# ABITIBI-CONSOLIDATED INC

# EVIDENCE OF MELVIN LLOYD DEAN

# Dec. 13, 2001 Revision

- Q. Would you please state your name, address and occupation?
- A. My name is Melvin Lloyd Dean. I reside at 91 Maryland Drive, Stephenville,
  Newfoundland. I am a professional engineer and I am employed by Abitibi-Consolidated
  Inc. ("ACI") as Coordinator of Strategic Projects at its pulp and paper mill at Stephenville.
  I have been involved in electrical rate issues since 1987 and have been in my current
  position since 1999. My responsibilities are primarily power, wood supply, alternate
  energy sources and the mill's business plan.
- Q. What is the purpose of filing revised testimony?
- <u>A.</u> <u>This revised testimony reflects four changes:</u>
  - 1. The rates as revised by Hydro on October 31, 2001
  - 2. The operational changes at Abitibi-Consolidated Inc.(ACI) since the original filing.
  - 3. <u>Correction of an error made in the original filing</u>
  - <u>4.</u> <u>ACI's current understanding of the issues and evidence in this hearing.</u>

- Q. Is there a power supply agreement in place between ACI-Stephenville and Newfoundland and Labrador Hydro?
- A. Yes. There is a power supply agreement dated September 1, 1992, in place between Abitibi-Price Inc .(now ACI) and Newfoundland and Labrador Hydro ("Hydro") for the supply of power to the Stephenville mill. There is also an agreement dated November 30,1993 between ACI and Hydro relating to curtailable power, otherwise called "Interruptible B Power".
- Q. Are you familiar with the financial information relating to the operation of the Abitibi mill at Stephenville?
- A. Yes. As part of my job, I am required to be familiar with the production cost of the operation at Stephenville. Since the spring of 1991, I have been assigned the responsibility for reducing the cost per tonne for electrical power. This responsibility includes review of the cost of power to the mill and, with the assistance of the controller, analysis of data relating to the cost of power to be purchased by the mill. I also analyze the effects of rate changes or other changes affecting the cost of power at the mill and monitor and help implement internal measures to maximize production and minimize energy consumption. I have also been directly involved in rate hearings before this Board since 1991.
- Q. Why is ACI so interested in the cost of power?

A. Abitibi-Consolidated Inc. (Stephenville Division) manufactures approximately 185,000 metric tonnes of newsprint per year. The actual production in 2000 was 180,704 tonnes.
 The 2001 production forecast is <u>173,000</u> tonnes which is lower than normal due to market related downtime.

Stephenville and Grand Falls newsprint is primarily sold in Europe and South America / Caribbean. This adds additional shipping costs that cannot be passed on to customers. To be competitive in the global marketplace we must be low cost in other areas.

Stephenville newsprint is manufactured using 100% thermo-mechanical pulp. This pulping process is energy intensive. Large amounts of energy are required in order to produce the high quality newsprint that is demanded by the pressrooms in the International marketplace.

The mill in Stephenville employs <u>282</u> people directly. In addition, there are 98 ACI employees in the woodlands required for the supply of wood to Stephenville.

In 2000, the Stephenville peak demand was 70,392 kw and the energy used at the mill was 552.3 gWh.. In 2000, the Stephenville mill purchased 536,676,972 kwh from Hydro. The other 15,639,639 kwh was wheeled from our mill in Grand Falls. The 2000 actual purchased power cost for the Stephenville mill was \$17,621,734.

Hydro's proposed rates are estimated to increase Stephenville's power costs by  $\underline{\$2.9}$  million per year. This is an increase of  $\underline{17.0\%}$  based on the power purchased from Hydro in 2000.

This increase in power costs will make Stephenville one of the high-cost ACI mills. High cost mills are the ones that are more likely to be shut down when there is excess inventory in the market place. In 2001, the two high cost ACI mills have taken or are scheduled for the greatest amounts of downtime for inventory adjustment.

Mills with higher manufacturing costs are also less likely to attract capital investment.

The cost of electrical power is a major consideration for the Stephenville mill. In 2000, the Stephenville mill purchased 536.7 gWh of electrical energy from Hydro. This is 42% of the total Island Industrial energy consumption in 2000.

Electrical energy is our second highest manufacturing cost - second only to the cost of wood. Power represents about 20% of our manufacturing cost, thus energy usage and power rates have a significant impact on our bottom line.

- Q. What steps have been taken at the Abitibi mill in Stephenville to minimize costs in recent years?
- A. The Stephenville mill is one of the most efficient and well managed mills in North
   America. The items that are mill controllable are in line or better than average. It is energy,
   wood and shipping, areas that we have limited control, where we are at a disadvantage.

In terms of energy efficiency, Stephenville:

1. Uses premium efficiency motors - this is part of our motor spec when purchasing motors;

2. Uses high efficiency lighting - High intensity discharge;

3. In the office areas, has a program to replace the existing fluorescent light with high efficiency electronic ballast lighting;

4. In the last 10 years, has replaced all eddy current couplings drives with more efficient variable speed drives.

5. Made modifications and changed operational procedures in order to allow us to shut down equipment rather than to leave it idle.

6. Modified and simplified our electrical distribution and eliminated three power transformers which reduced energy losses.

7. Reduced water usage (and subsequent energy requirement) on our paper machine drive cooling unit.

The energy per wrapped tonne of newsprint has decreased slightly since 1992. In 1992, we used 3003 kwh / wrapped tonne. Year-to-date 2001 we have used 2970 kwh / wrapped

tonne. This decrease has been accomplished in spite of market pressures to increase newsprint quality (i.e. put more energy into the pulp. Also, in 1992, 3.9% of the total furnish was purchased pulp (which requires low energy) - the year-to-date accomplishment is with 100% thermo-mechanical (high energy) pulp.

Improvements to our load factor have been made over the years. This reduces our power cost per tonne. From 1991 - 1995, average load factor was 83.1% and from 1999 to present, the load factor has averaged <u>86.9%</u>.Market downtime and strikes in 1996-1998 reduced the load factor in those years.

We continue to review our suppliers in order to ensure that we pay the best possible prices for the products which we use in our operation and to control shipping costs. Excluding energy costs, the overall increase in our costs per tonne of newsprint in the period 1992-2000 have been contained to 4.2%.

- Q. Is there any reason why the cost of power is particularly important to the Stephenville mill?
- A. Yes. This is discussed in detail in the evidence of Denis Jean and Jay Backus. Basically, since the cost of power currently represents 20% of the total production cost of a tonne of newsprint, changes in the cost of power have a significant effect on our bottom line. They also have a significant impact on our competitiveness. Our bottom line is, has been, and will continue to be, extremely important to the short and long term viability of the mill.

If the proposed increases for 2002 are approved, Stephenville's electrical costs for firm energy will increase by \$2.9 million in 2002 over 2001 which is an increase of \$16.50 per tonne of newsprint produced. The costs of the projected increase in 2004 will result in a cumulative increase of \$28.00 per tonne.

The proposed implementation of an 11-11.5% rate of return on equity by 2004 is expected to result in further increases which, cumulatively, will amount to an increase of more than 30% in firm electrical costs at Stephenville. This includes a 23% increase in the average cost per kWh (IC-16, Part 7 and IC-206(3)) and the 7% attributable to the RSP contribution. In addition, changes in contractual provisions, non-firm rates and wheeling charges all have additional cost implications for Stephenville which have yet to be fully quantified.

- Q. Are you familiar with energy issues affecting the cost of purchased power at ACI's Grand Falls mill?
- A. Yes. I am part of a committee which includes representatives of both mills which has been studying the impacts not only of proposed rate increases but also of proposed changes in contract language which will likely affect our costs.
- Q. Is there a power supply agreement in place between ACI-Grand Falls and Hydro?

- A. Yes. There is a power supply agreement dated June 23, 1982, in place between Abitibi-Price Inc.(now ACI) and Hydro for the supply of power to the Grand Falls mill. There is also an agreement dated April 6,1983 between Abitibi-Price Inc, (now ACI) and Hydro relating to compensation on an on-going basis from Hydro for the diversion by Hydro of certain waters of the Exploits River Watershed for the purpose of developing Phase II of Hydro's Bay d'Espoir Hydro-electric Project. That agreement is often referred to as the "Compensation Agreement".
- Q. Apart from the changes in firm rates, what proposed changes to the existing contracts have financial implications for Stephenville and Grand Falls and what are the expected financial impacts of those changes?
- A. In IC-30, the Industrial Customers asked Hydro to outline the differences between the existing contracts and the proposed contracts and to provide the financial impact of the forecast changes. The latter has not yet been provided. However, some of the impacts which increase our costs and cause the total amount of the increase to be greater than 16.1% (Refer to Transcript of D. Osmond Oct. 31, 2001 evidence Schedule A lines 5 & 6) are reflected in the following:

### **Non-firm Rates**

Hydro's proposed Non-firm rate is a catch-all rate which includes what used to be ACI's Interruptible "A" energy, Emergency Power, Supplemental Energy, <u>and Exceptional</u> Energy. <u>The billing condition proposed in article 5.01(d) of the Grand Falls contract will</u> result in excessively high cost in certain circumstances. As an example, if Grand Falls were required to take 1 mw of Generation Outage Demand for an entire month and 20 mw of Generation Outage Demand for two hours during the month, the demand would have to be paid on the 20 mw for the entire month.

### Converters

Article 6.01 relates to issues covered in Article 7 of the existing Grand Falls contract. is critical to Grand Falls. This appears to transfer to ACI - Grand Falls the responsibility for conversion.

Hydro has asked that the converters be treated as Specifically Assigned. This increases Grand Falls Specifically Assigned Charges by an undetermined amount for 2002, which is believed to be significant..

#### **Transformer losses**

In the new draft of the industrial power contract, Hydro is proposing that the transformer losses for ACI-Stephenville's four 230 kv transformers be added to our power bill. This is expected to add \$75,000 - \$100,000 to Stephenville's energy costs. Similar changes are proposed for Grand Falls and will also add cost to its energy requirements Currently, Hydro handles transformer losses in different ways for different customers. The following table summarizes the situation as we know it today and Hydro's current proposal. The table summarizes the customers and the 'effective' voltage at which the power is purchased. This is a convenient way of avoiding the details around meter location and if customer currently pays for losses or not.

The higher the purchase voltage, the greater the losses borne by the customer. The lower the purchase voltage, the more the losses are absorbed by Hydro.

CUSTOMER	CURRENT SITUATION		HYDRO'S PROPOSAL	
	Transformer	Power Purchased @ Voltage (kv)	Transformer	Power Purchased @ Voltage (kv)
ACI - ST	TA1 & TA2 T69- 1 & T69-2	13.8 6.9	TA1 & TA2 T69-1 & T69-2	230 230
ACI - GF	T1 & T2 T3	13.8 230	T1 & T2 T3	230 230
Corner Brook Pulp & Paper	T1 / T2 / T3 (common with NF Power)	66	T1 / T2 / T3 (common with NF Power)	66
North Atlantic Refining	T1 & T2	13.8	T1 & T2	230
Newfoundland Power	Various Transformers	230 130 66	Various Transformers	230 130 66

Nova Scotia Power provides for a reduction in meter readings when energy is metered at transmission voltage. New Brunswick Power seems to limit transformation charges to those circumstances where power is supplied at primary voltages between 4 kv and 25 kv. In that case, the demand and energy rates are increased by 1.5%. Hydro Quebec provides major discounts per kilowatt for Industrial Customers taking power at high voltage. Manitoba Hydro's web site indicates that the rates go down when energy is taken at higher voltages.

Our research indicates that other jurisdictions treat transformer losses quite differently.

#### **Force Majeure and Strikes**

Articles 9.02 and 10.02, respectively, of the 2001 Draft Contract, continue to significantly alter the provisions with respect to billing and demand during strikes and work stoppages for natural and non-natural causes. In particular, the reduction in the Billing Demand is limited to 15% where the problem is that the Customer cannot take the energy that Hydro can deliver in accordance with the agreement.. This is provided in the new Article 9.02(2) and 10.02(2), respectively.

In the new proposal, the only time when full recognition for a reduction in power is permitted is when the interruption is caused by Hydro. There is no provision in the proposed 2001 Draft Contract equivalent to Article 11.08(2) of the 1992 Stephenville Contract or Article 13 of the 1982 Grand Falls contract which provides for a reduction in the minimum monthly payment during a strike at the mill in excess of 30 days.

The strike clause is of importance to ACI. With Stephenville's <u>69,000</u> kw demand, the increased cost per month during a strike longer than 30 days would be <u>\$397,000</u>.

#### Wheeling Grand Falls and Stephenville

The Article relating to Wheeling does not address all the items covered in the existing agreements. The 4% losses included in this rate are above the system average. In fact, if rounded to the nearest whole percentage point (as specified in the application), the losses would be 3% (IC-256). Assigning the GNP transmission lines as common increases the wheeling rate. In the same way that ACI cannot understand why its rates are substantially increased for an interconnection that only benefits the residents and business of the Northern Peninsula, ACI cannot understand the rationale for the GNP interconnection increasing the rate for wheeling between Central Newfoundland and Western Newfoundland.

### **Supply of Surplus Energy by Customer Grand Falls**

Article 10 of the 1982 Grand Falls contract provides for the sale by ACI to Hydro of surplus energy which Grand Falls is unable to take. This is not included at all in the 2001 draft agreement.

# Curtailable/ Interruptible "B" Power

Hydro may or may not be prepared to renew when it expires. That will add significant cost to Stephenville which receives a credit for its willingness to have its power supply interrupted.

## **Article 4 Grand Falls - Off Peak Power**

Article 3.07 of the existing 1982 Grand Falls contract is a clause which potentially benefits ACI-Grand Falls. It provides an incentive for ACI to reduce the Amount of Power on Order to be supplied during Hydro's normal daily peak system demand by increasing ACI's demand during Hydro's off peak hours. Such off peak power, under the existing contract, is then provided with a price concession attached as set forth in the clause. There is no equivalent provision proposed in the 2001 Draft Contract.

Q. How are the proposed rate increases for the Industrial Customers viewed by ACI-Stephenville? A. ACI-Stephenville is frustrated by the magnitude of the proposed increases for 2002 and by the implications of Hydro's rate of return and capital structure proposals for the future.
 ACI's success over the last 10 years in reducing its electrical costs had improved the cost per tonne at Stephenville. This, in turn, improved the viability of each of the <u>mills</u>. This rate increase will put the Stephenville mill in the high cost per tonne category within ACI.

We have participated fully in hearings before the Board involving rate issues and have worked hard at reducing our electrical costs to make us more competitive. Hydro's response to IC-7 shows that the Industrial Customers, including ACI's Stephenville and Grand Falls mills, contributed \$37.8 million dollars to the subsidy in the period 1992-1999. We believed that eliminating the subsidy and implementing the 1993 cost of service methodology would have a long term impact on our electric costs. However, one way or another, this proposal eliminates all of the gains we thought we had made.

As explained by our Cost of Service and rate Design expert, Cameron Osler, the increases for ACI are totally out of proportion to those for Newfoundland Power. As noted above, increases of these magnitudes have significant negative impacts on the cost per tonne at each mill. This affects the future viability of the mills and is likely to have a significant negative impact on the amount of downtime which one or both of ACI's Newfoundland mills may experience in the future.