HEARING – Commission Information Request No. 4.445.1 dated September 8, 2006 ... 2006 IEP & LTAP Application – Amended LTAP |
| B2-B | SUBMITTED AT HEARING – Graph entitled “444.0 Reference: Exhibit B-1E ... Restated LTEPA” |
| B-3 | Letter dated November 7, 2006 filing submission with respect to the confidentiality of the Amended and Restated LTEPA and LTEPA Amending Agreement |

Exhibit No.	Description
B-4	Letter dated November 9, 2006, enclosing Long-term Electricity Purchase Agreement Amending Agreement dated October 27, 2006, between BC Hydro and Alcan Inc. and Amended and Restated LTEPA between BC Hydro and Alcan (Reference Doc # BCH-IEP B-29)
B-5	Letter dated November 9, 2006 re: Section 71 Filing of Agreement between Alcan Inc. and BC Hydro, advising on BC Hydro responses to BCUC IR No.1 (Reference Doc # BCH-IEP B-30)
B-6	Letter dated November 17, 2006 filing confirmation of Notice of Application and Submission Process published in various newspapers
B-7	Letter dated November 17, 2006 to Commission filing Information Request No. 1
B-8	Letter dated November 21, 2006 to Commission filing revised responses to Commission's Information Requests 1.12.2 and 1.12.5.
B-9	Letter dated November 24, 2006 filing outstanding responses to Commission Information Requests 1.14.1, 1.15.1, 1.15.2 and Revised Attachment 2 to BCUC IR 1.11.1
B-10	Letter dated November 27, 2006 filing response to the Commission's Information Request No. 2
B-11	Letter dated November 27, 2006 filing response to Alcan's Information Request No. 1
B-12	Letter dated November 27, 2006 filing response to BCOAPO's Information Request No. 1
B-13	Letter dated November 27, 2006 filing response to District of Kitimat's Information Request No. 1
B-14	Letter dated November 27, 2006 filing response to SCCBC's Information Request No. 1
B-15	Letter dated December 5, 2006 filing BC Hydro's Opening Statement
B-16	Letter dated December 5, 2006 filing response to Richard McLaren's Information Request No. 1

Exhibit No.	Description
B-17	Letter dated December 5, 2006 filing BC Hydro's Reply Evidence to the District of Kitimat's Evidence of Dr. Marvin Shaffer
B-18	SUBMITTED AT HEARING – Document entitled "Direct Testimony of Cam Matheson
B-19	SUBMITTED AT HEARING – Document entitled "Direct Testimony of H. Tiedemann
B-20	SUBMITTED AT HEARING – 2006 IEP Report ... Amended Chapter 4 Supply Demand Tables and Figures Reflecting the Response to the Commission Information Request 4.430.5.4
B-21	SUBMITTED AT HEARING – Document entitled "Direct Testimony of Beverly Van Ruyven
B-22	SUBMITTED AT HEARING – Document entitled "Direct Testimony of Graeme Simpson
B-23	SUBMITTED AT HEARING – Document entitled "Undertaking in Relation to Pre and Post New LTEPA Electricity Prices"
B-24	SUBMITTED AT HEARING – Response to Information Request at Transcript Volume 2, Page 143
B-25	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 369, Lines 12-17
B-26	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 369, Lines 20-26, Page 370, Lines 1-13
B-27	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 375, Line 21 and 22 1, Page 376, Line 9 2 and Line 183
B-28	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 391, Lines 14-19
B-29	SUBMITTED AT HEARING – Table entitled "Schedule F - Forward Market Prices for Electricity and Gas", (Provided by Powerex)
B-30	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 368, Lines 17-26 and Page 369, Lines 1-8
B-31	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 389, Lines 17 to 25

Exhibit No.	Description
B-32	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 365, Line 16 to Page 366, Line 11
B-33	SUBMITTED AT HEARING – Excerpt from Transcript Volume 7, dated November 22, 2006, pages 633-634, from the BC Hydro Integrated Electricity Plan/Long-Term Acquisition Plan public hearing
B-34	SUBMITTED AT HEARING – Document entitled “BC Hydro F2006 Open Call for Power – Call for Tenders”
B-35	SUBMITTED AT HEARING – Attachment I entitled “Existing and Committed Resources”
B-36	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 365, Line 15
B-37	SUBMITTED AT HEARING – Direct Evidence of BC Hydro on the LTEPA Recall
B-38	SUBMITTED AT HEARING – Response to Information Request of R. McLaren
B-39	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 363, Line 15
B-40	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 362, Line 4
B-41	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 363, Line 1
B-42	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 364, Line 19
B-43	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 364, Line 26
B-44	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 342, Line 8
B-45	SUBMITTED AT HEARING – Response to Undertaking at Transcript Volume 3, Page 392, Line 21
B-46	Response to Undertaking at Transcript Volume 2, Page 177, Lines 9-12 and Page 178, Lines 19-25

Exhibit No.	Description
B-47	Response to Undertaking at Transcript Volume 3, Page 239, Lines 10 -14 and Page 240, Line 23 to Page 241, Line 4
B-48	Response to Undertaking at Transcript Volume 4, Page 456, line 13 to Page 458, line 13
B-49	Response to Undertaking at Transcript Volume 5, Page 790, Line 11 to Page 791, Line 6
B-50	Response to Undertaking at Transcript Volume 5, Page 772, Lines 4-19

INTERVENOR DOCUMENTS

C1-1	DISTRICT OF KITIMAT - Letter dated November 7, 2006 from John J.L. Hunter, Hunter Litigation Chambers, legal counsel, filing written submission on the issue of legality of the Amended and Restated LTEPA (Reference Doc # BCH-IEP C37-3)
C1-2	DISTRICT OF KITIMAT - Letter dated November 16, 2006 from John J.L. Hunter, Hunter Litigation Chambers, legal counsel, requesting Intervenor Status
C1-3	Letter dated November 21, 2006 John J.L. Hunter, Hunter Litigation Chambers, legal counsel, filing Information Request No. 1 to BC Hydro
C1-4	Letter dated November 24, 2006 notice of intention to file evidence and requesting leave to file
C1-5	Letter dated December 1, 2006 from John J.L. Hunter, Hunter Litigation Chambers, legal counsel, filing Statement of Evidence
C1-6	Letter received December 1, 2006, from John J.L. Hunter, Hunter Litigation Chambers, legal counsel, filing the balance of the District of Kitimat's Evidence, the Direct Evidence of Richard Wozney, Trafford Hall, the 1990 LTEPA and 1997 BC/Alcan Agreement
C1-6A	SUBMITTED AT HEARING – Two Page Excerpt from 1990 LTEPA
C1-7	Letter dated December 4, 2006 from John J.L. Hunter, Hunter Litigation Chambers, legal counsel, filing partial response to Information Request No. 1 (Exhibit C3-3)

Exhibit No.	Description
C1-8	Letter dated December 5, 2006 from John J.L. Hunter, Hunter Litigation Chambers, legal counsel, filing balance of their response from Dr. Shaffer to Information Request No. 1 (Exhibit C3-3)
C1-9	Letter dated December 5, 2006 from John J.L. Hunter, Hunter Litigation Chambers, legal counsel, filing balance of response from Trafford Hall to Information Request No. 1 (Exhibit C3-3)
C1-10	E-mail dated December 5, 2006 filing of responses to Alcan's Information Request No. 1 to Evidence of Richard Wozney
C1-11	SUBMITTED AT HEARING – One page letter dated October 17, 2006 from BC hydro to BCUC with attached Excerpts from "Report on the F2006 Call for Tender Process dated August 31, 2006"
C1-11A	SUBMITTED AT HEARING – Report on the F2006 Call for Tender Process Conducted by BC Hydro, dated August 31, 2006
C1-12	SUBMITTED AT HEARING – Attachment D, Alcan LTEPA Cost of Energy Calculation
C1-13	SUBMITTED AT HEARING – Copy of E-mail Information Request from District of Kitimat dated December 9, 2006
C2-1	BRITISH COLUMBIA OLD AGE PENSIONERS' ORGANIZATION ET AL (BCOAPO) - Received letter dated November 16, 2006 from James Quail requesting Intervenor Status and for Leigh Worth, Counsel and on behalf of Mr. Colin Fussel
C2-2	Letter dated November 20, 2006 filing Information Request No. 1 to BC Hydro
C2-3	SUBMITTED AT HEARING – Excerpt from September 21, 2006 Commission Decision, Page 26
C2-4	SUBMITTED AT HEARING – Northern ATC on Williston-Kelly Cutplane ... Figure 3
C2-5	SUBMITTED AT HEARING – Printout from BC Liberal Website, "Alcan Announces \$2 Billion Investment Plan for BC"
C2-6	SUBMITTED AT HEARING – BCUC Information Request No. 1.39.1 dated April 21, 2006 – 2006 IEP & LTAP Application

Exhibit No.	Description
C3-1	SIERRA CLUB OF CANADA BRITISH COLUMBIA (SCCBC), BC SUSTAINABLE ENERGY ASSOCIATION (BCSEA) AND THE PEACE VALLEY ENVIRONMENTAL ASSOCIATION (PVEA) - Received web posting from William J. Andrews dated November 16, 2006, requesting Intervenor Status
C3-2	Letter dated November 21, 2006 filing Information Request No. 1 to BC Hydro
C3-3	Letter dated December 2, 2006 filing Information Request No. 1 to the District of Kitimat
C4-1	RANKIN, THOMAS - Received web posting dated November 17, 2006, requesting Intervenor Status
C4-2	SUBMITTED AT HEARING – Written presentation of Mr. T. Rankin
C5-1	INDEPENDENT POWER PRODUCERS ASSOCIATION OF BC (IPPBC) - Letter dated November 21, 2006 from David Austin, requesting Intervenor Status
C5-2	SUBMITTED AT HEARING – Standard Form Electricity Purchase Agreement, Large Projects, F2006 Open Call for Power
C6-1	JOINT INDUSTRY ELECTRICITY STEERING COMMITTEE (JIESC) - Letter dated November 21, 2006 from Brian Wallace, Bull, Housser & Tupper, requesting Intervenor Status
C7-1	THE BROTHERHOOD OF HUMANITY – Web registrations received November 22, 2006 from John & Mavis Venittelli and Catherine McGuire requesting Registered Intervenor status
C7-2	Web registration received November 24, 2006 from Doloris Shultz requesting Registered Intervenor status
C7-3	Web registration received November 24, 2006 from Shera Rael requesting Registered Intervenor status

Exhibit No.	Description
C8-1	COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA (CEC) – Letter dated November 23, 2006 from Christopher P. Weafer, Owen Bird, requesting Registered Intervenor status
C9-1	MINISTRY OF ENERGY, MINES & PETROLEUM RESOURCES AND MINISTRY OF ECONOMIC DEVELOPMENT (THE PROVINCE) – Letter dated November 24, 2006 from Christopher H. Jones requesting Registered Intervenor status
C9-2	SUBMITTED AT HEARING – Response from Ministries of Energy, Mines and Petroleum Resources and Economic Development to Information Request of R. McLaren ... Issued December 6, 2006
C9-3	SUBMITTED AT HEARING – Email dated December 8, 2006 from Christopher Jones, Counsel for Alcan to Gordon Fulton, BCUC Counsel, regarding Alcan's Intervenor status
C10-1	Letter dated November 17, 2006 from Alcan Primary Metal Group filing response to Commission Information Request No. 1.2.1 and 1.2.3
C10-2	Letter dated November 20, 2006 filing Information Request No. 1 to BC Hydro
C10-3	ALCAN INC. – Letter dated November 24, 2006 from Ken Duke requesting Intervenor status
C10-4	Letter dated November 27, 2006 from Ken Duke filing Alcan's responses to the Commission's Information Request No. 2
C10-5	Letter dated November 27, 2006 from Ken Duke filing Alcan's responses to the SCCBC's Information Request No. 1
C10-6	Copy of the Replacement Electricity Supply Agreement dated August 5, 1997 between the Province and Alcan Aluminium Limited (Reference Doc #BCH-IEP C38-2)
C10-7	Letter dated December 2, 2006, filing Information Request to District of Kitimat
C10-8	Letter dated December 5, 2006 filing response to Richard McLaren's Information Request No. 3 and No. 4
C10-9	Letter dated December 5, 2006 filing response to the Commission's Information Request No. 3

Exhibit No.	Description
C10-10	Letter received December 5, 2006 filing missing page 17 from response to Richard McLaren's Information Request No. 3 and No. 4 (Exhibit C10-8)
C10-11	SUBMITTED AT HEARING – Alcan Response to Commission Information Request No. 1.2.2
C10-12	SUBMITTED AT HEARING – Exhibit C entitled "Aluminum Production Metric Tonnes 1954 to 2004" from the Affidavit of Paul Henning
C10-13	SUBMITTED AT HEARING – Exhibit A entitled "Number of employees by Active & Inactive From 1992 to end of August 2005, Alcan Primary Metal British Columbia" from the Affidavit of Paul Henning
C10-14	SUBMITTED AT HEARING – Exhibit B entitled "Comparison of North American Smelters that Alcan Owns or Partly Owns" from the Affidavit of Paul Henning
C10-15	SUBMITTED AT HEARING – Exhibit G1 entitled "Alcan Monthly Power Delivery to Smelter and BC Hydro 1954 to 2005" from the Affidavit of Paul Henning
C10-16	SUBMITTED AT HEARING – Exhibit marked as C10-14 in error and remarked as Exhibit C10-16
C10-16A	Email dated December 11, 2006 filing Response to Undertaking at Transcript Volume 5, Page 665, Lines 7-16
C11-1	AUSTIN, ROBIN MLA – SKEENA – Letter dated November 24, 2006 requesting Intervenor status
C11-2	SUBMITTED AT HEARING – Written presentation of Robin Austin
C12-1	HORGAN, JOHN MLA – MALAHAT-JUAN DE FUCA – Letter dated November 24, 2006 requesting Intervenor status
C12-2	SUBMITTED AT HEARING – Document entitled "Statement to BCUC on Alcan LTEPA"
C13-1	BRITISH COLUMBIA TRANSMISSION CORPORATION – Letter dated November 23, 2006 from Marcel Reghelini/Laurence Gray requesting Intervenor status

Exhibit No.	Description
C14-1	GUDRUN, LANGOLF - Online web registration dated November 24, 2006 requesting Intervenor Status * * WITHDRAWN – THIS IS EXHIBIT D-2: INTERESTED PARTY STATUS **
C15-1	CAW 2301 - Online web registration dated November 24, 2006 from Gord Lechner & Rick Belmont, requesting Intervenor Status
C15-2	Letter dated December 4, filing written submission and evidence
C16-1	GERMUTH, PHILIP - Online web registration dated November 24, 2006 requesting Intervenor Status
C17-1	McLAREN, RICHARD - Online web registration dated November 24, 2006 requesting Intervenor Status
C17-2	Letter dated December 1, 2006 filing comments and evidence
C17-3	Email dated December 1, 2006 filing Information Request No. 1 to Alcan
C17-4	Email dated December 1, 2006 filing Information Request No. 2 to BC Hydro
C17-5	Email dated December 3, 2006 filing amendment to Information Request No. 1 to Alcan
C17-6	Email dated December 1, 2006 filing Information Request No. 3 to MEMPR
C17-7	Email dated December 1, 2006 filing Information Request No. 4 to Alcan
C17-8	Copy of E-mail Information Request from R. McLaren dated December 10, 2006
C18-1	NICHOL, HAMISH – Letter dated November 23, 2006 requesting Intervenor status
C18-2	SUBMITTED AT HEARING – Written presentation of Dr. Hamish Nicol

Exhibit No.	Description
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INTERESTED PARTY DOCUMENTS

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| D-1 | WOOD, DENIS – Email dated November 24, 2006 requesting Interested Party status |
| D-2 | GUDRUN, LANGOLF - Online web registration dated November 24, 2006 requesting Interested Party Status |