

# **Transmission Tariff Design For Hydro-Québec Transmission**

**Direct Testimony of Dr. Zak El-Ramly**

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**Association Québécoise Des Consommateurs Industriels D'électricité (AQCIE)**

**and**

**Le Conseil de l'industrie forestière du Québec**

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## Introduction and Overview

1 I have been retained by the Association Québécoise Des Consommateurs Industriels  
2 D'électricité (AQCIE) and Le Conseil de l'industrie forestière du Québec to provide  
3 expert analysis of Hydro-Québec's revised application relating to its open access  
4 transmission tariff (OATT) as submitted to the Régie under R-3549-2004 Phase 2  
5 through its division Hydro-Québec TransÉnergie's (HQT). The purpose of my testimony  
6 is to provide an expert assessment of the degree to which the proposed tariff meets  
7 standard rate setting principles, will enhance the utilization of the transmission system  
8 and will promote the long-term development of a competitive market in Quebec. My  
9 testimony will draw particularly on my understanding, familiarity and experience in the  
10 application of the FERC Pro-forma tariff in various jurisdictions, my significant  
11 involvement in the development of the British Columbia Transmission Corporation  
12 (BCTC) OATT application through the regulatory process and my past involvement  
13 before the Régie in HQT's previous transmission rate hearings.

14 I have thirty-five years of energy industry and public policy experience. Currently I am  
15 the president of ZE PowerGroup Inc., a consultancy that provides strategic and  
16 regulatory support to clients throughout North America. I formed the company ten years  
17 ago after spending several years as the Executive Vice President Marketing at  
18 Powerex. Powerex is the wholly owned power trading subsidiary of BC Hydro. Prior to  
19 moving to Powerex, I held several executive and management positions at BC Hydro,  
20 with responsibility for energy management, load research, rates, forecasting, policy  
21 development, corporate and environmental planning, business development, and  
22 resource management. My industry membership has included: participation in the New  
23 York Mercantile Exchange (NYMEX) Electricity Advisory Group for the development of  
24 NYMEX electricity futures, serving as an Executive member on the Western Systems  
25 Power Pool (WSPP), participation in the Northwest Electric Light and Power Association  
26 (NELPA) and Honorary President of the Power Marketing Association (PMA). The last  
27 section of the report includes my detailed Resume.



1 In the last ten years I have been very active in the transmission related regulatory  
2 process in BC as the province moves towards creating a sustainable competitive  
3 environment including participation in:

- 4     ▪ BC Hydro - Wholesale Transmission Service Rate Application, 1996, 1997, 1998
- 5     ▪ West Kootenay Power Ltd. - Transmission Access Application, 1999
- 6     ▪ West Kootenay Power Ltd. - Access Principles Application, 1999
- 7     ▪ BC Hydro - Bypass Guidelines for Independent Power Producers (IPPs), 2001
- 8     ▪ An Inquiry into a Heritage Contract for B.C. Hydro's Existing Generation  
9       Resources and regarding Stepped Rates and Transmission Access, 2003
- 10    ▪ Sumas Energy 2, Inc. – Construction of an International Power Line from Sumas,  
11      Washington to Abbotsford, British Columbia (EH-1-2000), 2001-2003.
- 12    ▪ Vancouver Island Energy Corporation - Certificate of Public Convenience and  
13      Necessity for the Vancouver Island Generation Project, 2003
- 14    ▪ BCTC - Open Access Transmission Tariff, 2005
- 15    ▪ BCTC – Vancouver Island Transmission Reinforcement, in progress
- 16    ▪ Sea Breeze – Vancouver Island Cable, in progress

17 I have also been involved in the transmission rate setting process in Quebec where I  
18 have attempted to inject an element of competitiveness in rate setting. I have provided  
19 expert testimony in the following hearings:

- 20    ▪ Hydro-Quebec - Establishment of General Regulatory Principles for Setting and  
21      Applying Transmission Tariffs, to be set in Future Hearings, 1998
- 22    ▪ Hydro-Quebec TransEnergie - Transmission Rate Design R-3401-98, 2001

- 1       ▪ Hydro-Quebec - Distributor's Procurement Plan R-3470-2001 [Second Phase),  
2           2002

3 In this present testimony, I revisit much of my past statements and recommendations  
4 and find them to be still applicable, especially given the early stages of competitive  
5 market development in Quebec and the market changes that are occurring around  
6 Quebec in New England and Ontario.

7 I generally agree with the Testimony of Dr. Ren Orans<sup>1</sup> that the FERC Pro Forma Tariff  
8 is an appropriate reference for HQT transmission rate setting, but strongly emphasize  
9 that FERC orders 888 and 889 set out a general framework and the minimum standards  
10 required for meeting FERC approval. FERC is supportive of, and encourages,  
11 improvement to the tariff that facilitate market development, efficient use of system  
12 resources and other objectives related to the creation of healthy sustainable competitive  
13 energy markets.

14 HQT refers often in its testimony to BC as its closest counterpart in developing  
15 transmission rates and in applying the FERC Pro-forma. I totally agree with this  
16 observation. Given that HQT seems to be dealing with issues that have already been  
17 addressed by BC Hydro or BCTC, I believe that Hydro Quebec and the Régie should  
18 make best use of the approaches that BC takes, the evidence that is generated in the  
19 regulatory process and ultimately the decisions made by the British Columbia Utilities  
20 Commission (BCUC).

21 Although HQT is largely following the FERC Pro-forma, and the application is based on  
22 the current tariff as approved previously by the Régie, the proposed changes and their  
23 ramifications must be carefully examined. I particularly reject the premise that rate  
24 discounting is not required in Quebec, I disagree that there is sufficient competitive

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<sup>1</sup> Direct Testimony of Dr. Ren Orans - R-3549-2004 – Phase 2 – HQT -4 Document 3

1 experience to justify otherwise and the claim that HQT's proposed OATT already  
2 incorporates an appropriate level of discounting in its short-term point-to-point<sup>2</sup> rate.  
3 What is also of concern is the absence of any initiative to enhance the long term  
4 utilization of the transmission system in Quebec.

5 My testimony covers five areas:

- 6 1. The suitability of using the FERC Pro-forma as the basis for the HQT OATT
- 7 2. Use of the one-coincidental peak (1-CP) to set the reference for the point-to-point  
8 rate
- 9 3. Ancillary Services pricing.
- 10 4. Discounting Policy
- 11 5. The need to inject competitive elements into the rate setting process in order to  
12 position the province to benefit from future competitive market development.

13 Based on my experience and review of the OATT application, information requests and  
14 responses I conclude that:

- 15 ■ The FERC Pro-forma tariff is appropriate to the HQT environment but should not  
16 constrain creative rate making.
- 17 ■ The 1-CP approach is the most appropriate to the HQT system, but that the total  
18 installed system capacity in Quebec and not the system peak should be used as  
19 the denominator (divisor) in establishing point-to-point rates.
- 20 ■ HQT should include competitive bidding in the procurement and pricing of  
21 ancillary services. Additionally, the proposed increase in ancillary service rates

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<sup>2</sup> Direct Testimony of Dr. Ren Orans R-3549-2004 – Phase 2, HQT -4 Document 3, page 30



1 does not meet the rate setting principles of stability, gradualism or avoidance of  
2 rate shock.

- 3     ▪ HQT should continue to offer discounting to its short-term point-to-point rates to  
4     enhance system utilization and to support competitive market development.  
5     Absent discounting, the HQT proposed short-term point-to-point rates are high in  
6     absolute terms and unfair when compared to the long-term point-to-point rates.
  
- 7     ▪ The HQT OATT does not include any provision that will enhance the utilization of  
8     the system or contribute to the development of a long-term competitive market.

## Analysis

### Use of FERC Pro-Forma

9 In April 1996, in Orders 888 and 889, FERC established the foundation necessary to  
10 develop competitive bulk power markets in the United States: non-discriminatory open  
11 access transmission services by public utilities and stranded cost recovery rules that  
12 would provide a fair transition to competitive markets. Orders 888 and 889 ensured that  
13 customers have the benefits of access to competitively priced generation, and  
14 determined that non-discriminatory open access transmission services (including  
15 access to transmission information) and stranded cost recovery were the most critical  
16 components of a successful transition to competitive wholesale electricity markets.

17 Accordingly, Order 888 required all public utilities that own, control or operate facilities  
18 used for transmitting electric energy in interstate commerce to:

- 19     1. File open access non-discriminatory transmission tariffs containing, at a  
20     minimum, the non-price terms and conditions set forth in the Order.
  
- 21     2. Functionally unbundle wholesale power services by taking transmission services  
22     under the same tariff of general applicability as do others, applying separate  
23     rates for wholesale generation, transmission, and ancillary services as well as



1           relying on the same electronic information network to obtain information about its  
2           transmission system when buying or selling power.

3   Order 889 requires that all US public utilities establish or participate in an Open Access  
4   Same-Time Information System (OASIS) that meets certain specifications, and comply  
5   with standards of conduct designed to prevent employees of a public utility (or any  
6   employees of its affiliates) engaged in wholesale power marketing functions from  
7   obtaining preferential access to pertinent transmission system information.

8   Orders 888 and 889 require a significant change to the way many public utilities have  
9   done business, and most public utilities accepted these changes and made substantial  
10   efforts to comply with the new requirements. Virtually all US public utilities filed tariffs  
11   stating rates, terms and conditions for comparable service to third-party users of their  
12   transmission systems. Similarly, many Canadian utilities have voluntarily followed the  
13   FERC Pro-forma because of its applicability and desire to access US markets.

14   Open access transmission and the opening of wholesale competition in the electric  
15   industry brought many changes and foresaw a future where there is reduced reliance on  
16   large vertically integrated public utilities in favor of healthy and sustainable competitive  
17   markets. This sees an integration of gas and electric markets and an increase in the  
18   number of new participants in the industry in the form of both independent and affiliated  
19   power marketers and generators as well as independent power exchanges. It also sees  
20   increases in the volume of trade in the industry, particularly sales by marketers; state  
21   efforts to introduce retail competition; and new and different uses of the transmission  
22   grid.

23   However, orders 888 and 889 were not intended to address all problems arising in the  
24   development of competitive power markets. I must stress that the FERC Pro-Forma  
25   tariff is an initializing step to support competitive market development by supplying a  
26   uniform minimum standard. It is not the intention of FERC that there be blanket adoption  
27   of the standard, or that the standard is sufficient of itself to promote competition.

1 I support the use of the FERC Pro-forma as a suitable basis for the HQT OATT. I must  
2 stress however, that although the FERC Pro-forma tariff is appropriate to the HQT  
3 environment, its use must not constrain creative rate making. BCTC has adopted the  
4 FERC Pro-forma, but that has never constrained them from employing competitive  
5 elements into the rate and creating a portfolio of rate options. There is a striking  
6 difference between HQ's approach and that of BCTC. BCTC after separation from  
7 BC Hydro has moved aggressively towards enhancing its OATT to make the tariff  
8 market responsive and enhance the utilization of its system.

9 Hydro-Quebec indicated that there were only four customers that secured reservation  
10 for hourly point-to-point services in 2004 and only one active customer other than  
11 Hydro-Quebec Production (HQP)<sup>3</sup>. HQT will need to be creative in its tariff design if it  
12 wants to promote greater IPP development in the province or more enhanced utilization  
13 of its system.

### **Use of 1-CP Methodology**

14 The Hydro Quebec system has the following characteristics

- 15     ▪ Distinctly winter peaking
- 16     ▪ Load is served predominantly by HQP's hydro-electric capacity
- 17     ▪ Most of the hydro-electric generation is remote, located in the northern parts of  
18         the province
- 19     ▪ Most the transmission system and associated costs is generation related and  
20         designed to deliver the peak generation capacity to the load centers south of the  
21         province.

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<sup>3</sup> HQT-2 Document 3 – page 12

1 The costs associated with developing remote generation and the necessary long  
2 distance transmission lines are thus attributable to the need to meet winter peak  
3 demand. This is especially true in Quebec which need not use imports to meet peak  
4 native load. These observations drive me to conclude that costs assignment in Hydro  
5 Quebec should be based on the contribution to the coincident winter peak.

6 Long-term firm point-to-point reservation, because of its flat nature of the reservation,  
7 will always coincide with the coincident peak and contributes to it, hence using a single  
8 measure of a coincident peak is also appropriate for setting transmission rates.

9 HQT proposes to continue to use a single-coincidental-peak (1-CP) methodology to  
10 develop the transmission rate. In his testimony and responses to information request Dr.  
11 Ren Orans reasons that the preference of 1-CP to the alternative twelve-month-  
12 coincidental-peak (12-CP) methodology based on the following:

13 “...The results of the four FERC tests indicate HQT should not use the 12-CP  
14 method. HQT proposes to continue using the 1-CP method because (a) the 1-CP  
15 method best reflects how HQT plans its system to meet the annual peak  
16 forecast; (b) the result of applying the methods is inconclusive with regard to the  
17 use of 1-, 3- and 4- CP methods; (c) the 1-CP method was accepted by Régie  
18 based on the available evidence at the time; and (d) my own supplemental  
19 analysis is consistent with a temperature pattern reflective of a system built to  
20 meeting the peak loads in 1, rather than 3 or 4 peak months each year.”<sup>4</sup>

21 In the submission on BCTC’s application for OATT, a more detailed analysis of the 12-  
22 CP versus 1-CP methodologies is provided:

23 “The effect of this would be to deter use of the long-term firm point-to-point  
24 service and cause more customers to use the discounted short-term service.  
25 This would be detrimental to the system as a whole as it would take away the

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<sup>4</sup> Reponses du Transporteur a la demand de renseignements numero 1 de l'Union des Consommateurs (US), R. 50.1

1           beneficial effects, such as revenue stability, of long-term contracts. Finally,  
2           increasing the rate may not even increase revenue from the service as there will  
3           be fewer customers willing to pay for the service.<sup>5</sup> (Emphasis added)

4 BC has similar transmission system characteristics to Quebec, although the  
5 transmission cost drivers are not as prominent, because BC Hydro allocates some the  
6 transmission costs to generation. Still, at the most recent BCTC OATT hearing, there  
7 was general consensus that allocation based on contribution to a single peak (1-CP) is  
8 the proper approach for BC. BCTC proposed a modification of how the OATT would be  
9 derived for long-term-firm point-to-point through the use of the installed capacity as the  
10 divisor as opposed to system peak. Hence in BC installed capacity, not system peak, is  
11 the proxy for the 1-CP approach.

12 BCTC believes that using installed capacity has the advantage of reflecting the cost  
13 attributable to transmission line development (the installed capacity) and that this would  
14 also have the benefit of reducing the transmission rate. A reduced long-term firm point-  
15 to-point rate would attract more independent power production investment to the  
16 province.

17           “BCTC submits that the proposed long-term firm point-to-point rate calculation  
18 achieves a fair allocation between customer classes. The current calculation  
19 reflects the diversity of transmission use on the system and keeps the long-term  
20 firm point-to-point at a justifiable level. Alternate calculations of the long-term firm  
21 point-to-point rate that have been proposed during the proceedings would  
22 substantially raise the long-term firm point-to-point rates and would likely result in  
23 no substantial increase in revenues.”<sup>6</sup>

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<sup>5</sup> Submission of BCTC on Application for Open Access Transmission Tariff, March 22, 2005, p. 12

<sup>6</sup> Submission of BCTC on Application for Open Access Transmission Tariff, March 22, 2005, p. 9

1 HQT rates are the highest in Canada. The use of installed capacity could also attract  
2 more use of the transmission by reducing HQT's long-term firm point-to-point rates and  
3 reducing the barrier to market entry. Moreover in 2005 Hydro Quebec shows a  
4 reduction in the use of long-term reservation, reduced costs may increase the  
5 attractiveness and potential for increased use of long-term firm point-to-point  
6 reservation.

7 The proposal to use the installed capacity for calculating the long-term firm point-to-  
8 point transmission rate can also be viewed as notionally allocating 100 percent of the  
9 transmission revenue requirement (TRR) to a virtual rate class containing all generators  
10 on the system. If the system was built to meet, for example, a single coincident peak  
11 demand, then the allocation factor could be said to be the single coincident peak  
12 demand. To derive the rate, that allocated cost is divided by the forecast billing  
13 determinants, for which total installed capacity is a proxy.

14 The main objective of the long-term point-to-point rate should be to provide an  
15 appropriate price signal to encourage utilization, while requiring transmission users to  
16 make a fair contribution to system costs such that all users of the system benefit. As  
17 more IPPs develop in the province, the total installed capacity will increase to reflect  
18 that change, but correspondingly there will be more users of the system that contribute  
19 to the overall transmission revenue requirements.

20 In rough terms, the Hydro Quebec installed capacity is 33,900 MW with a further  
21 estimated 3,600 MW of IPP installed capacity for a total system installed capacity of  
22 37,500 MW. This number excludes the 5,400 MW of output from the Churchill Falls  
23 power plant in Labrador. It can be argued that this should be included in the calculation  
24 of total installed system capacity that is being served by the HQT system, given that  
25 Hydro-Quebec has access to most of the energy, thus bringing the total installed  
26 capacity for developing the point-to-point rates to 42,900 MW.

## Mechanisms for Setting Ancillary Services Pricing

1 FERC finds that six ancillary services must be included in an open access transmission  
2 tariff. The six services that must be provided are as follows: (1) scheduling, system  
3 control and dispatch; (2) reactive supply and voltage control from generation sources  
4 service; (3) regulation and frequency response service; (4) energy imbalance service;  
5 (5) operating reserve / spinning reserve service; and (6) operating reserve /  
6 supplemental reserve service.

7 The requirement that the six services be included in an open access transmission tariff  
8 does not preclude the transmission provider from offering voluntarily to provide other  
9 interconnected operations to the transmission customer along with the supply of basic  
10 transmission service and ancillary services. FERC considers the pricing of ancillary  
11 services on a case-by-case basis, under enumerated pricing principles.

12 I agree with the proposed set of ancillary services to be provided by HQT. However, the  
13 proposed new rates by HQT will result in an increase of ancillary services cost of up to  
14 300%. Such a sudden and large increase does not meet the general principles of rate  
15 making, namely, stability, predictability and absence of rate shocks. An increase of  
16 approximately 300% across the board for voltage control, frequency control, spinning  
17 reserves and non spinning reserve services should not be acceptable to the Régie.

18 Given that HQT is the incumbent utility, the utility of last resort, and the only supplier of  
19 ancillary services, the Régie must actively protect the market and ensure these services  
20 are priced reasonably and have HQT pursue a competitive bidding process where the  
21 services are pursued by HQT from the market to the extent the market is able and  
22 willing to provide it at a cost better than that available from HQP.

23 In BC, BCTC's main objectives in rate design are to facilitate direct access to the  
24 Transmission System by end-use customers, and to provide opportunities for IPPs to  
25 supply cost effective interconnected operations services (IOS). BCTC in its recent  
26 OATT introduced an option for procuring IOS on a least-cost basis from any qualified

1 supplier, rather than procuring its entire need from BC Hydro, which 1) enhances the  
2 opportunities available to IPPs, 2) to the extent that Qualified Offers are lower than BC  
3 Hydro's approved rates, BCTC can lower its IOS costs and therefore its AS rates, 3) in  
4 the long run, there will be a competitive supply of IOS within the province. This, in turn,  
5 required a change in the way the Ancillary Service ("AS") rates are calculated. BCTC  
6 has two different mechanisms for pricing AS, one for capacity services and one for  
7 energy services.

8 1. If BC Hydro is the only supplier, BCTC's rates for capacity AS will be simply pass  
9 through of the rates in BC Hydro's BCUC approved IOS Rate Schedules.

10 2. If BCTC purchases IOS from one or more Qualified Parties, its AS rate would be  
11 a quantity-weighted average of the rates for IOS supplied by all parties.

12 Alberta and Ontario also successfully allow for competitive procurement of ancillary  
13 services. For example, ERCO<sup>7</sup> provides ancillary services to the Electric System  
14 Operators (ESO) in Alberta and Ontario. Basically, ERCO bids daily for the right to  
15 supply the services. The services that ERCO provides include:

16 1. 10 minute and 30 minute non-spinning operating reserves

17 2. stand-by reserves

18 3. Under Frequency Load Shed Service

19 4. Curtailable Load Service

## Discount Policy

20 HQT has been applying discounting to short-term transactions for the past few years.  
21 Originally the discounting was ordered by the Régie as a means to optimize system

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<sup>7</sup> Private discussion with Michael Filippelli, Director, Raw Materials and Energy, ERCO Worldwide, A Division of Superior Plus Inc.

1 utilization, increase in the transaction reservations and ultimate growth in Hydro-Quebec  
2 revenues (we believe the decision was triggered by our recommendation). HQT  
3 analysis of the reservation data during the discount period led HQT to conclude that the  
4 main reason for the low level of off-peak non-firm reservations is the fact that the main  
5 customer for transmission services is HQP and reservations are made during off-peak  
6 hours. Following this trend of argument, the HQT concluded that it would not be logical  
7 to continue applying this discount. Hence, in the current Application Hydro-Quebec  
8 request cancellation of the discount for short-term services based on the evidence that  
9 the amount of short-term reservation did not increase after discounting was applied.

10 Dr. Oran provides an analysis of a different measure to the transmission value. His  
11 analysis is, however, rather simplistic and does not consider the uncertainties  
12 associated with power trading and does not assign a risk premium. The analysis reflects  
13 only the ability of producers like HQP, who have access to storage, to buy low and sell  
14 high and may have only considered one part of the wheeling charges (for an entity to  
15 arbitrage between peak and off peak prices it and must pay both a wheeling in and a  
16 wheeling out charge (for an entity to arbitrage between peak and off peak prices it must  
17 pay both a wheeling in and a wheeling out charge; I believe Dr Orans may have  
18 accounted for only one wheeking charge in Quebec). Further, I do not believe that the  
19 trading pattern possible for a large sophisticated entity like HQP who has deep storage  
20 to the typical small IPP. Hydro Quebec production and transmission costs are  
21 internalized, and transmission pricing (discounting) should be geared to the IPP of the  
22 future, not HQP.

23 The lack of interest from third parties is more likely grounded in the fact that even  
24 discounted at 25%, Hydro-Quebec short-term rates are still too high for the bordering  
25 systems to use Quebec transmission system for wheeling through transmissions.

26 As it stands, HQT rates are the highest in the country (see table below), when  
27 compared to the maximum of other jurisdictions before discounting. Even when using  
28 non-firm transmission services, there is insufficient incentive for neighboring regions to



- 1 wheel through Quebec and less incentive for IPPs to develop in the province; except
- 2 perhaps for direct sale to Hydro-Quebec.

| <b>Maximum Allowable Transmission Rates by Jurisdictions (\$)</b> |  |   |  |   |
|---|--|---|--|---|
|   | Hydro-Quebec<br>(OATT effective<br>January 1,<br>2001) | BCTC<br>(OATT effective April<br>1, 2005) – regularly<br>discounted | Manitoba Hydro<br>(OATT effective<br>September 4, 2002) –<br>subject to a discount | New Brunswick Power<br>(OATT effective May 1,<br>2005) – subject to a<br>discount |
| <b>FIRM</b>   |  |   |  |   |
| Annual rate   | 72.90/kW/year  | 56.022/kW/year  | 39.547/kW/year   | 25.234/kW/year  |
| Monthly   | 6.08/kW/month  | 4.67/kW/month   | 3.296/kW/month   | 2.102/kW/month  |
| Weekly  | 1.40/kW/week   | 1.077/kW/week   | 0.716/kW/week  | 0.485/kW/week   |
| Daily on-peak   | 0.28/kW/day  | 0.154/kW/day  | 0.152/kW/day   | 0.097/kW/day  |
| Daily off-peak  |  |   | 0.109/kW/day   | 0.069/kW/day  |
| <b>NON-FIRM</b>   |  |   |  |   |
| Monthly   | 6.08/kW/month  | 4.67/kW/month   | 3.296/kW/month   | 2.102/kW/month  |
| Weekly  | 1.40/kW/week   | 1.077/kW/week   | 0.761/kW/week  | 0.485/kW/week   |
| Daily on-peak   | 0.20/kW/day  | 0.154/kW/day  | 0.152/kW/day   | 0.097/kW/day  |
| Daily off-peak  |  |   | 0.109/kW/day   | 0.069/kW/day  |
| Hourly on-peak  | 8.33/MW/hour   | 6.4/MW/hour   | 9.507/MW/hour  | 6.07/MW/hour  |
| Hourly off-peak   |  |   | 4.527/MW/hour  | 2.88/MW/hour  |

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4 I believe that transmission rate setting through the OATT application process is one of

5 the first steps utilities, transmission companies and regulatory commissions must take in

6 defining their commitment to developing long-term, healthy, sustainable competitive

7 markets. I further believe that HQT's attempts to use the limited data related to

8 discounting to justify the removal of discounting are not substantive or convincing. The

9 use of HQT transmission is weighted very heavily towards HQP, a company who has

10 the system knowledge and sophistication to make best use of the Hydro-Quebec

11 system.

12 HQP adjustments of its long-term firm point-to-point and short-term point-to-point use of

13 the transmission system are more likely adjustments to market environment than to

14 discount policy. Thereafter, there is essentially only one other IPP accounting for the

15 small remaining balance of transmission usage. HQT notes that only 4.2% of its point-

16 to-point revenues in 2004 came from other than HQP; this amount being 0.166% of total

17 HQT revenue. The available data reflects the very limited test data of the last few years

1 since the first OATT application. Further, the sample size of two users, one whose use  
2 is vastly disproportional to the other is in no way indicative of possible future market  
3 development. There can be no statistical reliance on the analysis, nor can the Régie  
4 properly assume that data arising from the test period can in any way be foreshadowing  
5 of how a real competitive market would behave if it was allowed to develop in Quebec.  
6 The HQT application does seem to reflect lack of desire of HQT to facilitate movement  
7 towards building a competitive market in Quebec.

### **Enhancing System Utilization and Competitive Markets**

8 The HQT OATT does not include any provision that will enhance the utilization of the  
9 system or contribute to the development of a long-term competitive market.

10 BC, to follow the idea of developing a competitive market, as a first step, took a  
11 significant step of separating the transmission operation from production by forming a  
12 separate wholly independent transmission corporation, BCTC, to operate the  
13 transmission system. Independent operation is designed and expected to contribute to  
14 the improvement in market conditions that are favorable to the development of  
15 independent power production by putting in place market rules and practices that are  
16 flexible and user-friendly. Even though such step seems to be sensible and appropriate,  
17 I do not believe that separation of production and transmission is required now to  
18 promote competitive market development in Quebec

19 HQT stated that it is not operating in a competitive market, so rules should be applied to  
20 suit the existing conditions. However, HQT is surrounded by other systems including the  
21 power pools of New England and the IMO in Ontario. These systems have fully adopted  
22 the competitive principles set out in FERC Orders 888, 889 and 2000. The market in  
23 Quebec should eventually develop to take advantage of and match the operation of  
24 surrounding markets.

25 As a parallel example, BC who shares similar system characteristics and whose  
26 neighbor systems include power pools and ISOs is also dominated by BC Hydro.

1 However, BC recognizes the competitive constraints associated with BC Hydro and has  
2 moved aggressively to develop policies and conditions that limit potential exercise of  
3 market power and is favorable to independent power production. BC believes that  
4 supporting IPPs is critical to the evolution of the Province. Relative to the Quebec  
5 market, BC has many IPPS in place and a very active investment market seeking to  
6 develop new power projects.

7 With this in view, it is recommended and expected that the Régie and Hydro-Quebec be  
8 more proactive and follow the direction of introducing truly open market principles to the  
9 Province of Quebec instead of accepting the existing dominance of HQT as the primary  
10 user of the transmission system to drive HQT in developing its OATT application.  
11 Nothing is going to change unless the conditions that are regulated by the Régie are  
12 modified and adjusted to follow the competitive trends proceeding throughout the rest of  
13 Canada and with Hydro-Quebec's trade partners to the south.

14 As an example of the of what is possible to achieve, in its recent application BCTC  
15 made the following changes that are expected to improve access to the transmission  
16 system and enable independent power producers to participate in neighboring markets:

- 17     ▪ Shaped rates: BCTC introduced a new long term firm point-to-point product that  
18       allows for long-term firm reservation that meets the available shape of  
19       transmission capacity remaining on the system available for customers whose  
20       requests the transmission provider is unable to fulfill without a network upgrade.
- 21     ▪ Credit for new generators: BCTC offers a credit to new generators located in  
22       areas that help reduce congestion or provide other benefit to the transmission  
23       system.
- 24     ▪ Competitive Bidding for ancillary services: BCTC allows the procurement of  
25       Interconnected Operating Services from any qualified supplier, not just  
26       BC Hydro.

- 1       ▪ Refund policy: BCTC has modified the network upgrade refund policy to return  
2       the entire customer contribution over time.
  
- 3       ▪ Open Season: BCTC has implemented an Open Season process in which  
4       individual transmission service requests can be aggregated to facilitate new  
5       transmission investment.
  
- 6       ▪ Discount Policy: BCTC has enhanced the discount policy to promote more  
7       efficient use of the transmission system.
  
- 8       ▪ Clean Power Rate: BCTC has introduced a new rate designed to serve the low  
9       load factor clean power IPPs (has not been approved by BCUC yet).

10 BCTC conducted extensive consultation sessions with its stock holders and provided  
11 technical paper and discussion changes in order to explore the range of changes that  
12 would be suitable for and acceptable to BC.

13 I have previously recommended during the Hydro-Quebec's Tariff case reviewed in  
14 2001 that "the Régie should not limit itself to focusing on the immediate transmission  
15 environment within Québec, but should expand the horizons of its focus to include those  
16 issues which may be required in the future, particularly those that may be necessary in  
17 order to maintain/preserve the position and benefits enjoyed by Hydro-Québec and the  
18 Province."<sup>8</sup> It is worth repeating the premise since little has changed in this direction  
19 since year 2001. Hence it is recommended that the Régie continue to direct Hydro-  
20 Quebec to develop tariffs that enhance the utilization of the system and promote the  
21 development of a healthy IPP market.

22 HQP has extensive storage facilities and can arbitrage the price between neighboring  
23 markets. Other IPPs may not enjoy the same flexibility and need every advantage in  
24 rate design that would be their right in a truly competitive, open and transparent market.

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<sup>8</sup> Dr. Zak El-Ramly Testimony, R-3401-98, February 5, 2001

1 The Régie must ensure that where there is market dominance, that the application of  
2 rates is a proxy for competition.

3 The Régie in its Decision D-2002-95 in the previous Hydro-Quebec Application R-3401-  
4 98 directed HQT to optimize the utilization of the transmission system<sup>9</sup>. The OATT as  
5 proposed provides no comfort that HQT has satisfied that direction<sup>10</sup>. The current HQT  
6 application is no more than the existing tariff with retraction of any discounting and  
7 massive increase in ancillary services cost. Hydro-Quebec (still) does not see any driver  
8 that could result in introduction of changes to the current system<sup>11</sup>. I cannot see how the  
9 current OATT promotes efficient use of the transmission system now or importantly into  
10 the future, nor do I see how the OATT would be effective in bringing competition to the  
11 market.

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9 Decision of the Regie D-2002-95 on HQ case R-3401-98, p.283:

10 Response to AQCIE/CIFQ R.B.1.1, R-3549-2004, phase II by Hydro-Quebec

11 Direct Testimony of Dr. Ren Orans on Demande R-3549-2004 – Phase 2, p.7

## Recommendations

1 In conclusion I make four recommendations to the Régie

2 1. The 1-CP approach is the most appropriate to the HQT system. I recommend  
3 that the total installed system capacity in Quebec (~43,000 MW) and not the  
4 system peak be used as the denominator (divisor) in establishing point-to-point  
5 rates. Using installed system capacity will have the effect of slightly reducing the  
6 long-term firm point-to-point rate and could help restore some of the lost point-to-  
7 point reservations and correspondingly enhance the utilization of the system.

8 2. The proposed increase of ancillary services rates of up to 300% should not be  
9 approved. Such a sudden and large increase does not meet the general  
10 principles of rate making, namely, stability, predictability and absence of rate  
11 shocks. The Régie should instead phase in any justifiable increase and condition  
12 the increase on HQT procuring as much of the needed services from the market  
13 place using the competitive bidding process to the extent possible.

14 3. HQT should continue to offer discounting to its short-term point-to-point rates to  
15 enhance system utilization and to support competitive market development. The  
16 Régie should deny the request to drop the discounting being made by HQT, and  
17 should consider expanding the discount to cover all short-term point-to-point  
18 rates.

19 4. HQT should be instructed to explore new ways to enhance the utilization of its  
20 system through the introduction of innovative rates. HQT could follow the  
21 example of BCTC and develop a consultation program with all its stakeholders to  
22 define what is required to produce market responsive rates that would lead to the  
23 enhanced utilization of the system in the long run.

24

25



## Resume of Dr. Zak El-Ramly

### 1 **Work Experience**

#### 2 **ZE PowerGroup Inc.**

3 1994 – Present      President

- 4      ■ ZE PowerGroup is a consulting firm specializing in electricity deregulation and  
5 competitive strategy for emerging markets. Dr. El-Ramly leads a group of  
6 technical staff and seasoned industry associates in variety of comprehensive  
7 projects. The group is active in regulatory consulting and intervention, active  
8 management and implementation of electricity trading and risk management,  
9 operationalization of new competitive business functions and trade and risk  
10 software development.  
11

#### 12 **Powerex**

13 (British Columbia Power Exchange Corporation, subsidiary of BC Hydro)

14  
15 1993 - 1995      Executive Vice-president, Marketing

- 16      ■ Responsible for sales, long-term contract negotiation and resource acquisition  
17 and for managing daily activities. As one of the early executives credited for the  
18 development and structuring of Powerex and its trading operation.  
19

20 1990 - 1993      Vice President, Development

- 21      ■ Responsible for the development of corporate direction to enhance the business.  
22 *Led the developed a short-term electricity market, the Power Exchange*  
23 *Operation (PEO).*



1 **BC Hydro**

2 **(British Columbia Hydro and Power Authority)**

- 3       ▪ Held several key managerial positions related to various utility functions. He lead  
4 the development of many innovative programs and policies some of which were  
5 modeled by other utilities in North America and abroad, most notably being the  
6 Power Smart program, wheeling policies and an application for a rate overhaul.  
7

8 1991 - 1993           Manager, Business Development, Resource Management

- 9       ▪ Development of corporate policies related to energy trade (in key areas such as  
10 rate strategy, wheeling and exchanges with other suppliers). Negotiating complex  
11 contracts. *Responsible for the development of a BC Hydro innovative system of*  
12 *unbundled rates referred to as the Industrial Rate Proposal*  
13

14 1989 - 1991           Manager, Policy Development, Corporate & Environmental

- 15       ▪ Development of corporate policies related to energy transactions. *Led the*  
16 *developed of one of the first leading edge wheeling policies in North America.*  
17

18 1988 - 1989           Manager, Rates & Forecasting

- 19       ▪ Personnel and resource management of Rates, Load Research and Forecasting  
20 groups.  
21

22 1985 - 1988           Marketing Manager, Residential & Commercial Energy

- 23       ▪ Market program development, program implementation and providing general  
24 technical support for all marketing activities. Spearheaded the development of  
25 the demand side management program known internationally as Power Smart.  
26

27 1983 -1985           Projects Supervisor, Energy Management Division

28 1981 -1985           Supervisor, HVAC Section Energy Conservation Division



1 1979 -1981 Energy Services Systems Engineer, Energy Conservation

2 1977 -1979 HVAC Engineer, Energy Conservation Division

3

4 **Prior to Joining BC Hydro**

5 1964 -1977 Teaching, research, graduate studies and worked overseas.

6

7 **Memberships**

8 1995 -1998 Honorary President of the Power Marketing Association

9 1995 -1996 Member of the New York Mercantile Exchange (NYMEX) Electricity  
10 Advisory Group for the development of NYMEX electricity futures

11 1994 -1995 Executive member of the Western Systems Power Pool (WSPP)

12 1994 -1995 Member of the Northwest Electric Light and Power Association

13 1977 -present Member of the Association of Professional Engineers of BC

14 1977 -1995 Member American Society of Heating, Refrigeration, and Air  
15 Conditioning Engineers (ASHREA), BC Chapter. Held several  
16 executive positions and was president from 1987-1990