December 4, 2001

Opening Remarks

I want to first commend Hydro for its efforts in responding to the vast number of Information Requests and Undertakings during this Application. The responses have for the most part been complete, forthcoming and timely, indicating the effort has been well-managed. Having worked under similar circumstances at Ontario Hydro where we filed a rate application in each and every year but the last of my 16 years I can say that I have a fair understanding of the substantial effort involved.

Before I am made available for cross-examination, I thought it would be useful if I gave a more complete explanation of the recommendations in my Pre-filed Evidence to help reduce any confusion that might exist.

1. Cost of Service

My first recommendation relates to the cost of service study. My review of the cost of service study indicates that Hydro has done a reasonable job of reflecting the Board's guidelines set out in its 1993 Report on Cost of Service Methodology. While I have not conducted an in-depth review of the cost of service treatment of each piece of equipment on the system, I do feel that the Applicant has accurately reflected the basic principles in the Board's 1993 Report and applied them on a reasonably consistent basis. In this regard, I have only two recommended changes to the cost of service study:

1.1 # of CP Allocators for Generation Demand

A 1CP allocator is more appropriate than a 2CP allocator as proposed by Hydro for allocation of generation demand costs on the Island Interconnected System. I favor a 1CP allocator because it is consistent with what Hydro has proposed for its other systems and reflects cost causation. Mr. Budgell testified that Hydro plans its generation to meet an 18.5 % reserve margin at time of system peak (Nov 6 transcript, page 7, line 2). He goes on to say that the change in models from LOLE to LOLH should have no impact on the need for additional capacity (page 12, lines 41 to 43). Therefore, I conclude a 1CP allocator is appropriate. Mr. Osler, Mr. Brickhill and myself all favor 1CP allocation, while only Mr. Brockman favors a multiple CP allocator.

1.2 Allocation of Distribution Demand Costs

Distribution demand costs should be allocated on the basis of non-coincident peak rather than coincident peak as proposed by Hydro. Distribution equipment is sized to meet local peak load as opposed to system peak load.

All experts at this hearing agree that utilities generally size their distribution systems to meet local peak loads including Mr. Brickhill (November 28 Transcript, page 6, lines 87 to 90), Dr. Wilson (on page 8, lines 10 to 12 of Pre-filed Evidence), Mr. Brockman (in response to CA-213), and Mr. Osler (in response to CA-215). However, Mr. Brickhill believes that Hydro's distribution plant investment decisions are more appropriately reflected by a coincident peak allocator. I do not understand

his reasoning, and it is inconsistent with the testimony submitted by the other experts. On this basis, I recommend a non-coincident peak allocator for distribution demand costs for consistency with other jurisdictions.

2. Rate Design

I also recommend that the Board hire an independent consultant to review and recommend rate designs for customers in Newfoundland. The Board should table the independent consultant's report at a public hearing. I make this recommendation because in spite of the Board's efforts over the years, Hydro's proposed rates fail to meet its design criteria, particularly with regard to market efficiency and cost-based rates.

I make this recommendation primarily on the basis of the following:

2.1 Wholesale Rate Design

Hydro has not submitted for the Board's review a revised wholesale rate design for sales to Newfoundland Power in spite of the Board's order to do so as far back as 1992. Every rate design expert involved in this hearing has recommended before this Board that a more complex wholesale rate with demand and energy charges be implemented – Mr. Osler, Dr. Wilson, Mr. Hamilton at the 1990 hearing, Dr. Sarikas, representing Mr. Brickhill's firm at the 1990 hearing, and Mr. Brockman at the 1990 hearing. In the Board's 1990 Report on *Proposed Rates to be Charged Newfoundland Light & Power*,

Newfoundland Power witnesses, in particular. Dr. Bruneau, the CEO at the time, and Mr. Brockman came out strongly in favor of a rate with a demand charge component. Dr. Bruneau stated that NLP cannot send the proper price signal to its customers until it gets proper pricing signals from Hydro. He went on to say that waiting 3 years for implementation of a rate structure with a demand charge would be a serious impediment to the introduction of cost effective demand side management programs (page 76 of Board's 1993 report).

Mr. Brockman states that it is widely accepted practice, consistent with the principle of ensuring rates reflect costs, to signal costs separately in customer, energy and demand charges where practical to do so. Counsel for the Industrial Customers brought out Mr. Brockman's views during cross-examination yesterday (pages 76 and 77 of Board's 1993 Report).

Newfoundland Power represents over 60% of Hydro's sales in the Test Year, and over $200 million in annual revenues at current rates. A more complex rate structure is likely to be cost effective. In fact, Mr. Brockman states on page 4, lines 16 to 17 of his Supplemental Testimony that the size of Newfoundland Power's load "means demand meters can clearly be afforded". If it is likely to be cost effective, and it better reflects cost causation and fairness, it should be done. In the words of Bonbright, Danielson and Kamerschen in *Principles of Public Utility Rates*, "Whether it is difficult for the large customers to react to peak rates by changing load patterns is also not relevant. The benefit/cost ratio is the criteria for utilization of peak tariffs for any class of customers. … Economic efficiency simply dictates that consumers should be faced with prices

reflecting the true costs they impose on society regardless of how they choose to react to these tariffs".

2.2 Time-of-Day/Seasonal Rates and Marginal Costs

Hydro has not performed an analysis of time of day and seasonal rates since 1990 (IC-205, page 3 of 5, lines 19 and 20), and refers to a marginal cost study conducted in 1984 when it designed the rate for the Non-Utility Generators (see response to IC-208, page 3, lines 26 to 28). Without updated studies of marginal costs and time of use rates, Hydro is missing an opportunity to better meet its rate design criteria related to market efficiency and cost based rates, and to improve customer service by offering rate options, and providing customers a level of control over their bills.

Mr. Brickhill, in response to a question from Commissioner Whelan stated that TOD rates have not been taken up by a large number of customers because people don't want to get up at 3 am to do their laundry. I would suggest that responses like this are one reason why customers have not taken up TOD rates in large numbers. I was on a TOD rate for over 5 years and never once did my laundry at 3 am. I am confident in saying that neither did my wife. (Explain my experience)

Technology is making it easier for customers to respond without changes in lifestyle. Two companies, PTSC and IntraCoastal System Engineering are producing prototype devices for not-at-home appliance control for home, office and commercial use. A recent study in Rhode Island states that TOD rates based on production costs is one of the keys to bringing true competition to the electricity market.

2.3 Cross-Subsidization

Finally, Hydro has made no progress in reducing the excessive levels of cross-subsidization in its rate structure in spite of the Board's recommendation in its 1996 Report. Customers are currently paying between 9 and 334 % of the cost of service (see response to CA-70). Not only is there cross-subsidization among customer classes, but according to Hydro expert witnesses, taxpayers are subsidizing electricity consumers. In addition, through the RSP, future customers are subsidizing current customers. Because rates are averaged over the year, and do not reflect seasonal variations in costs, electric heating customers are being subsidized by non-electric heating customers. Hydro makes a very feeble attempt at subsidy reduction, proposing a 20% increase for Government institutions on Isolated Systems and states that it will file its plans addressing subsidy reduction in 2003. Clearly, subsidy reduction is moving at a snail's pace.

In summary, an independent consultant could review the tariffs free of the historical baggage faced by Hydro. By having an open review of the Consultant's report, all stakeholders will have the opportunity to provide their input.

3. Industry and Regulatory Structure

The current structure of the electricity industry is inconsistent with the move to more competitive electricity markets throughout North America and around the world, and customers are missing out on the potential benefits. Competition should be assessed at the

generation procurement level, and through the introduction of performance based regulatory mechanisms, at a minimum.

3.1 Generation Procurement Competition

Hydro has indicated a need for new generation by 2006 or 2007. It would appear that the procurement process would include a request for proposals, and that Hydro might be allowed to submit a bid. It is less likely that an independent power producer will submit a bid in a competition to construct a new generation facility if a government-owned utility is allowed to participate in the competition. The odds of winning are simply too much in favour of the government utility. When quality developers fail to participate in the competition, the quality of the bids is reduced and the prices tend to be higher, both of which are likely to lead to an increase in the cost of power.

3.2 Performance-Based Regulation

Before talking about PBR, I want to discuss what it consumers care about. Consider telephone long-distance companies. A couple of years ago when I was being solicited by MCI, Sprint and AT&T on a weekly, and sometimes daily basis, to become one of their customers, I asked two questions – 1) what services are you offering with regard to international calls, and 2) what is the price. I never asked about customer service or reliability of service because they were all big companies, and because if service turned out not to be acceptable, I could always change suppliers at a later date. In fact, I did

change providers once because the provider made errors on my bill in each of the first three months. So, it is fair to say that the only thing I cared about was the amount of my monthly bill. I never once asked one of the service providers what its return on equity is, what its operating and maintenance costs are, about their depreciation expenses, etc. The bottom line is that consumers don't care about these things – unless they are thinking about investing in the company. They care about the dollar figure that appears on their bills, customer service and quality and reliability of service.

PBR is a more light-handed form of regulation that focuses on what customers want. Under PBR, prices are capped at a level, possibly at today's prices, and are allowed to increase at the beginning of each subsequent year, usually according to the consumer price index. But the allowed increase is offset at an appropriate productivity factor. Costs over which a utility has no control, for example costs owing to severe storm damage, are allowed direct pass-through to consumers. In order to ensure that a utility does not cut costs to the point that reliability is affected, performance benchmarks are established with penalties applicable when they are not met.

Under PBR since 1990, the National Grid Company, the transmission service provider in the United Kingdom, has reduced the cost of transmission by 37%, while increasing the capacity of the transmission system by 20%, and reducing the unavailability of the system by half, from 2% to 1%. Now this relates only to the transmission system, but the distribution companies in the UK under PBR, in the period from 1995 to 1998, reduced operating costs by 20%, while making significant improvements in the quality of service. For example, minutes not served decreased by 10% over this period. Norway's regulator expects network companies to improve efficiency under PBR by 50% over the next 10 to

15 years. These are results that a Regulatory Board simply can't ignore, and in reality, is what the Flatrock Ladies including Ms. Peddle were looking for in 1986 – sustained pressure on the utilities to provide quality service at low cost. Instead, they got the RSP.

PBR is receiving increasing attention within the industry. The World Bank endorses PBR in the countries I have worked. The consultants in our Bonn office in Germany don't even consider PBR to be innovative given that all European countries have some form of PBR in place. A recent survey reported in Public Utilities Fortnightly indicated that 40 states now employ PBR to regulate intrastate operations of local exchange carriers. At least 28 electric utilities in 16 states currently operate under some form of broad-based PBR, and Ontario has recently implemented PBR for distribution companies. I noticed in this Board's Annual Report, that a study of alternative regulatory mechanisms was to be undertaken this year, but I understand the study has not been completed.

You can see how a system such as this has the potential to produce significant benefits to consumers, while giving utilities the opportunity to increase returns to shareholders. You can be quite sure under a system like this that Hydro and Newfoundland Power would cooperate and work much harder to identify and implement shared programs that result in cost savings.

Clearly, the system as it now stands could be improved to serve customers better.

4. RSP

I recommend that the RSP be eliminated, but gradually in order to spread the rate impact over time.

The RSP broken down into its principal components includes a fuel adjustment charge to enable refunds, or pass-through, of fuel costs that are different from forecast, and a balancing account, that enables pass-through, or refunds, of one third of the balance each year. Unfortunately, balances have been accruing since 1994, and a deficit of $100 million is projected for next year.

No other utility in North America appears to have an RSP charge like that used in Newfoundland. NARUC does not address RSP accounts in its manual. The survey of Canadian utilities undertaken by Hydro indicates that no Canadian utility uses an RSP account. We contacted the NRRI and they indicated that no US utility utilizes an RSP like that used in Newfoundland. NRRI did indicate that fuel adjustment clauses are common, although they have been under fire in recent years because fuel prices have tended to be more stable, and because they provide little incentive for utilities to do a good job of managing fuel costs. NRRI did indicate that all but one state that have fuel adjustment clauses balance the fuel adjustment account either annually, or semi-annually. Connecticut uses a monthly balancing mechanism similar to the fuel adjustment clause that preceded Newfoundland's RSP. According to NRRI, no state utilizes a fuel adjustment clause that balances over a period greater than one year.

There are a number of reasons why utilities do not use multi-year balancing accounts with their fuel adjustment clauses like Newfoundland.

1. It distorts price signals. Last year, when Hydro's price of oil was about $35, customers saw rates reflecting a substantially lower price. Three years from now, customers will see rates reflecting an oil price closer to $35, when oil prices might

actually be $10/barrel. The effect is that customers will be reacting to the wrong price signals – potentially conserving when oil prices are low, and consuming when oil prices are high.

2. As I have already mentioned, the RSP causes cross-subsidization in that past consumers are being subsidized by current consumers, and it appears that current consumers will be subsidized by future consumers. When the two Industrial Customers left, their share of the RSP was left for remaining consumers to pay. Similarly, my brother-in-law left the Province last year to move out west, and left his share of the RSP for remaining customers. On the flip side, customers moving to the Province will be stuck paying a sizable debt that they in no way were responsible for.
3. It provides little incentive for Hydro to better manage its fuel supply costs and improve its forecasting techniques. It simply passes all costs through to consumers.
4. It is difficult for consumers to understand, as witnessed by the number of Information Requests, and the amount of time spent explaining the administration of the RSP at this hearing. The Industrials are claiming the RSP has been calculated incorrectly since 1992.
5. As Newfoundland Power states on page 51 of the Board's 1992 Report on Proposed Rates to be Charged to Newfoundland Light and Power Company "NLP submitted that cost deferrals are against generally accepted utility practice of matching rates to costs in the period in which they occur and that cost deferrals should not be made especially when they can be reasonably avoided." The RSP

balancing account, by deferring costs to future periods, violates this basic principal as agreed by Mr. Hamilton under cross-examination (November 29 Transcript, page 14, lines 30 to 42).

6. All cost of capital experts testified that the RSP offers protection from variations in forecast load, generation mix and fuel prices (November 19 Transcript, page 17, lines 5 to 15). They indicated that this protection enables a reduction in the rate of return required by Hydro. I totally agree with this assessment, but must point out that the protection is offered by the fuel adjustment component of the RSP alone, not the balancing account. Only one rate of return expert testified concerning the effects of the balancing account and that was Dr. Kalymon. He testified under cross-examination that if the outstanding balance in the RSP became too large, the financial community may view this negatively, resulting in an increase in the required rate of return. Therefore, Hydro and NP, by endorsing the RSP in its present form, are promoting higher rates for consumers.

7. As I alluded to earlier, Hydro and NP support the RSP on the basis that customers demanded the RSP back in 1985. In addition to the fact that this information is out-of-date, being 16 years old, it is very much exaggerated. None of the documentation submitted by Hydro in its response to CA-179 indicates that consumers in 1985 were complaining about unstable year-over-year prices. In fact, the newspaper articles and transcript excerpts are clear that customers were not satisfied that the RSP addressed their concerns. The New Labrador Action Committee stated that the averaging plan was only a whitewash, and demanded a full inquiry into why electricity bills were so high. In the transcript, Mrs. Peddle

stated “we reject this proposal in so far as we can understand it”. In my review of CA-179, I was unable to find a single article indicating that customers wanted the rate stabilization plan. Balancing the fuel adjustment account on an annual basis rather than a monthly basis, and an equalized billing option would have addressed customer concerns about billing stability. To suggest that the RSP addressed customer concerns because there has been no rioting in the streets since it was implemented is a rather course measure of customer satisfaction.

In summary, there are many problems with the RSP, explaining why there are no other jurisdictions in North America with such a plan in place. The fact that the plan will be $100 million in arrears next year, equivalent to roughly 1/3 of the revenue requirement, adds significantly to the need to act quickly on its elimination.

5. Options for Replacing the RSP

Now if the RSP is eliminated as I recommend, a replacement mechanism is needed. I would like to see the plan replaced by a mechanism that transfers a portion of the risk associated with fuel costs to Hydro. At this point in time, all cost of capital experts have referred to the very low risk that the utility must manage. This is not a good thing for consumers because it means the risks are being transferred to them. Although Hydro is unable to control such things as the amount of rainfall and the world price of oil, there are things it can do to manage the risk to some extent. For example, Hydro has implemented a software package that enables it to maximize output from its hydraulic generating

stations. Mr. Osmond outlined the details of a phantom oil price hedging program that might be utilized under the right regulatory mechanism to reduce exposure to variations in world oil prices. Compare these measures to the consumers ability to manage such risks.

5.1 Fuel Price Risk Management

One means of providing a better allocation of risks between consumers and Hydro would be through the application of a fuel price mechanism commonly used in Power Purchase Agreements. Often, the energy component of a power purchase tariff has two features – the first relating to the conversion efficiency of the generator and the second relating to the price of fuel. The conversion efficiency is typically set at an industry standard consistent with the type of generator in order to encourage the owner to continue to adequately maintain the unit. Using Holyrood as an example, you might peg the conversion efficiency at a level reflecting recent plant experience, or at a level reflecting the industry standard for this type of facility. By pegging it at an industry standard, Hydro would keep any revenues gained from improvements to the conversion efficiency that place it ahead of the industry standard, but would absorb any losses arising if the efficiency of the unit falls below the industry standard. The risk is transferred to Hydro as Hydro is clearly best able to manage the risk.

With regard to the fuel price component, It is recognized that Hydro has only limited control over fuel prices, so the fuel price is allowed to increase or decrease according to a published fuel price index, for example, a relevant fuel index published by Statistics

Canada. In this manner, if Hydro can manage its fuel contracts so that its cost of fuel is less than the increase in the index, it will increase revenues. Conversely, if Hydro does not do a good job of managing its fuel contracts, its revenues will be reduced. In either case, the electricity consumer sees the index. You can see how this would preovide incentive to Hydro to do a good job of managing its fuel contracts, while taking into account that it has only a limited amount of control over world oil prices. This mechanism provides a better allocation of risks between Hydro and consumers than would a direct pass-through as is currently the case under the RSP.

5.2 PBR Applied to Overall Cost of Fuel

Under a performance-based mechanism, the Board might allow Hydro what it views to be a reasonable fuel price for 2002 based on current forecasts. For example, if the Board were to determine that $100 million represented an appropriate cost for fuel in 2002, and at the end of the year, Hydro had spent $110 million, it might be allowed to pass through $5 million to consumers, while absorbing the other $5 million. Conversely, if fuel costs came in at $90 million, $5 million would be refunded to consumers, while Hydro would keep the remaining $5 million. This would provide Hydro incentive to better manage its overall fuel costs, and provide Hydro a benchmark for deciding how much it wanted to spend on hedging programs. It would also encourage implementation of demand management and energy efficiency programs.

5.3 Board Considerations

These are the types of mechanisms that should be considered by the Board as a replacement for the RSP. But I don't believe that the Board has enough information before it that would allow design of such incentive mechanisms. An alternative to the RSP has not been presented in testimony and received the necessary scrutiny from the various stakeholders. Yet I feel that the RSP in its present form is untenable for the consumers in the Province.

As a result, and in keeping with a question posed last week by Commissioner Powell, I recommend that the stakeholder groups, including Newfoundland and Labrador Hydro, Newfoundland Power, the Industrial Customers and the Consumer Advocate, meet off the record in an effort to negotiate a solution that is agreeable to all parties. I feel that this potentially represents the optimum solution to this dilemma for stakeholders.

I have pulled together a brief terms of reference for the negotiations. These terms of reference are submitted in an effort to focus stakeholders. I am completely open to suggestions and comment from the various stakeholder groups.

Rate Stabilization Plan
Proposed Terms of Reference

1. One member from each of Newfoundland and Labrador Hydro, Newfoundland Power, Industrial Customers and Consumer Advocate, to be proposed by the relevant parties. The proposed individual should have rate design expertise.

2. One negotiation session on December 5, 2001 with a proposed duration of two hours.

3. A second negotiation session on December 6, 2001, if necessary.

4. A written "Agreement" will be presented to the Board by December 11, 2001 reflecting the outcome of the negotiating sessions. The intent is that one *Agreement* will be delivered to the Board, although dissenting proposals can be made if a party does not conform with the position put forward in the *Agreement*. If there is more than one dissenting proposal, an *Agreement* will not be submitted to the Board, and the parties will present their positions in Final Argument.

5. If conformity is reached among the parties, the Board has a consensus *Agreement* to consider and include in drafting its decision.

6. The negotiating sessions will focus on developing a suitable replacement for the current RSP design. The replacement design will adhere to generally accepted rate making principles, and will be consistent with collection of Hydro's full revenue requirement as determined by the Board. The *Agreement* will address the design of the mechanism that will replace the RSP. Actual figures associated with the design will be developed by Hydro consistent with the Board's ultimate decision with regard to the appropriate revenue requirement to be granted the Applicant.

That concludes my opening remarks.