

## Undertaking of John T. Browne to Maureen Greene, Q.C.

### **Re: Additional References to Size of Rural Deficit in the Board's Report.**

At page 5, lines 37 to 76, of the transcript for November 2, 2001, Counsel for Newfoundland & Labrador Hydro requested, and Mr. Browne undertook to provide, references to statements contained in the *Report of the Board of Commissioners of Public Utilities to the Honourable Minister of Natural Resources, Government of Newfoundland & Labrador on a Referral by the Lieutenant Governor in Council Concerning Rural Electrical Service* dated October 10, 1995 (the "Report"), in addition to the reference made at page 19 of his pre-filed testimony, comparing the deficit on the rural electrical system in Newfoundland to those in other provinces.

Mr. Browne's pre-filed testimony made reference to statements contained in Chapter 1 of the Report, titled "Description and Scope", under the sub-heading "Magnitude/Scope of Rural Deficit". These statements are found at pages 13 – 14 of the Report, which pages are attached.

The additional references are as follows:

- (1) In Chapter 5 of the Report, titled "Current Canadian Electrical Pricing Practices", the Board reviewed the evidence of several parties with respect to the relevance of practices in other jurisdictions regarding rate setting for rural isolated systems. At the end of Chapter 5, the Board stated, at page 82:

"...The big difference from the perspective of cross-subsidy, is that the magnitude of the Newfoundland rural deficit imposes a significant burden upon other ratepayers. The result is that this Province is placed in a unique situation as compared with other Canadian jurisdictions."

Chapter 5 of the Report (pages 74 - 82) is attached.

- (2) In Chapter 9 of the Report, titled "Funding Options", under the sub-heading "Continued Cross-subsidy from Other Ratepayers", the Board made the following statement, at page 166:

"... While it is true cross-subsidies occur in many jurisdictions across the rest of Canada, the highest isolated rural subsidy elsewhere amounted to 1% of revenue requirement, whereas in Hydro's case the isolated rural deficit is in excess of 8.8%."

Pages 162 - 166, which contain the above noted sub-heading, are attached.

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- (3) In Chapter 10 of the Report, titled “Recommendations”, under the sub-heading “Conclusions and Guiding Principles – Rates”, the Board stated, at pages 176 - 177:

“(3) One of the principles of sound public utility practice is that rates should not be unjustly discriminatory. Section 3 (a) of the *Electrical Power Control Act, R.S.N., 1990* rules out such discriminatory rates. The preferential rates which apply on the rural system are discriminatory in nature and such discrimination should be mitigated.

(4) Cross-subsidization is common in all public utilities. The problem with this Province’s rural system is the magnitude of cross-subsidization. The Board has adopted, as a guiding rate principle, that cost recovery from isolated rural customers, both domestic and general service, should be targeted at 50%, with implementation to be phased over a five (5) year period.”

Pages 176 and 177, which contain the above noted sub-heading, are attached.

### Magnitude/Scope of Rural Deficit

The principal issue which arises from the rural electrical system is the size of the deficit. In 1995 the total deficit for all rural customers is projected to be \$34 million. Of this total, about \$25.5 million, or 75%, is attributable to electrically isolated customers. For isolated rural customers the subsidy per customer is \$3,082 per year while for interconnected customers the annual deficit per customer is \$475. On the isolated systems, only 30 cents on the dollar is recovered from customers. For electrically interconnected customers, the recovery rate is 74 cents on the dollar.

While in the past the deficit was funded directly by Government, today the rural deficit is funded through a surcharge upon, or a cross-subsidy from, other ratepayers. The rural deficit adds 14% to the cost of purchased electricity for both Newfoundland Power and for Island industrial customers.

The problem that has arisen from the current mode of financing is the burden that it places on these other ratepayers. The rural deficit represents 11.7% of Hydro's revenue from electricity sales. This is a burden significantly higher than the corresponding burden borne by ratepayers in other jurisdictions, who cross-subsidize rural losses to a lesser extent. This report will review the present financial arrangements in greater detail and will propose alternative approaches which can be considered by Government.

The level of rates charged to rural customers is a critical issue. Electrically interconnected rural customers pay the same rates as those charged by Newfoundland Power to its customers. However, customers on the isolated system face higher rates. In the case of rates for isolated domestic customers the rates charged by Newfoundland Power

apply to the first 700 kWh of monthly consumption. Beyond this monthly level, the rates are higher.

General service customers also face higher rates on the isolated systems. While fish plants have been given the benefit of Island interconnected general service rates, other commercial enterprises, such as hotels and stores, must pay a rate which is above the rate charged to electrically interconnected general service customers.

Electrically isolated customers consider the rates which they pay to be inequitable. These people believe they should have access to electricity on the same terms as Newfoundland Power's customers and the electrically interconnected rural customers. However, while rates charged on the isolated systems are considered high they fall far short of recovering the full 1995 cost of 41 cents per kWh.

### **Interpretation of Terms of Reference**

With this background, the Board will now turn to its interpretation of the terms of reference for this inquiry, on an item by item basis.

### **Cost of Service**

The terms of reference for this investigation called for the Board to investigate and examine the following:

"the cost of providing service (diesel generation) to Isolated Rural Customers versus the cost of providing service to other rural customers."

**CHAPTER 5****CURRENT CANADIAN ELECTRICAL PRICING PRACTICES****Introduction**

This chapter reviews the evidence of several parties to the hearing with respect to the relevance of practices in other jurisdictions regarding ratesetting for rural isolated systems. This review will seek to identify trends and patterns rather than to analyze the policies of any one utility in isolation.

The principal evidence before the Board on current Canadian pricing practice was submitted by: Mr. G. C. Baker, Engineering consultant to the Board; Mr. M. L. Dean, representing Abitibi-Price; and Mr. T. Connors, representing Newfoundland Power. Newfoundland and Labrador Hydro was silent on the matter. At least one other presenter, the Labrador Inuit Association, underscored the necessity of conducting this research. Mention was made that lack of time and funds prevented the smaller consumer groups from conducting any independent analysis of pricing practices.

**Mr. G. C. Baker's Evidence**

Mr. Baker pointed out that, while the underlying principle of good regulatory practice is that rates should reflect costs, the reality is that application of this principle varies from one jurisdiction to another. In Manitoba and New Brunswick the utilities' residential rates are differentiated on the basis of customer density, i.e. rural rates are higher than urban rates.

By contrast, in Nova Scotia, since 1975, all residential customers are charged the same rate, in the same way as they are on the Island interconnected system in Newfoundland. In Prince Edward Island, at the behest of Government, residential rates are moving in the direction of uniformity.

Mr. Baker notes that while there are no isolated power systems in the Maritime provinces, there are in Quebec, the Northwest Territories and in Western Canada. In the Northwest Territories there are 53 different rate zones along with a Territorial Power Support Program (TPSP) to ensure that all residents of the Northwest Territories pay the same unit price for the first 700 kWh of electricity use as the average price paid for 700 kWh in Yellowknife. Beyond this 700 kWh block, energy is priced at the rate which has been set for each particular zone. For each customer, regardless of location, the monthly bill shows the amount of subsidy provided under the TPSP as well as the actual amount required to be paid.

Mr. Baker explains (direct testimony March 17, 1995, Pages 6 and 7) that:

"Manitoba Hydro has been providing service in thirteen communities isolated from its main grid. Customers in those communities can purchase the limited service at standard rural (Zone 3) rates. This collects about 30% of the cost of service.

"For residential customers, limited service had been 15 amperes at 240 volts. However, in two communities the limit was increased to 60 amperes in 1991 and 1992.

"General service (GS) customers receive limited service (at Zone 3 rates) or full service (with basic monthly charge at Zone 3 level and energy rate recovering allocated costs). The rate varies by community and depends on whether or not the customer had made a capital contribution.

"Government agencies, federal and provincial, are served under the GS full cost rate, but in addition pay a surcharge. The surcharge has been calculated so that the proceeds thereof, when added to the revenue from limited service customers, would bring the revenue/cost ratio on diesel service up to the level of Zone 3 residential in the interconnected system."

Mr. Baker goes on to say (Page 7) that:

"... the Manitoba Hydro approach is instructive. In essence, it involves:

1. Full cost recovery from isolated areas, without burden on the interconnected system.
2. Subsidization of certain isolated system customers.
3. Limitation of service where subsidy exists.
4. Customer option to receive full service at full cost.
5. Recovery of revenue shortfall from federal and provincial government customers." (Direct evidence, March 17, 1995, Pages 6 and 7).

Mr. Baker indicates that Alberta does not apply a separate rate in remote areas, but accomplishes the same result by applying a surcharge, as a reminder that service in those areas costs more. The surcharge approximately doubles the energy rate.

Mr. Baker notes that in Saskatchewan there is only one isolated system. Residential customers pay the same rates as applicable to rural and resort areas, plus a surcharge of about six cents/kWh on the first 650 kWh and about twenty cents/kWh on the balance of use. There is also a government surcharge.

In British Columbia, the utility subsidizes the isolated diesel systems and provides for a more generous first block (1500 kWh per month) than does Newfoundland and Labrador Hydro (700 kWh per month).

Ontario serves all residential customers at the same rate, whether they are served from interconnected or isolated systems.

The Quebec utility provides residential service to isolated customers at two rates.

South of the 53rd parallel, the rate is the same as the interconnected rate in Quebec. Blanc Sablon, Quebec is just a few miles from the Southern Labrador community of L'anse au Clair. Blanc Sablon residents, served from a diesel generating system, pay a lower interconnected rate on all consumption, while L'anse au Clair residents pay the higher isolated diesel rates. North of the 53rd parallel they have a first block of 20 kWh per day at a rate slightly less than Newfoundland's but for consumption above the first block the rate is much higher than the corresponding second and third block rates in Newfoundland and Labrador.

#### **Mr. M. L. Dean's Evidence on behalf of Industrial Customers**

Mr. Dean filed with the Board a very useful listing of the rates in effect in the other Provinces across Canada. In essence they support the statements made by Mr. Baker.



**Mr. T. Connors' Evidence on behalf of Newfoundland Power**

Mr. Connors' evidence closely agrees with that of Mr. Baker and Mr. Dean, but goes on to develop comparisons with the Newfoundland scene.

He notes that Newfoundland and Labrador Hydro has the second highest operating deficit for its isolated areas after Hydro-Quebec. Newfoundland has a much lower revenue base over which to spread this deficit, amounting to 8.8% of revenue, compared to 1.0% or less for other areas in Canada. Manitoba is close to full cost recovery. Newfoundland and British Columbia recover one third of the cost from customers, and Quebec, one fifth.

Some provinces have a number of companies distributing electricity from the same transmission network. Mr. Connors notes, in these provinces, different rates are the norm rather than the exception.

**Submission by Newfoundland and Labrador Hydro**

As stated earlier, Hydro submitted no evidence on current Canadian practice in setting rural rates, but, in its final submission, stated that:

"setting rates for Hydro's isolated rural customers requires a more delicate balancing of interests than that which is usually encountered by regulators".

**Submission by Newfoundland Power**

Newfoundland Power submits that while pricing practices vary among isolated diesel systems across Canada, it is only in Newfoundland that they are permitted to have a significant impact on the rates of other customers. They suggest that in two jurisdictions,

Manitoba and the Northwest Territories, the Board might find policies and practices which would be helpful in recommending policy for Newfoundland. Specifically they are:

- (a) Manitoba selects which customers are to be subsidized, restricts the level of service in subsidized areas and charges government customers a surcharge beyond full cost recovery as a contribution towards the rural deficit;
- (b) The Northwest Territories limit its subsidy to service up to 700 kWh per month, whereas Hydro extends subsidization of service throughout all blocks.

While not universal across North America, Newfoundland Power points out that rates differ among distribution jurisdictions using the same interconnected power network.

Newfoundland Power explains:

"On balance, it seems that where customers are served by different utilities on the same integrated grid, there is usually some difference in the rates charged by the different utilities".

An example of this is Ontario Hydro and the Municipal utilities in Ontario.

#### **Submission by the Industrial Customers**

The Industrial Customers confined their remarks in their final submission to a listing of Canadian pricing practices, by jurisdiction, without drawing any specific conclusion as to which practices might serve Newfoundland best.

Instead they referred to the data as supporting, along with the other evidence, their general conclusions on ratemaking principles, which were:

- (a) Isolated and interconnected rural rates of Newfoundland Hydro should reflect costs.
- (b) The burden of service to isolated and interconnected rural customers of Newfoundland Hydro should not be allowed to create a significant impact on the cost of electricity to their other customers.
- (c) New rates should be introduced gradually over a reasonable time.
- (d) Revenue to cost ratio targets should be established to ensure cost-based rates are achieved.

### Conclusions

It is clear from the evidence submitted that there is a wide variation in the rates set in different provinces for electricity users, whether they are supplied from an interconnected grid or from isolated systems. These discrepancies are more related to the history of electrification in each jurisdiction and how the governments of the day viewed the availability of this energy as an essential service for its residents.

Where other Canadian utilities operate isolated systems, the trend seems to be to require customers to assume more of the cost of service above a certain level of consumption. All isolated systems have a special lifeline rate for a basic level of service. In some cases, to offset the subsidy that lifeline rates impose, other customers, notably government, are surcharged and the utility absorbs the balance of the deficit.

The Board is unaware of preferential rates in any other jurisdiction other than those reported by Hydro in demand for particulars IC-74 relating to Nova Scotia Power, which charges the domestic rate to groups such as service clubs and churches who otherwise come

under the small general rate or the general service rate.

The operation of isolated systems in Newfoundland and Labrador bears little resemblance to any one operation in another jurisdiction. However, there are some broad generalizations that can be drawn from the evidence with respect to Canadian practice.

These are:

- (a) Where more than one company serves customers in a Province, the interconnected rates are decoupled and allowed to reflect a closer relationship to the cost of service, e.g. Alberta.
- (b) Where customers receive service from an isolated power system, a rate is established for a minimum level of service, and usage beyond that level is at rates substantially higher, to limit load growth.
- (c) Preferential rates are not common in other jurisdictions.
- (d) The rate for service to a Government owned facility provides for full cost recovery and, in some cases, an additional surcharge is made to help alleviate the cost associated with supplying electricity to other customers.

The general Canadian pattern is that funding of rural deficits is through cross-subsidy by other ratepayers, combined with a surcharge on electrical usage by government.

The Northwest Territories may be an exception, where it appears that both the

federal and territorial governments provide financial support. The big difference, from the perspective of cross-subsidy, is that the magnitude of the Newfoundland rural deficit imposes a significant burden upon other ratepayers. The result is that this Province is placed in a unique situation as compared with other Canadian jurisdictions.

Power customers has no closer association than oil consumption, to the cause of the deficit. The fact that the subsidized and subsidizing commodities are the same, does not make it fair or logical.

#### Continued Cross-subsidy from Other Ratepayers

This second option for funding the rural deficit involves continued cross-subsidization by Newfoundland Power and Labrador interconnected customers. As previously discussed, upon proclamation of the *Electrical Power Control Act, 1994*, industrial customers would no longer be contributing to the rural deficit after December 31, 1999.

Member of the House of Assembly, David Gilbert strongly supported this option. Mr. Gilbert indicated Newfoundland Power should pay higher rates for its purchased power to provide a more even playing field for isolated rural areas. Mr. Gilbert said, he wholeheartedly agreed with the transfer of responsibility for the deficit to Newfoundland Power and Industrial Customers in 1989, since he believes in uniform rates across the entire Province. (Transcript, Page 79, May 3, 1995)

However, most hearing participants took exception to the existing cross-subsidy structure in its totality. Those subsidizing the deficit disapproved of substantial cross-subsidization; those expecting to begin subsidizing the deficit were opposed to it and subsidized rural customers wanted lower overall rates, leading to greater cross-subsidization.

The Board heard from Councillor Judy O'Dell, representing the Town of Happy Valley/Goose Bay, who stated that if the Labrador interconnected rates were increased in the future to include a rural rate subsidy, they would be unable to compete with other

locations, such as Quebec, as a possible smelter site for metals mined at Voisey's Bay. (Transcript, Page 57, April 24, 1995).

Cross-subsidization of this magnitude, as a result of social policy relating to rural electrification, amounts to a hidden tax. This should be converted into a visible, better understood tax, that is fairer in its application.

It is questionable whether the ordinary customers of Newfoundland Power realize they are paying this hidden tax. It is equally questionable whether the ordinary Hydro rural customer is aware of who pays this tax. Since Newfoundland Power does not earn additional profit, or lose profit as the result of subsidy, it passes through without alteration to the customers of Newfoundland Power. It seemed to be misunderstood by some interested parties that the subsidy was paid by the shareholders of Newfoundland Power and that the amount of the subsidy which could be paid depended upon Newfoundland Power's profitability. The reality is that it is the ratepayers of Newfoundland Power, not their shareholders, who pay the subsidy.

This second option for funding was not well supported by Newfoundland Power, their expert, Industrial Customers or Mr. Baker. Rural customers provided intervention on the level of rates, but generally did not address who should best fund the deficit.

Mr. Brockman explained (Page 7 of his direct evidence) that the present cross-subsidization structure is neither good ratemaking nor good economic policy. This is due to the sheer magnitude of the subsidy.

Mr. Tom Connors of Newfoundland Power explained the impact of the cross-subsidization on Newfoundland Power's customers [Page 7 of his direct evidence]:

"Exhibit TAC-8 Page 1 of 2 outlines the impact that NP's portion of the total Hydro Rural Subsidy has on NP's domestic customers at various consumption levels. For example, for an average NP domestic customer without electric heat with monthly consumption of 700 kWh, the impact of the subsidy is an increase of \$4.63 per month or \$56 per year in the customer's total electricity cost. For an average NP domestic customer with electric heat with monthly consumption of 1,700 kWh, the impact of the rural subsidy is an increase of \$9.48 per month or \$114 per year in the customer's total electricity cost. These amounts are based on the 7.0% increase plus the associated increase due to GST. The impact of the subsidy is greater in dollar terms for customers with electric heat due to those customers' higher usage of electricity.

"Exhibit TAC-8 Page 2 of 2 outlines the impact that NP's portion of the total Hydro rural subsidy has on NP general service customers at various consumption and demand levels. For example, for a NP General Service customer on Rate 2.4 (over 1000 kVA), with a demand of 1,500 kW, and monthly consumption of 600,000 kWh, the impact of the subsidy is an increase of over \$2,700 per month or \$32,000 per year in the customer's total electricity cost. These impacts are based on the average 7.0% increase plus the increase due to RST."

Industrial Customers were clearly not in favour of cross-subsidization. At every opportunity Industrial Customers pointed out the subsidy raised the cost of producing



newsprint by \$11.90 per tonne at the Stephenville mill. Mills at Corner Brook and Grand Falls would not have to pay as much of the subsidy since they produce their own power, in Kruger's case through its related company, Deer Lake Power. Industrial Customers consequently pointed to the inequity in application of subsidization on the basis of how much of Hydro's power is consumed, instead of ability to pay. They also objected to its effect on their member companies' ability to compete in the international marketplace.

In the final argument of Industrial Customers, it is recommended that the 1993 Cost of Service Methodology be implemented in full no later than 1996. This recommendation would require a rate hearing in order to include Hydro rural rate subsidization in Labrador interconnected rates. Upon allocating Labrador interconnected customers their share of the deficit, Industrial Customers and Newfoundland Power would experience some relief from their present level of subsidization.

Newfoundland Power was highly concerned with the effect of the future cross-subsidization structure. In fact, in Newfoundland Power's final argument (Page 23), it is recommended:

"that Government revise its policy with regards to Hydro's rural service."

This recommendation asks Government to reconsider relieving industrial customers from the obligation to contribute to funding the rural deficit.

The option of funding through cross-subsidization is certainly unpopular with Newfoundland Power, the Happy Valley/Goose Bay Council and Industrial Customers.

Table 9-2

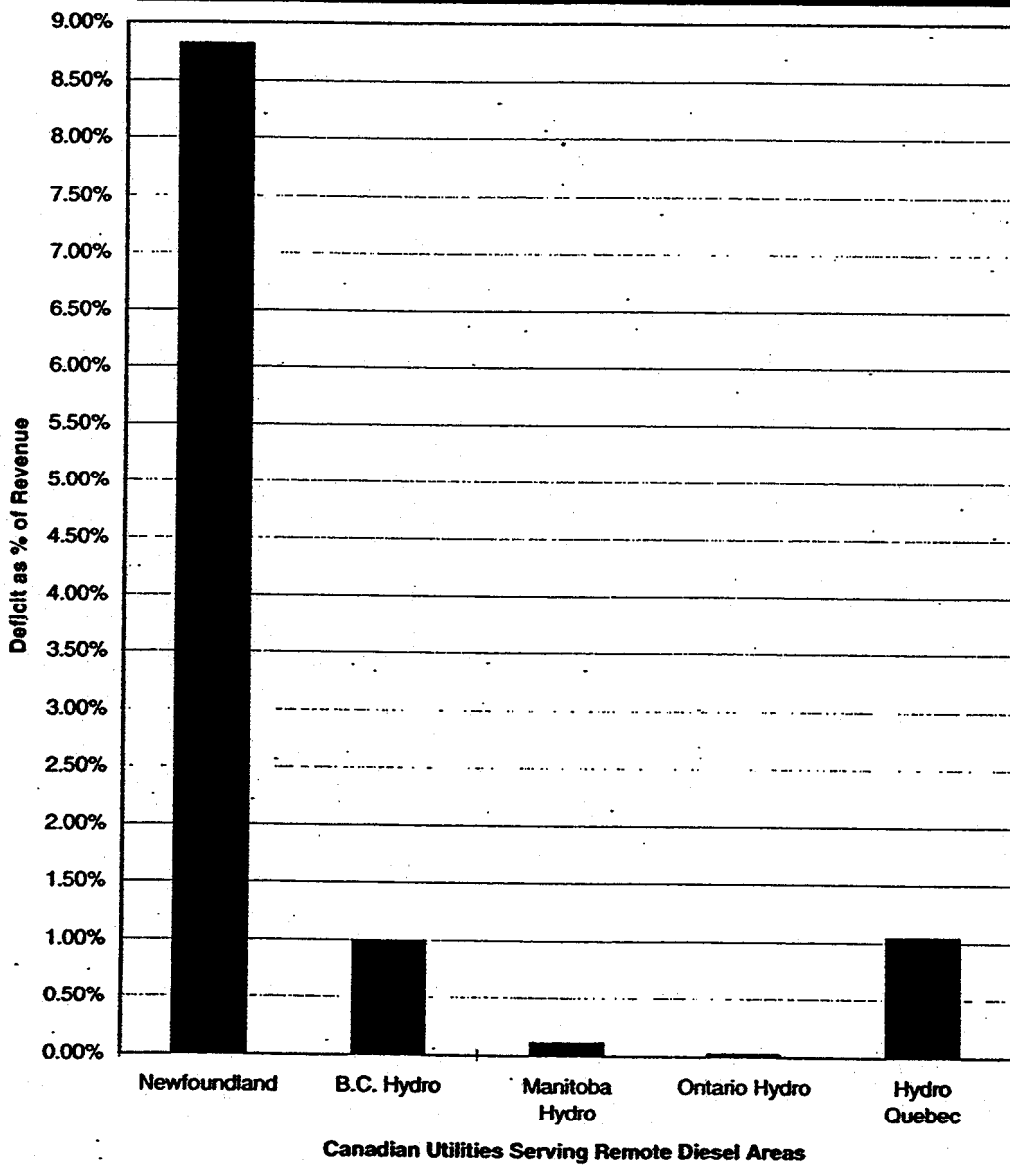
**Summary of Canadian Utilities' Operating Deficits From Serving Remote Diesel Areas**

Source: TAC-3 of Direct Evidence of Tom Connors

Utility	% Total Revenue	Operating Deficit
Newfoundland	8.81%	\$ 25,726,000
B.C. Hydro	0.99%	\$ 19,941,000
Manitoba Hydro	0.11%	\$ 748,000
Ontario Hydro	0.02%	\$ 2,000,000
Hydro Quebec	1.04%	\$ 68,435,000

**CHART 9-1**

**Comparison of Canadian Utilities' Operating Deficits From Serving Remote Diesel Areas**



However, more convincing than its lack of popularity is its negative impact upon the economy. Mr. Brockman and Mr. Baker both testified that large cross-subsidies in rates result in poor economic decision-making by both the subsidizing classes as well as those subsidized. Mr. Baker states it will impact negatively on the economic welfare of the Province.

In conclusion, the present and potential cross-subsidizing classes were not in favour of the option of continued cross-subsidization. All pointed out the economic dysfunction of cross-subsidies. While it is true cross-subsidies occur in many jurisdictions across the rest of Canada, the highest isolated rural subsidy elsewhere amounted to 1% of revenue requirement, whereas in Hydro's case the isolated rural deficit is in excess of 8.8%. This is shown in Chart 9-1 and Table 9-2, both on the page opposite, which are based upon Mr. Tom Connors' direct evidence (Table TAC-3). It should be emphasized that the full rural deficit for 1995 (demand for particulars PUB-1), as shown as a percentage of Hydro's revenue requirement, is 11.7%, as compared with 8.8% for the isolated system deficit only.

Isolated customers pay only 30% of the cost of electricity produced for 1995 (demand for particulars PUB-1). The 70% balance is significantly affecting rates of those cross-subsidizing. They all seek relief. Since there is no cost causality relationship amongst those subsidizing the rural deficit, it is difficult, fairly and equitably, to enter the subsidy into rates. It is no easier to justify a \$114 surtax to a captive low income domestic customer than it is to justify the cost of the subsidy to industrial customers.

the form of a tax which is both more equitable and more efficient. Such a tax can be designed by broadening the base to include not only electricity but also heating fuel.

### Conclusions and Guiding Principles - Rates

- (1) The ability of rural customers to support higher rates is extremely limited. The collapse of the groundfishery has had an enormous impact upon most rural communities.
- (2) Full cost recovery is not feasible. However, in seeking the most equitable and efficient rates for isolated customers the principles of marginal cost pricing should be applied. The application of such principles will support redesign of the rate structure for rural isolated customers without compromising the integrity of a preferentially priced first block. This first block should cover all short run marginal cost, while the third block should cover long run marginal cost and, thereby be reflective of the cost of capital replacement.
- (3) One of the principles of sound public utility practice is that rates should not be unjustly discriminatory. Section 3 (a) of the *Electrical Power Control Act, R.S.N., 1990* rules out such discriminatory rates. The preferential rates which apply on the rural system are discriminatory in nature and such discrimination should be mitigated.

- (4) Cross-subsidization is common in all public utilities. The problem with this Province's rural system is the magnitude of cross-subsidization. The Board has adopted, as a guiding rate principle, that cost recovery from isolated rural customers, both domestic and general service, should be targeted at 50%, with implementation to be phased over a five (5) year period.
- (5) The Board has also concluded that the level of cost recovery for the rural interconnected system has deteriorated to an unacceptable level and that a higher level of cost recovery should be targeted. In order to pursue such cost recovery the Board believes that further investigation and hearings should be initiated within which the concept of rate zones can be explored.
- (6) The Board has taken as a guiding principle that rates paid by Government departments and agencies should not be subsidized by other ratepayers.
- (7) Rural customers are not aware of the cost which they impose on other ratepayers and they should be informed of the consequences of their energy consumption decisions through the receipt of billings which show full cost as well as the amount to be paid by the end use customer.