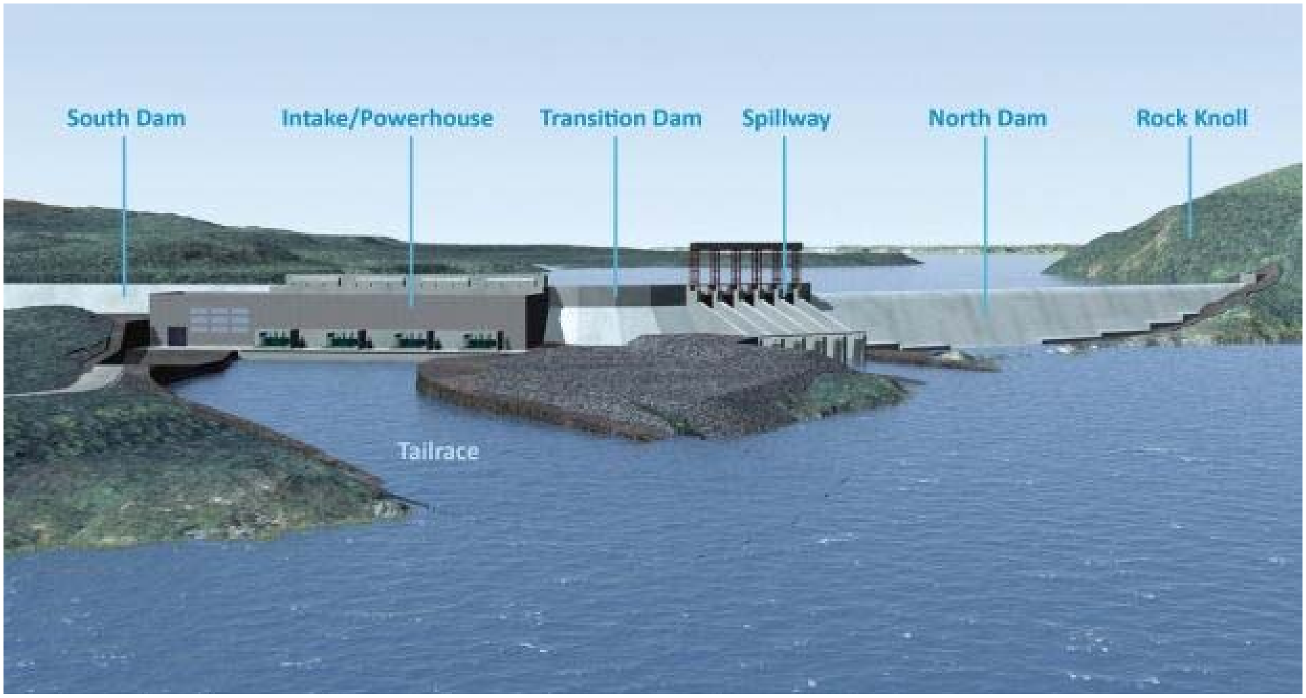
SUBMISSION TO PUBLIC UTILITIES BOARD

October 2019



OWN Muskrat Falls

Proposal for Citizens' Equity in Muskrat Falls Project

or

How Ratepayers/Taxpayers can OWN Muskrat Falls, saving the government Billions in Bank interest payments, over time, while providing a good return on investment to themselves.

(As first outlined in a letter to Minister of Natural Resources, in February 2019)

Author Overton Colbourne, P.Eng.

Table of Contents

Summary

The revenues from the Muskrat Falls Project fall far short of the interest and principal repayment requirements, and will continue in that shortfall position for many years.

Since revenues cannot be increased, the other solution is to decrease the debt owing (i.e increase the equity) by a direct infusion of cash.

Cash can be raised from a public offering of “shares” in the project through direct investment by ratepayers and taxpayers, to repay immediately some of the loans on the project.

Instead of paying interest to the banks, “investors” will be paying the interest to themselves. Investors would consist of willing ratepayers. Rate of return alone to the investor would be attractive, with the added benefit that the investor’s own utility bill is paid to himself.

The government must look seriously at this option, which has the potential of removing $10 Billion dollars, or more, from the repayment schedule, and put a plan into action.

Only two responses from the government are needed:

1. A legal opinion whether the option of early repayment of debt is possible, or not, under the terms of the various loans and bonds, and
2. If not possible, why the government allowed itself to be bound into agreements forbidding early repayment, thereby locking the taxpayers/ratepayers into paying $10 Billion dollars, or more, un-necessarily.

Overcoming the negative publicity, and the public’s scepticism, will be the greatest hurdle to showing how public’s equity position in the Project will in the short term, as well as the long term, be beneficial to the investors and the ratepayers. Saving billions in interest payments to the banks should be the priority for the government, the ratepayers, and the Public Utilities Board.

Former Premier Dunderdale said in her testimony “government can do **anything it wants to**”. Government, the Consumer Advocate and PUB must show that “it wants to...” cut the debt.

The “Rate Mitigation” question then becomes moot by cutting the debt is cut in half.

Introduction

In February, 2019 in an interview on radio station VOCM, the Minister of Natural Resources issued a request to “hear from” anyone interested in buying an equity position in the Muskrat Falls Project.

For quite some time I had been contemplating the problem facing the province in dealing with the massive debt, and especially the interest payments that the project costs had generated. Around the same time as her request, in a Letter to the Editor at the local paper, **The Western Star**, I had drawn an analogy to a new homebuyer who, through circumstances beyond his control, was suddenly faced with the inability to meet his mortgage payments.

In an attempt to generate public comment I used Facebook, with a Power Point presentation, to solicit public comment, hopefully that someone could point out that the very simple solution I am proposing was in fact, and in law, too simple, and that it could not be made to work. I did not get that type of comment.

In August, 2019, I made a public presentation to Judge LeBlanc’s Inquiry, in the ten minutes allotted to me, and posted the Power Point and my slide commentary on the Harris Centre’s website.

In letters to MHA’s I have requested comment, in particular, ***“is there a legal impediment to wanting to repay the debt, early, and avoid paying the interest payments?”*** That should be a fairly simple question to answer. I do not have that answer from anyone.

If there is no legal reason preventing early repayment, then the government should be looking at every possible way to save interest payments, even if it is only one dollar. *”A dollar saved is a dollar earned.”*

This Board, and the government, must support this plan, unless it can convincingly show, with legal opinions to support it, that it cannot be done. By the same token, if it cannot be done, because of any terms in the loan forbidding early repayment, it must show the taxpayers, why the terms were negotiated in that manner.

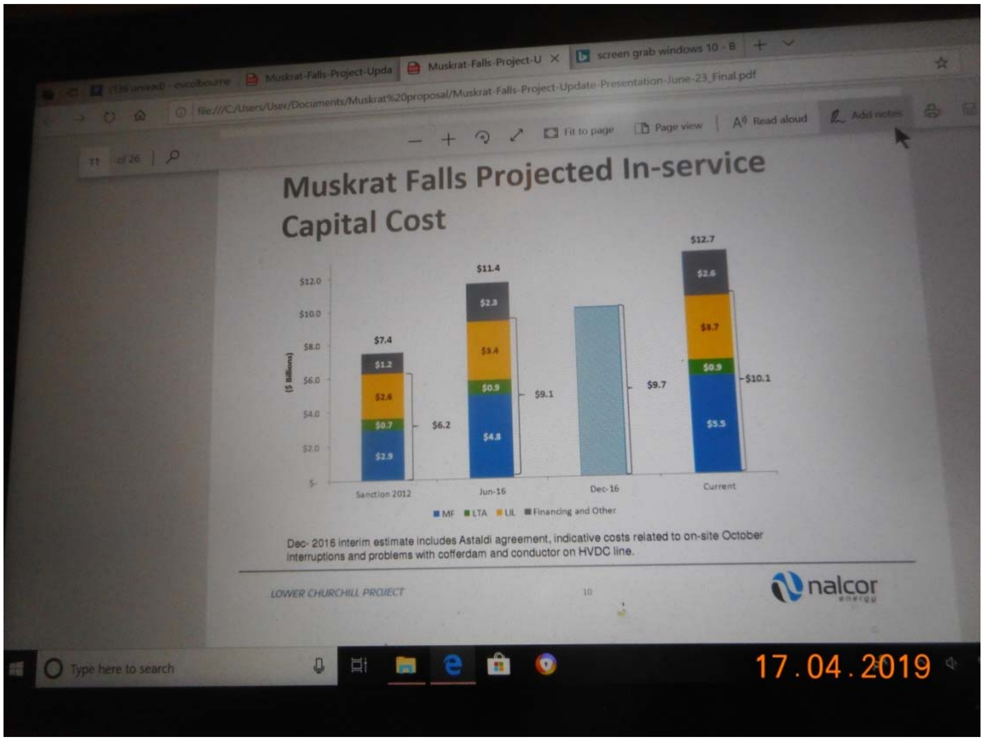
Any, and all, loans should be able to be re-negotiated.

I am able, and willing, to save ratepayers/taxpayers through the Muskrat Falls project, more than $100,000 in interest payments to bank right now with my own money, and still make money for myself (and my heirs) in the bargain.

And, it will not cost the government one cent.

Project Cost

For the purpose of this discussion, we have relied on a figure shown by Mr. Stan Marshall in a presentation in the Spring of 2019:



consisting of $10.1 Billion, Direct Construction costs, and $2.6 Billion in Interest During Construction (IDC).

The above chart shows the Muskrat Falls facility at $5.5 Billion, which, later in the discussion we will round to even $5 Billion, for a defined portion of the asset.

Project Financing

The project financing is a little more difficult to state with any degree of precision. Relying on media reports, and government websites, it seems that the following is a good estimate:

- Project Cost (2019) **P** = $12.7 Billion
- Interest Rate ***i*** = 3.5%
- Term ***n*** = 57 years

Although it is reported that the government has "equity" in the project in the form of paying **Interest During Construction (IDC),** this is really only a book-keeping exercise since, with the province in an overall deficit position, the **IDC** payments are nothing other than loans from the province's general budget, or Hydro income that would have, and should have, been put to other use.

In normal business, "equity funds" are funds provided by the owners of the enterprise, as cash or stock, with no obligation to pay interest or return. The NL government is still obliged to pay interest on what it calls "equity", from the funds which came from the public Treasury's deficit.

My old "**Principles of Engineering Economy"** textbook, Grant and Ireson, fifth edition 1970, **Compound Interest Factors** show a **Capital Recovery Factor**, **A/P = 0.04065** (straight line interpolation between 55 years and 60 years), the

- Annual Payments **A** = $576 Million
- So, the **Total to be Repaid** (over 57 years) is $576M x 57 yrs. = **$29.4 Billion**

for the **$12.7 Billion project**.

This is the *least* expensive way of repaying the debt. There are other ways. For example, with sinking funds payments on bonds, the province may commit to simply meeting the annual interest payment of 3.5%, amounting to about $444.5 Million per year, with the principal remaining to the end of the 57 years. After that time, the total repaid would be;

- Annual Payments **A** = $444.5 Million X 57 years = $25.4 Billion
- Plus Principal **P** = $12.7 Billion
- Total to be repaid = **$38.1 Billion**

We don't know, for sure, how the bonds are structured. It seems to be a combination of sinking funds and interest payments, with amortization of principal. For the purpose of this discussion we will assume the former (which is the least amount.)

In our opinion, the province is obliged to look at every possible way of reducing this **$29.4 Billion** burden to the ‘ratepayer/taxpayers’. (For the remainder of this discussion we will use ‘ratepayer’ alone to replace the cumbersome compound noun. Likely, all ratepayers are taxpayers, while not all taxpayers may be ratepayers.)

And, the simple way to reduce future payments is to reduce present debt.

Other proposals I have seen speak to “re-financing” the loans. While refinancing loans may reduce annual payments, the net effect is to increase total payments, unless of course refinancing consists of better interest terms. Seeking better interest terms cannot be seen as a solution, and should not be considered as an alternate. To do so, would be as folly as predicting the price of oil in project financing feasibility.

Just How Much is $12.7 Billion, Anyway??

The annual payment on the **$12.7 Billion** loan (like a house mortgage) amortized over the 57 year term, is **516 Million Dollars** !!!

$444.5 Million is Interest, alone, in the first year.

In a recent statement by a municipal politician, in reference to the cost of waste water treatment facing the small municipalities of NL, he said that "the (wastewater) problem could cost about $600 Million", a figure which he said the municipalities could never afford.

I believe his figure is low, but without quibbling, that puts the Muskrat Falls debt in context. Just the interest payment alone, for Muskrat falls, in a year or so would solve his wastewater problem, for the entire Province. Yet he sees the cost of waste water treatment as the biggest problem facing us.

His concern was considered dire enough to get seven MP's in the same room with municipal politicians in what he described as "an emergency meeting."

Did they even consider that <u>one year's interest</u> payment will build a secondary treatment plant for greater St. John's...twice over.... according to the City mayor's recent estimate.

<u>One year's interest</u> payment will build water treatment plants for almost the entire province, in a province which has more than 200 boil water advisories in place, or towns which have increased chlorination treatment to the point of bleaching their highly colored surface water supplies, to the point of creating a THM health hazard, as serious as the pathogen potential they are attempting to eliminate.

<u>Two years' interest</u> payments will build the new hospital in Corner Brook.

The Newfoundland public is completely blasé about the enormity of this debt, because it is simply too big to contemplate.

Project Revenues

The only source of project revenue is the sale of power produced.

With the Emera investment, the actual power available for domestic consumption, and external sale, is something less than the total power produced at the plant. This Board is aware of the details, so my numbers which follow are based on my own understanding, and are likely to be wrong, but the actual numbers do not change the premise of the argument.

- Plant Output (annual) 4.9 terawatt-hrs.
- Emera's share ?? 20% or 33% ??
- NL Hydro's share **3.92 or 3.27 tw-hrs.**

What is the market value of electricity as it leaves the Plant? (ie. Before transmission and distribution costs)

In a presentation June 23, 2017 Mr. Bennett quoted *"wholesale and domestic rates are 7.5 cents/kWh and 11.7 cents/kWh (excluding HST), respectively."*

Again, for the purpose of this argument I will use **6** cents per kw-hr (or **$60 Million** per terra watt hr., which is approximately the current wholesale price in the US market.

Therefore, in the first year, at full production being sold, project revenues from sale of power produced at Muskrat Falls might be as little as **$196 Million** (or perhaps $235 Million if the Emera share is but 20%).

So, when financing repayment begins, the **shortfall** between revenues and the first mortgage payment is **$341 Million**, or perhaps even **$380 Million**.

Even if the power is valued at **10** cents per kw-hr., for domestic consumption delivered to the Island, with only half being consumed in the domestic market, and the other half sold for **six** cents, the shortfall would still be **$263 Million - $315 Million**.

Note, I have not mentioned **Operating and Maintenance** costs. In **Engineering Economy** comparison of alternatives, one does not bother with costs that are common to all alternatives. O and M costs will remain the same, no matter what the alternative, such as been presented at these hearings already, so it is not relevant in this discussion.

The Liberty report expresses some concern about the projected operating cost being high. (Without dwelling on the point, I would add a personal view that the operation of this Plant does not become a make-work scheme for some group or the other.)

This Plant should be practically remotely run. The Baie d'Espoir complex with multiple sites spread over almost all the interior of the Island contains at least three remote stations. There are other remote Plants on the Island; Cat Arm, Hinds Lake (skeleton crew), Star Lake, Rattle Brook and more.

From the Liberty report it seems that Muskrat will be run by, or in conjunction with, Churchill Falls. This is ideal as CFLCo has hummed along without political hitch for the last fifty years, and Muskrat should also. After all, it's just another power plant.

Muskrat Falls has practically no associated reservoir infrastructure such as Upper Churchill's dykes and Control Structures, and its massive "Smallwood Reservoir". The piddly "reservoir" at Muskrat must be properly referred to a "head pond" or even the "forebay", which is really all it is. Its function is simply to maintain head on the Plant on a run-of-river power plant. Its storage capacity as a reservoir is very limited, not at all near the six months storage capacity that should be expected of a Northern climate reservoir. Without a real reservoir, Muskrat Falls will likely be putting water through its Spillway as often as isn't.

That being said, with other alternatives considering external sources of revenue to offset O & M costs, those same sources will be considered available for this alternative, so the entire revenue will be considered as debt repayment.

With the six cents and ten cents, as described above, the **Revenue** might be in the order of $261 Million - $313 Million. Say **$290 Million** for round numbers.

So, in the first year of debt repayment, we can say the project **revenue ($290 M) is little better than half** of what will be required to meet the **first annual payment of $516 million.**

Where's the other half of the mortgage payment coming from?

This Board has been given the unenviable task of determining how that shortfall can be met.

Doubling the rates was seen to be a solution. But that wouldn't work. The portion of power shown above at six cents must remain as six cents. (perhaps even less) It is set by the outside market. Therefore the ten cent portion would have to be increased to twenty three cents, or more. That would be just the cost delivered to the utility. Add to that the distribution cost, for cost to the ratepayer.

Obviously, the additional revenue to meet debt schedule cannot be raised from power sales. Other people have said other income can come from other sources, on which I will not comment, but get straight to my point. The other solution is to immediately get rid of some of the debt, and the subsequent interest payments that go with it.

Let’s say half the debt (almost), $5 Billion, can be removed from the $12.7 Billion project cost by “selling” the Power House.

Following is part of a presentation I have submitted to the Muskrat Falls Inquiry, which I have titled:

OWN Muskrat Falls (Slide 3)

Since the revenue cannot be increased, The Solution is

- **Sell the Power House, for $5 Billion, cash, right now, to 50,000 new shareholders (citizens)**
- **Power House will include dams, control structures, turbines, generators, building, up to the point where the conductors exit through the bushings**
- **Transmission Line (LIL and LTA, conductor, switch yards, transformers, converter stations, towers, and submarine crossing) remains with NL Hydro**

This will reduce the debt to **$7.7 Billion**. (I will not deduct what the government calls “equity” in the project, because it is false economy, where the “equity” is simply debt from another source.)

With a new principal amount, **P = $7.7 Billion**

i = 3.5%

with term remaining at 57 years, **n = 57 years , A = $313 Million**

or, with **n = 50 years, A = $328 Million**

n = 40 years A = $361 Million

n = 30 years A = $419 Million

and n = 25 years A = $467 million

Although it may be tempting to maintain a debt repayment schedule of 57 years, with the annual payment of $313 Million, which can be almost met from revenues, even in the first year, I suggest the debt repayment period should be reduced to twenty five or, at most, thirty years.

Since it has been said by others that the obligations of the present debt of $12.7 Billion can be met, then logically, it should be possible to meet the obligations of a smaller debt over a smaller time period, maintaining the same (or even lower) annual repayments.

Slide 5

- **In Year 1, repayment shortfall would be $240 Million, instead of $350 Million**
- **But, the shortfall will decrease each year, and can be made up by NL Hydro profits from existing facilities**
- **By Year 15, with the modest 3% annual increase (historical average past ten years) in electricity value, the revenue will meet the mortgage**
- **And by Year 20, the revenue = $550 Million per year,**
- **Exceeding the mortgage by $83 Million per year**

Slide 6

- **So, how will the shareholders be repaid?**
- **For first ten years, no dividends paid out. NL Hydro uses all revenue toward Transmission Line debt**
- **Next ten years, dividends paid at 3.5%, accumulated on books, but not paid out; loaned to NL Hydro, which uses it toward LIL Transmission Lines**
- **Next ten years, to Year 30, pay out the accumulated dividends, and a negotiated split on gross revenue**
- **Reminder of project life, 100 % power sales to shareholders (after costs)**

By Year 30, or earlier, NL Hydro/government will have paid for the project, and except for the first few years, almost entirely out of revenues. Since under any other alternatives, it would have required another twenty seven years of payments to the banks, Hydro will have paid for, and would own its Labrador Island Link, from savings realized through the citizen shareholders' investment in the Power House, without any up-front investment of its own.

Before this point, the Upper Churchill contract will have been re-negotiated, and without the burden of the Muskrat Falls debt hanging over it like the sword of Damocles, the new contract can have been negotiated fairly.

How can Citizen Shareholders Invest in Muskrat Falls?

The simple answer is, “through a co-op”.

Setting up a co-op through NL legislation "The Co-operative Societies Act" is very simple, and (a) "co-operative basis" means the carrying on of an enterprise organized, operated and administered by its members in accordance with co-operative principles and that is operated as nearly as possible at cost after providing for reasonable reserves and interest or dividends on loan or share capital;"

Societies that may be registered

5. The following societies may be registered under this Act with limited liability:

(a) a society that has as its object the promotion of the economic or social interests or both of those interests of its members, on a co-operative basis;

(b) a society that has as its main object the provision of services for community welfare on a co-operative basis; and

(c) a society established to promote the advancement of societies having objects or principal objects described in paragraph (a) or (b).

The co-operative society would provide $5 Billion from 50,000 members, directly to the government to pay off the loan on the Power House. Each member would own a $100,000 share in the project, which would provide dividends, in perpetuity. (long life projects, like hydro plants, use this phrase, in Engineering Economy)

The return on investment would give credence to the term often used "good for our children and grandchildren."

The co-op would be set up initially with the purchase of a $100 share, to provide working capital. The government would have to advance a loan of say one million dollars while the co-op is being established, which would be re-paid by the share capital. Share capital would be used to pay the administrative costs of the co-op, expected to be more in the first few years, and decreasing with the established co-op life.

When the co-op is established with its first, let's say 1000 members. the members would be in a position to each add their $100,000 investment in the Power House, to pay off the first $100 Million of the loan. The publicity is needed to attract more members.

Setting up the co-op, on paper, will be simple. Selling the idea, after all the negative publicity surrounding the project, will be the difficult part, and will require some good PR.

The co-op will need a respected public figure to lead it.

Why Would Anyone Invest an RRSP this Way?

Recently, I was reminded by the government, because of my age, to begin converting RRSP's to annuities, pensions, life insurance and the like, or even a house, if I didn't already own one, as allowed by the current RRSP rules.

For starters, I converted one lot, $207,211 to a RBC life insurance/pension. RBC will pay me, or my wife, $10,496 annually, and subject to taxes, for the next 35 years.

P = $207,211 , **A = $10,496** , so **A/P = 0.05065** , which is ***i* = *3.5%*** over **n = 35 years**

Since the annual payment is taxable, say at 30%, the net **A = $7,347**

Then the equations become,

P = $207,211 **,** **A = $7,347** **,** **so A/P = 0.03546** **,** which is ***i* = *1 ¾ %*** over **n = 36 years**

This RBC "pension" will not even match the present rate of inflation, and at the end of life, the principal will have been all gone. This was not a good investment.

$100,000 invested today in **OWN Muskrat Falls** , at the same rate of return as the project's bank loans, 3.5%, will yield $3,500 annually, which is about the same before tax rate of return in the first example shown above.

In a recent investor magazine article, Fortis current rate of return on shares, is called a "shining example" as investment, and is quoted at 3.45%, which is also similar to the rate of interest due on the Muskrat Falls loans, at 3.5%.

But, more importantly, the $100,000 invested in **OWN Muskrat Falls**, like Fortis shares, will still be there, and will have increased in value, because of the increase in value of the Plant.

Even at a modest 2% annual increase in Plant value, in ten years, the $100,000 share will be worth $128,000.

At the end of 35 years, at just 2%, the share would be worth $237,000, whereas, again in the example shown above, the RBC pension principal will be worth zero.

More likely, the **OWN Muskrat Falls** share will be worth closer to $500,000 in line with appreciation in value of hydro plants, historically.

How Can a Co-op be Established?

Overcoming the negative publicity that now surrounds the Muskrat Falls Project will be the greatest challenge to reducing the debt. A sceptical public is unlikely to accept that the government has a plan to enable this to happen.

The strongest ally will have to be the Public Utilities Board, which must present this equity proposal as an alternative in any “rate mitigation plan.”

The government will support this proposal in the interest of its ratepayers and taxpayers, to whom they have committed to provide the lowest possible cost.

The Co-op can be started with an interest of just a dozen or so people.

With an initial share capital of say $100, the members will establish a Co-op following the legislation. Members join the Co-op with just a $100 share.

In order to promote the Co-op the government will loan of about one million dollars. The money will be used to hire full time manager, PR, legal, etc. in order to attract about 10,000 members at first. 10,000 members with a $100,000 investment in project equity represent one billion dollars.

Under the rules of a Co-op, one member, one vote, the membership will choose a Board of Directors. A suggestion might be a Board of seven members, say one from each federal riding, for simplicity in geographic representation across the province.

People will not accept the idea overnight. A great deal of publicity will be needed. The silly TV ads promoting programmable thermostats and energy efficient light fixtures (in an electrically heated house??) should be replaced with a reasoned analysis of the advantage of eliminating interest payments.

Over a period of a few years, the fifty thousand shareholders will be found.

A Co-op will also help transparency in the future life of the project. With the equity position, the shareholders will be able to hold the hydro executive accountable for its actions.

The Co-op will issue annual reports, as well as more frequent reports as necessary to attract new membership and to keep existing membership informed.

Eventually, the founding members will be dead, replaced by new members who inherited shares.

Share value will increase in proportion to the value of the asset. After a certain period of time, maybe 25 years, NL Hydro may be in a financial position to start to buy back shares.

An added advantage to investing in **OWN Muskrat Falls** is that it will be tax free. NL Hydro does not pay tax on revenues from sale of power, so the same would be available to the investors who bail out the utility.

A Small Generator Analogy

As noted earlier, the Emera share of power is somewhat cloudy to the layman, but for the purpose of this discussion let's say the power available to the Island, from the Plant's annual output of 4.9 terra-watt-hours is 3.27 tw-hrs.

Imagine the output as being supplied from 50,000 small generators (representing 50,000 shareholders) all interconnected to form the total output. How much would each small generator be supplying?

Plant capacity 824 megawatts divided by 50,000 = 16.5 kilowatts

Plant annual output 3.27 tw-hrs. divided by 50,000 = 65.4 mw-hrs (**65,400kw-hrs**)

The average Canadian household uses about 12,000 kw-hrs annually.

The average Newfoundland household consumption, with electric heat, is about **24,000** kw-hrs annually,

(So, except for peaking capacity, a 16.5 kw generator will run two households, with electric heat.)

Would you buy, today, for $100,000, a small generator, 16.5 kw, that runs on water, requires little maintenance, would last a hundred years or more, and would still be worth a million dollars, or more, after that time?

At just six cents per kw-hr. the value of the 65,400 kw-hrs that would be produced annually by this small generator, is about $4,000, and is likely to increase annually, say 3%, based on historical record of NL power rates over the past decade.

Going back to Grant and Ireson, "what is the annual cost of $100,000 today, over 57 years, at 3.5 % interest." Answer: with A/P = .04065 , A = $4065

Would you buy this generator, today?

Of course you would.

Would you buy this generator with a portion of your RRSP money? I would.

If I went to my RRSP institution today, and asked for $100,000 it might give me $70,000 and withhold $30,000 until tax time next year. Likely, I will have to pay even more.

If I asked for the $100,000 in a ten year annuity, the annual payout might be slightly more than one percent on the capital, say $10,100.

With the same tax rate, say 30%, the present worth of the annual tax payments, over the ten year period, would be about $25,200.

What is the present worth of ten years' power production, valued at $4000 per year? Answer; about $33,300, which is about the same as the tax payable on the $100,000 RRSP withdrawal, and greater than the tax paid on a ten year annuity.

With the historical annual increase in value of power production, about 3% annually, the $4000 would be valued at about $5500 after ten years. Therefore the present worth of the power, with a 3% gradient, is even greater, about $38,000.

So, having purchased the 16.5 kw generator in Year 0, for $100,000 using the RRSP withdrawal, without the initial withholding tax, the value of power produced remains with NL Hydro, without paying me any return. For the first ten years NL Hydro keeps all the value of the power produced, which is about the same amount as the foregone dividends.

After ten years, at 3.5% interest, the future worth of the generator is $141,000. From Year 10 to Year 20, with annual value of power produced is $5,500, and increasing .

What is the future value, after ten years, of a present investment of $100,000 at 3.5% interest? Answer: $141,060

Still, at 3.5% return on the now $141,000 generator investment, the return would be about $4950 which is still less than the value of the power produced.

This dividend would be due to the owner of the generator (the co op investor) but not paid out except in extraordinary circumstances, to be defined in the agreement.

At the end of Year 20, this dividend would be worth a little more than $58,000.

And by Year 20 the generator value will have increased to about $200,000.

After Year 20, the accumulated dividend will be paid out of power sales over, say five years, plus a new agreement to pay future dividends based on power sales. It can be any number of arrangements to suit the investor and the power purchaser. After that time, NL Hydro can begin to purchase back the "16.5 kw generators" at market value. Market value of the generators will likely be more than $200,000 value based on an annual 3.5% increase in value.

Market value, based on the twenty-fold increase in market value of Churchill Falls plant from 1970's (less than fifty years) might put the value of the little generator at about 5% annual increase in value, so say, $250,000.

Otherwise, the investor continues to own the Plant, and receives value of the power produced in the same way as any other plant owner in the province.

Note that I have not made any reference to tax on the value of power produced. NL Hydro does not pay tax on power production, nor does any other producer. Why should this power be taxable, at source?

But would you borrow $100,000 today, at 3.5% interest, over a term of 57 years, to buy that generator.

Of course you wouldn't.

The annual repayment of your $100,000 loan, principal and interest, would be $4065, for 57 years. At the end of that time you will have repaid a total of $231,705, before you own the generator. The bank owned it still, til that time. The value of the power produced would be less than your mortgage payment to the bank. Sound familiar?

What Can Prevent a Co-operative Success?

Two things can prevent this co-operative venture from succeeding.

The first is political will. Unless the government can show that there is a legal reason why this venture cannot be made to work, then the government must show why it does not want to **save the Island ratepayers of this province $10 - $15 Billion**, or perhaps even more.

I suspect the political will is not there, to deprive the banks of interest. The interests of the banks will take precedence over the citizens. This was shown to me recently by the Consumer Advocate, who, when presented with this Plan, said that the loan structures and repayment terms are such that the loans cannot be repaid early, even if the Province were to suddenly come into a huge windfall of cash.

I had expected to hear from the “Advocate for Consumers” some legal advice as to how an early repayment plan might be accomplished, if the cash could be found. Not so.

The second reason it might not succeed is the Newfoundland psyche, which is probably more difficult to understand than the first reason.

In my personal experience, it is not in the nature of a Newfoundlander to want to co-operate for the common good.

This fact was very well documented, more than a hundred years ago, by Sir Wilfred Grenfell, when he tried to establish a co-operative in St. Anthony, my hometown, from the collection of fresh salmon for direct sale into the Boston market.

Although Grenfell was able to raise the price to the fishermen catching the salmon, through a co-operative venture for a couple years, it came at a great personal cost to him, nearly bankrupting his own finances, because the fishermen were unable to hold their heads together long enough to make the project succeed, when the merchants were determined to make it fail.

My own father described the failed venture in less flattering terms than Grenfell, since, in his writings Grenfell never disparaged those he was trying to help. Father described to me very explicitly the fishermen’s own role in the co-op’s demise, which leads me to my conclusion of the Newfoundland psyche. Father described it as “each fisherman could not bear to see another one succeed”, and would suffer himself, rather than see that happen.

Despite the co-operation described in the old folk song, one can be sure that the unfortunate owner of the horse, Kit, when she was dragged from the ice of Tickle Cove Pond, would remain forever beholden to the Oldfords and Whites. As Newfoundlanders, that’s how they would have wanted it.

Thank you.

APPENDIX 1

Letter to Minister of Natural Resources February 2019

47 Brookfield Avenue
Corner Brook, NL
A2H 2R4
26 February, 2019

Honourable Siobhan Coady
Minister of Natural Resources
Government of Newfoundland and Labrador

Proposal for Equity in Muskrat Falls Project

Dear Minister Coady;

I was pleased to hear your comment a few days ago that if anyone wanted to buy equity in the Muskrat Falls project, to "please give me a call". I forget the exact date, but I was in St. Anthony, sometime between February 14 and the 22, when I heard it on radio, either news, or maybe Paddy Daley's show.

I was pleased to hear you say it, because I have been mulling over in my mind for quite some time how citizens can actually have true equity in the project, beyond simply as taxpayers funding a government asset, which most can poorly afford.

I propose that citizens be given an opportunity to purchase the Muskrat Falls Generating Facility, outright. This proposal will need the full support of government, and its assistance, to facilitate the purchase.

The Problem

I believe it is well agreed that:

1. *The Muskrat Falls project cost too much to build*
2. *The government will be hard pushed to repay the loan(s)* ***and the interest payments***
3. *The costs must be recovered, some way. This has not been made clear to the public, yet.*

The Solution

1. *Sell the Muskrat Falls Generating Facility, lock, stock and barrel, for cash, right now (or in the immediate future, when the facility is complete)*
2. *The government will then be able repay the loan, right away, and avoid the future interest payments of 40 years.(??)*

I am not privy to exact costs of the project, but for the purpose of this argument, I have broken the costs into two simple numbers:

1. ***Generating Facility*** *say* ***Five Billion Dollars,*** *and*
2. ***Transmission Facilities,*** *say* ***Five Billion Dollars***

For simplicity, I will use these numbers. The concept will remain the same when other proper numbers are plugged into the argument.

I will define the ***Generating Facility*** *as the dams, control structures, turbines, generators, and powerhouse, up to the point where the conductors exit the powerhouse through the bushings.*

Transmission Facilities *will include anything beyond the conductor after it exits the powerhouse: the transformers, switchyards, converter stations, the Labrador Island Link, transmission line, and the Straits submarine crossing.*

Many people have said that this project will be good for our children and grandchildren, and I am in agreement with that statement. I believe the problem has arisen in that it will be a severe blow to our present economic state, as we struggle to own the project over the next forty years.

Promoters were correct in stating the future value that this project will hold.

I am old enough to have worked on the Upper Churchill project, at various phases, in the 1960's. That project, brought in at a cost of about ***1 billion*** *dollars (1970 dollars) would be worth about* ***6.5 billion today****, just due to the inflationary value of the money. However, my guess is Upper Churchill is worth* ***20 billion****, today, perhaps more. I don't know what it shows on CFLCo's books. You would.*

(Years ago, we used to look at hydroelectric development costs at one million dollars per installed megawatt. About fifteen years ago I was involved in wind studies, just before Muskrat, where we looked at wind development, cost of just over two million per megawatt.)

Eventually, Muskrat Falls Generating Facility will be worth its ***5 billion****, (or 6 million dollars per megawatt) even if it isn't at this moment. I believe this is what the promoters really meant when they were saying it would be value to our children and grandchildren; that is to say, when hydropower development costs exceed six million dollars per megawatt.*

So, to get to my point of equity ownership, rather than simply taxpayer funding, I propose the following:

Issue 50,000 shares, in actual ownership of
the Generating Station, at $100,000 per share.

The shareholders will own the generating facility, outright, just as I own my house, which is shared with another shareholder, my spouse.

The shares would be restricted to private investment, which would exclude investment by Fortis or Emera, or other utility companies. As a corollary to this proposal, I would support selling the Transmission Facility to the utility companies. (I could be persuaded to allow utility investment if individual investment is facilitated such as I am proposing.)

We bought our house in 1979. We were newly wed, and the house was a major purchase, for which we obtained a mortgage at the bank. I'm sure you don't personally recall mortgage rates at that time, 1970's and 1980's, but perhaps you know the history of interest rates at that time. We obtained a mortgage for our house, something over $50,000, which was a major investment. As I recall, our rate was around 7%, when we locked in for five years. We were quite fortunate, as the rates almost immediately started climbing.

When we went to renew, five years later, rates were more than 12%, and when we looked at where our previous mortgage payments had gone, we discovered that in only five years we had hardly dented repayment of principal, and we were simply paying interest. Suddenly, with the new 12% rates, the situation would become even worse.

We decided we would scrape together every penny we could, and pay out the remainder of the mortgage. By then we also were starting our family, with small children, so it was hard. I even drove a Lada, the cheapest car on the market. I decided I would cash in my RRSP's which I had started, almost as soon as the program was started, mostly with rather small amounts during college years of part time work.

With a full time job, cashing in the RRSP's cost me 30%, or so, in income tax. I went against the advice of so-called financial advisors, who I realized were more concerned with their loss of return on my money, than they actually were with my financial well being. I was facing a 12% mortgage rate, which was eventually to go to more than 20%, if I extended the mortgage a few more years.

We bought the house, and have been mortgage free, ever since.

Forgive my diversion, but that is what I propose for buying the Muskrat Falls Generating facility.

The public attention is focussed on the excessive construction cost of the project. There's nothing anyone can do about that. It's built (practically). So there it is.

We tend to forget, or ignore, the interest cost that will be repaid under the current arrangement, which I understand to be a 3.5% rate over a forty year term[1]*. With annual payments, the **5 Billion** dollar loan must be repaid at **$234 Million** per year, for forty years, for a total of **9.4 Billion.** (Just like my house, but interest rates not as bad)*

So, just like my house, which is now worth more than $200,000 on the market, with market conditions being a little better than the inflation rate, purchasing Muskrat Falls today, with cash, to avoid paying almost double to the money lenders, should be a logical solution.

The government seems to be committed to repaying its borrowed money on the basis of what it can afford to repay. (How it can afford to make these payments has not been made clear, almost like if I had lost my job during my mortgage repayment years. How would I be able to make my payments?)

*So, I will accept that the government has a plan to meet it loan repayment (mortgage commitments). On my assumed **10 Billion, at 3.5%, over a 40 year term,** my old **Engineering Economy** textbook, **Grant and Ireson**, 1970 tells me the annual repayments will be **468 Million** per year. (perhaps the government has a different repayment plan, seems I recall seeing a little less than 400 Million being the annual repayment cost, but that doesn't matter for the purpose of this discussion)*

Let's say the government can afford to repay the 468 Million per year. So, without the cost of the interest on the Generating Facility, the entire repayment can be re-directed to the Transmission Facilities.

*So, 468 Million per year, paid toward the **5 Billion** dollar Transmission Facilities debt, will reduce the term of the loan to 13 ½ years, from the original 40 years. The total amount repaid will be **6.3 Billion**, instead of the **9.4** Billion.*

*So, at the end of fourteen years, the government will still own the Transmission Facilities, and be **7.5 Billion better off** (the banks will be sorry) and I and my 49,999 other shareholders will own the Generating Facility.*

1 CBC Former premier Kathy Dunderdale announced in December 2013 that her Progressive Conservative government had finalized terms of the loan guarantee with the then-Harper government. She said it would trim more than $1-billion off total costs, allowing the province to secure a $5-billion loan to be repaid over 40 years at an interest rate of about 3.5 per cent.

Where are those potential Shareholders?

I recently received notification from my RRSP institutions that I must convert my RRSP's to annuities, before the end of the year in which I turn 71. (this year)

Clearly, the financial institutions are quite eager to keep my money in their own hands, as long as it takes, until I decide to exhaust it, on my terms, over time, and the government is all too eager to get their share, as I withdraw it.

For argument sake, let's say the tax rate will be a minimum of 30%. The financial institutions will withhold that amount for the government, just for starters, when dispersing my money to me.

So, a $100,000 requested withdrawal will result in only $70,000, anyway, if withdrawn as one lump sum in one year. Even if withdrawn over time (say a 10 year annuity) the payout will be only slightly better (in present worth) and the government will have slightly higher tax (cumulative) if the tax bracket and tax rate remains unchanged.

I can't easily put my hands on, today, $100,000 cash for an investment. However, $100,000 would not make a great dent in my RRSP portfolio. I suspect there are many people like me.

(There are also many who are, no doubt, able to invest $100,000, so I do not intend in this proposal to restrict investment to RRSP annuities. Cash is fine, too, thank you.)

Therefore, my proposal is that there is a lot of money invested in RRSP's, (some websites say about ***800 Billion****) by Canadians, with 8.3 Million people between the ages of 55 and 74, and 150,000 of them in NL alone.*

So, a RRSP of a nominal $100,000 (which in reality would be only $70,000) would be an enticing withdrawal if the 30% withholding tax was not imposed.

And it would not cost the government anything, other than cost of setting up the program.

RRSP's converted to annuities deliver income tax only at the rate of drawdown, which is often over a period of ten to twenty years. So the income tax is spread over that period as well. It's not as if the government was losing all its tax at one time.

So my proposal would see a RRSP annuity, in the full amount of $100,000 to purchase a share in the scenario I am presenting. (Share value can be revised to other amounts but the principle remains the same.)

The share would not increase in value over the first ten years. At the end of ten years, it would still be worth $100,000 which would be the same as if the $70,000 had been invested at 5.7%, even with an inflation rate of 2%. (not a bad return)

The investment would be locked in for the ten years.

At the end of ten years, the shareholder would be permitted to sell the share back to the government, at its face value, with no capital gains tax, because its value had not changed. However, if kept as a share in the Muskrat Falls Generating Facility, its value will be proportional to the value of the plant, which will be a viable operating power plant, continuing to rise in value, and selling electricity, at market value to NL Hydro and Emera, for the next hundred years or more.

After ten years the plant would start to pay dividends to its shareholders, and publish the share value.

Unlike highways and bridges, which are owned by the government (or as some would say, therefore, the people) power plants don't wear out, and depreciate in usefulness over short periods of time. I don't want to own a highway, which begins to deteriorate, right from the day it is built, and will have to be completely rebuilt after forty years, even after being partially rebuilt, every ten years.

But a power plant, with nominal maintenance, will maintain its functionality forever, or a very long time. The first plant built in Niagara Falls (before 1900) is still operating. Churchill Falls (1973) and Baie d'Espoir (1963) plants are still as good as the day they were built.

Governance and Administration

There is public appetite today for the release of NALCOR from administration of NL Hydro activities. I do not disagree with this sentiment.

NL Hydro had done a very good job of building Baie d'Espoir and subsequent projects.

CFLCo has done a terrific job of managing Upper Churchill.

I propose a new entity, similar to CFLCo, would be set up to manage Muskrat Falls, within the framework of NL Hydro.

*The new entity, let's call it **MFLCo** for the moment.*

It would have its own Board of Directors, elected from the shareholders, who would put themselves forward at an annual general meeting. The directors will put forward their credentials; their desire to serve would be complemented by ability and qualifications, similar to MUN Board of Regents, and not simply political appointments, as we have seen in past NL Hydro boards.

MFLCo would have its own CEO (similar to Jim Haynes when he was with CFLCo) and its own local administration, operating within NL Hydro. It need not be as elaborate as CFLCo's because it would not have CFLCo's distinct shareholder arrangement. MFLCo's shareholders would have a common cause, without the shareholder split that we see in CFLCo.

Let's say the MFLCo, with its new shareholder financing, would come into effect 2021. (Presumably, that's when the loan repayments begin, when the project is online at end of 2020).

That gives a year and half to sell this proposal, and get the 50,000 shareholders on board. There are some innovative people who can make this happen.

With the new company, the first ten years (to 2031) will be the establishment of MFLCo as a viable energy source. As stated earlier, share value will increase (hopefully) with the value of the company.

The next ten years (to 2041) will see the increase in value of MFLCo, and the approach of that all important date 2041, and its implication on Upper Churchill contracts. MFLCo will be an important asset in the province's overall energy policy after that date.

Without the sword hanging over the Province's head, of debt owing on Muskrat Falls in 2041, the Province will be in a much better position to re-negotiate Churchill Falls.

This would also be an important date for MFLCo shareholders and a need for a strong Board of Directors, not politically motivated, whose responsibility would be to the shareholders, and their stock, which had pulled the government out of the financial mess it was in twenty years earlier.

In 2041, the government, and NL Hydro might be in a position to buy back Muskrat Falls from some shareholders. Other shareholders may simply want to continue their investment. (It is not likely that the original investors, the RRSP holders, would still be around, but the shares would have been passed on to the "children and grandchildren" that the politicians have said it would benefit.)

What are the problems with this Proposal?

"Naysayers" will dismiss this proposal, without thought, simply because it is too difficult to think about. "It hasn't been done before", some will say, therefore it can't be done.

Others will point to existing legislation, which will not permit it, at this time. But I was encouraged by Ms Dunderdale's testimony to the Muskrat Falls Inquiry last fall, when she said "governments can do anything, when they want to" (my paraphrase).

Therefore, a lot of enabling legislation will be required to make the proposal work.

Let's say the government wants to carry out this proposal, or a variation of it, in order to save a very large interest payment over the next 40 years.

One should expect the strongest opposition from the banks, who stand to not gain 5 Billion dollars or more. I doubt the loan agreements allow for "lump sum payments" or early re-payment, as a house mortgage might, with penalty. They might, though, I don't know.

The second will be from the federal government, with its RRSP rules, and deferred tax implications. This, too, is not as important as it might appear. MFLCo could be set up as an annuity institution. The RRSP annuities will spread tax payments over ten or twenty years, anyway. The government(s) will get early tax payments only with early deaths, and RRSP's as inheritances.

The third will be from governments, provincial, federal and indigenous, who simply want to prolong the Muskrat Falls financing problem for political gain. To which I say "Get over it."

I have pointed out how to save the province, ie, the NL taxpayers and the Newfoundland (but not Labrador) rate payers, ***4.4 Billion Dollars*** *on the Generating Facility, and upwards of* ***3.1 Billion*** *on the Transmission Facility.*

Let me know what you think of it, as a response to your call for equity positions.

Sincerely,

Overton Colbourne, P.Eng.

APPENDIX 2

Minister's Response July 29, 2019

Newfoundland
Labrador

Government of Newfoundland and Labrador
Department of Natural Resources
Office of the Minister

JUL 29 2019

Mr. Overton Colbourne
47 Brookfield Avenue
Corner Brook, NL
A2H 2R4

Dear Mr. Colbourne:

Re: Proposal for Equity in the Muskrat Falls Project

I am writing in response to your recent correspondence regarding your proposal for addressing Muskrat Falls Project costs.

With regard to the cost impacts arising from the completion of the Muskrat Falls Project in late 2020, please be assured that this government has made it a priority to correct the mistakes of the previous administration and pay for the impacts of their poorly-conceived Muskrat Falls project on Newfoundlanders and Labradorians. To date, we have secured from the federal government an additional and enhanced federal loan guarantee that we announced in 2016. We have also recruited proven utility industry leader Mr. Stan Marshall as CEO of Nalcor, and ensured that project construction was brought on track in terms of greater cost control and effective scheduling to ensure a strong project finish. We also created a committee of officials from Natural Resources, the Department of Finance, NL Hydro and Nalcor Energy to identify and consider additional opportunities to increase electricity system revenue and reduce costs.

To obtain a public and independent perspective on how to address Muskrat Falls cost impacts on the province, on September 5, 2018, our Government provided a reference question to the Board of Commissioners of Public Utilities (PUB) to examine options to reduce the impacts of Muskrat Falls Project costs on electricity rates. This reference has tasked the PUB to examine options including both cost savings and revenue opportunities involving the electricity-related activities of Nalcor Energy and its subsidiaries. A PUB interim report was submitted to government on February 15, 2019 and can be found on the PUB's website: http://www.pub.nf.ca/2018ratemitigation/. The PUB's final report is due by January 31, 2020.

More recently, on April 15, 2019, we released a comprehensive plan on protecting the people of Newfoundland and Labrador from the cost impacts of Muskrat Falls. While there is no single solution, we have detailed a variety of strategies including committing up to $200 million in Nalcor dividends towards rate management, reducing expenses, raising revenue and managing financing of the project. These efforts allow us to commit that there will be no increase in electricity rates due to the Muskrat Falls project. A link to the plan can be found at https://www.gov.nl.ca/nr/muskratfallsframework/.

Newfoundland Labrador

Your thoughtful proposal, which included enabling the people of the province to invest their retirement savings to purchase the project, is timely and topical given that Muskrat Falls Project financing is an area of keen interest for this Government and is also highlighted in the PUB's February 15, 2019 interim report on rate management. Government's April 15 plan for Muskrat Falls includes a commitment to address Financial Management by working with the Federal Government, which has loan guarantees in place for the Muskrat Falls Project. Your suggestions have been helpful to inform our approach as we continue working towards addressing Project financing.

I thank you for offering your insight on this matter and for sending along your proposal, which we have forwarded to the PUB for consideration, without identifying you. I appreciate hearing your views on this important issue.

Sincerely,

SIOBHAN COADY, MHA
St. John's West
Minister

APPENDIX 3

Letter to the Editor, The Western Star, February 2019, published

A Muskrat Falls Proposal

Imagine you had just built a new house, half a million dollars, you're about to move in, thirty year mortgage, and suddenly a life changing incident, such as no job, serious injury, whatever, and you are no longer able to meet your mortgage payments.

And, to make matters worse, the town's biggest employer closed down, the bottom dropped out the housing market, and you'd be lucky to get $400 K for the house.... if you could sell it at all.

What do you do?

Then, a kind uncle offers to buy your house for you (he would own it) but allow you to live in it for the rest of your life.. You can keep the rent from basement apartment, which you had built anyway, from which you would have to pay the property tax, and maintenance and upkeep, for first ten years, while keeping the remainder.

After ten years, you would have to split the basement rent with your uncle, what was left after all the household expenses had been paid. And, if things had turned better for you, you could buy the house back at the original price.

Would you do it? Or would you tell him to go to hell? You're going to default on the mortgage, give the house back to the bank, still be responsible for the $100 K to the bank, and you will look for somewhere else to live and pay rent.

I know what I would do. I'd thank God for the kind uncle, and take him up on his offer.

That's the position this province is in with respect to Muskrat Falls. We often hear of the 12 Billion, or 13 Billion, whatever it is. But those numbers are very misleading. They are the only the principal of the forty (or is it 57?) year mortgage. No one ever talks about the interest repayment. Total repaid will be 25 or 35 Billion.

Remember how you looked at your house mortgage statement, and realized how little you had paid down the principal in the first five years, when you went to renew. And wondered... where did all your payments go?

That's the problem facing the province, concerning Muskrat Falls. The basement apartment rent (sale of power) will only meet the expenses. They have no way to pay the mortgage. So, they need a kind uncle.

Natural Resources Minister Coady recently asked for anyone wanting equity in Muskrat falls to "give her a call". I wrote her, six weeks ago, but no response.

A kind uncle for the province exists in the RRSP annuities. There is 800 Billion dollars held in RRSP accounts, on which the banks are making a lot of money.

I propose that the Muskrat Falls Powerhouse be sold to private investors, giving them equity in the project, using money held in RRSP accounts that are about to mature, (like mine are). With the loan being paid off immediately, the province would be rid of the debt, and its subsequent interest payments, but still collect the rent for the basement, while maintaining an affordable rent for the tenant (ratepayers).

Someday, Muskrat Falls will be a viable energy producer, which will produce electricity at a decent price. And the power plant will last a long time, a hundred years or more, with its value increasing.

*Early promoters of the project relied on the line that it will be "valuable to our children and grandchildren." I agree with that statement and Stan Marshall repeated it at Nalcor's AGM with his "...Muskrat **will** be a good project." (He didn't say when, with the interest payments due).*

I propose the Powerhouse should be sold to individual investors, say $100,000 per share, which investors will own, and have some value. The immediate cash sale will relieve the province of the interest payments, which must be passed on to the ratepayers of Newfoundland only (not Labrador).

For the next forty years (or 57 years) the only people who will profit from the venture are the lenders, who stand to make a lot of money, as the province is trying to repay double the worth of the facility, or more.

I have pitched an idea to the government, how kind uncles, like me, can get them out of their unfortunate circumstances, and all they have to do is make it possible to sell their boondoggle. The only person who can make this happen is Canada's Bill Morneau, from whom they are now taking their marching orders.

Letter to the Editor, the Western Star, March 2019, not published

Muskrat Falls Analogy, Part II

A few people have asked me about the kind uncle I spoke about in my last letter.

The 'kind uncle' would be a co-operative of 50,000 shareholders, who would purchase the Muskrat Falls Generating Station from the government, for $5 Billion outright, at $100,000 per share.

There would be no more mortgage on the Powerhouse, and no interest payments to the lenders. (Minister Coady recently said she had a problem "managing the mortgage")

More about the co-operative later, but first let me tell you about the problem facing the government. Starting year 2021, they will have to start repaying their 12.7 Billion dollar loan, for the Powerhouse and the Transmission Link.

The interest alone, at 3.5 percent on $12.7 Billion dollars is 445 Million dollars annually and with their amortization period of 40 years, the mortgage payment due is actually $595 Million per year. The total repaid will be close to double, or $23.8 Billion.

At 57 years amortization period, the total repaid will be $29.4 Billion, for the sake of reducing the annual repayment by $79 Million each year.

Where will they get the money? It was supposed to be from the "ratepayers", when the estimated cost was less than half the actual cost.

It might have been manageable, after a few years, had it been 6 or 7 Billion.

Muskrat Falls is supposed to produce 4.9 terrawatt hours (Twhrs) per year. Bear in mind that about 20 percent must be 'given away' to Emera, reducing that 4.9 to 3.92 Twhrs for the ratepayers. To meet the mortgage payments,the rate payers must pay $595 Million for these 3.92 Twhrs, or $152 Million per Twhr, or 15 cents per kilowatt hr. Add to that the production and transmission costs.

(Our present residential rate is 11.4 cents, which includes distribution costs.)

Unfortunately, the ratepayers will not need all these 3.92 Twhrs, so the excess must be sold, at much less than 15 cents, probably around five cents, so that loss must be made up by adding to the rate payers' cost, which is where the doubling of rates we hear so much about, becomes a reality.

So to solve the problem....remove the Powerhouse mortgage cost!!!

That will cut the project's mortgage by almost half, hence cutting the charges by half. (Don't remind me that there will be operating cost, I know that, but in the scheme of thing the operating and maintenance costs will be minor compared to the mortgage.)

I have not been able to find details of how that Powerhouse will be operated but I hope it will not become a "make work" project for some Labrador group or another. Muskrat Falls can be operated, practically remotely, controlled from Churchill Falls and St. John's Hydro Control Centers.

For the first ten years the co-operative will allow NL Hydro to sell all the power produced, without paying any dividends to its co-op shareholders, and allowing profits to be applied against the transmission line mortgage. The Public Utilities Board will set the rates. After ten years, dividends will accrue to the shareholders, and if the same sweetheart formula is given to the co-op as has given to Fortis in the past (8% ??? on equity) the Powerhouse will soon prove to be a boon to the children and grandchildren of the co op shareholders.

Actually, the project won't be able to afford 8% return, but it's a good starting point to negotiate.

This is not a new idea. Remember when Clyde tried to sell NL Hydro? The Fortis's of the world would jump at the chance. So, if they now want to buy the transmission line, go right ahead. But the Powerhouse must remain in the hands of the citizens who paid for it.

In a third post, I will explain how the co-operative could work, with numbers, and why it is so lucrative in the long run, as I have in my proposal to the Minister.

Appendix 4

Verbal Submission to Judge Leblanc, Happy Valley-Goose Bay August 8, 2019

Ten Minute Precis

I have an idea which I presented to Minister Coady, six months ago, in an eight page letter, with quite a bit of detail, that can save this Province's taxpayers and Island ratepayers more than ten billion dollars.

All I expected was a polite reply, on a department's letterhead, over someone's signature, thanking me for my time; that they had looked at it carefully, but unfortunately, they could not see how it might work, and detailing the reasons why.

Perhaps they might even have asked for clarification of some point in order to properly consider it.

That didn't happen. I didn't get any reply. I suppose we shouldn't be surprised at them not wanting to create a paper trail.

Before the recent election was called, I sent the same letter, and a Power Point presentation for those who might not like to read eight pages, to every MHA, with the same response. Zippo.

So, following the election, I sent it to everybody again. This time I did get a Blackberry message, from Natural Resources Minister Coady, who said "her officials had reviewed the information and taken it into consideration", whatever that means, and Finance Minister Osborne (the two right ones) said that "the correspondence will be forwarded to the appropriate officials for review." Again, whatever that means.

Like me, my idea was quite simple. The real problem facing us, now, is not the construction cost of this project, however much that is, or was supposed to be. That's done. It's over with. Nothing you can do about it.

The real problem facing us is the interest on the loans. Over 57 years, the interest payments alone will more than double the construction cost. Some people, Liberty Report for example, have said even triple.

The revenues from the project might never be unable to meet the interest payments.

So there are only two solutions: (1) increase the revenue, or (2) decrease the debt.

To be honest, I would have accepted the 23 cents per kilowatt hour on my utility bill, to increase the revenue, if I thought that would have solved the problem. But it wouldn't have. Not by a long shot.

That was simply a number thrown out there, to scare you, and justify the so-called "rate mitigation plans" discussion, all the while deflecting attention away from the real problem. But that's not my comment here today.

My comment, today, is that there is a solution. Decrease the project debt, with a direct infusion of cash. My cash.

So I propose, SELL THE MUSKRAT FALLS POWER HOUSE. I will buy it. Of course, I don't have Five Billion dollars, but I know where to get it. By taking five billion dollars off the debt, today, the remaining debt becomes much more manageable.

What I don't advocate, and I want to very strongly emphasize, is, don't sell it to any private utility company. It must remain in our own hands, as taxpayers and rate payers. I do agree that NL Hydro should get out of the distribution business, by selling its remaining distribution assets on the Island, which will raise a little bit of cash, as well. But do not sell its transmission lines and generating plants..

I've done the numbers to OWN Muskrat Falls, but time won't allow me to go into them. It's on a Power Point I have sent to Harris Centre.

The "I" who would buy the Power House would be a co-operative of 50,000 shareholders, each with a share worth $100,000.

- *We could set up a Co-op society under the NL Co-op legislation, which Article 5 states "a society that has as its objective the promotion of the economic or social interests of its members...."*
- *While NL Hydro would continue to legally own the facility, the Co-op would own 100% of the equity in its assets*
- *It would have its own* ***Board of Directors***
- *And its own* ***Constitution****, with its social objective, to "bail out" NL gov't." The economic interest would be that of its members, and society.*

Where would the money come from?

- *I'm suggesting from RRSP's, but other money as well*
- *There is a Trillion dollars in RRSP's in Canada, held by 6 Million Canadians*

- *2 Million Canadians are between 65 and 70 years old. Having turned 71 this year, my banks tell me I have to put my RRSP's into annuities, and pay taxes to the government as I withdraw it, for the rest of my life.*
- *There are 30,000 NL'ers in this age bracket*
- *The majority of RRSP annuities are never spent. They are left as taxable inheritances*
- *With a stroke of his pen, Bill Morneau can change the annuity rules to allow this investment, just as the RRSP Home Ownership rules were recently changed to benefit the banks and CMHC*

I have detailed how the investment can be made worthwhile to the shareholders, as well as to the government. The shareholders will forgo dividends for the first ten years in place of taxes they would have paid on their annuity withdrawals. This allows the government to use all the revenue for that time. For the next ten years, dividends would accumulate, but not able to be withdrawn until then. For the next ten years, split the gross revenue 50/50. Bear in mind NL Hydro does not pay taxes on its revenue, so shareholders can expect the same courtesy. PUB will probably support that. After thirty years, negotiate a new deal. Deals should not be made more than thirty years. The Co-op shares will increase in value, over time, as the project does, and can be bought and sold, and transferred. When it can afford to, the government will certainly want to buy them back from anybody silly enough to sell.

With the decreased debt, the loan period remaining on the Transmission facilities can be reduced. I suggest about twenty five years.

That period of the first twenty years brings us to the magic year of 2041, and with only five years remaining on the transmission line debt, and what could that means.

But first, we just have to change the negative doom and gloom Muskrat Falls thinking to a positive one.

Imagine if you had had the opportunity to buy 1 of just 50,000 shares in Upper Churchill in 1970, a Billion dollar project, for $20,000 a share. How much money would you have made over the last fifty years? How much would that share be worth today? How much longer is that plant going to last? I know plants in Newfoundland more than a hundred years old, and still producing power more than the day they were built. I know a plant on Niagara Falls is still producing after 140 years.

I don't expect to live that long, but as others have said, "Muskrat Falls will be good for our children and grandchildren." I agree.

It will need a new way of thinking to sell the co-op shareholder idea, but I it can be done.

Read my Power Point, and I would like to see informative comment.

I would also like the government to tell me why, if legally it cannot be done. I think it can.

The government simply has to change its way of thinking. Every option must be considered, even to cracking open piggy banks.

I took courage from former Premier Dunderdale's testimony when she said "the government can do anything that it wants to do. " The key phrase is "that it wants to do". So, does our government want to save paying $15 Billion dollars in interest to the banks? Or not?

That's all it should consider.

Appendix 5

Power Point and "Speaking Notes" to PUB, October 18, 2019

Slide 1

Thank you. My name is Overton Colbourne. I am a Professional Engineer.

With only thirty minutes, I will get immediately to my point. The utility ratepayers of the Island of Newfoundland and the taxpayers of the whole province are facing the largest financial problem this province has ever faced.

Since no one told me the number I requested earlier, if you should find it, please interrupt me and shout it out. That will determine whether or not I should proceed any further.

Although we have heard a lot about the low budget and cost overruns, the aggressive schedule and actual schedule slippage, poor management decisions and a litany of concerns of special interest groups, I have heard no discussion of the actual cost of repayment of the 12.7 Billion dollars (or whatever that number is) in loans, over a term of 57 years. I have asked, and at least one Cabinet Minister actually believes that $12.7 Billion is all that must be repaid..... that the only interest to be paid is the interest during construction. Imagine that. A Cabinet minister, no less.

My comment is not on the fact of a term of 57 years, a length of time that, fifty years ago, my engineering economy textbooks warned against in decision making.

The mistake is made. It's done. We have to live with it, or try to change it.

OWN Muskrat Falls

- **The PAST is the PAST. What's Done is Done. There's nothing we can do about it.**
- **What can we do about the FUTURE? Lots.**
- **The Muskrat Falls Project has produced the biggest debt this NL has ever owed.**
- **At least $ 30 Billion , perhaps 40, or more, that no one wants to say aloud.**

Slide 2

Besides the amount of the loan, and the repayment period, the other part of the problem is that there will be insufficient revenue generated from the project, to meet the annual payments. Simply put, that's the only problem. Well...not counting Transmission Line software.

If you look at two numbers, the annual repayment of $576 Million is short by about $350 Million. Revenue is actually less than half of what is needed, just to meet the mortgage payment.

So there are only two alternatives: (1) increase the revenue, or (2), decrease the debt.

I have not seen any solution proposing any increase in revenue. I will reserve my comment on the ludicrous idea of increasing use of electric vehicles. So my solution is to decrease the debt, and consequently the repayment period.

OWN Muskrat Falls

- **Project Cost (2019)**
  P = $12.7 Billion
- **Interest Rate**
  ***i* = 3.5%**
- **Term *n* = 57 years**
- **Annual Payments A = $576 Million**
- **Total to be Repaid**
  $576M x 57 yrs. = $29.4 Billion

- **Market value of Energy**
  6 cents/ kw-hr.
- **or, say**
  $60M / tw-hr.
- **Annual Revenue (after Emera's share) 3.92 x $60 M = $ 235.2 M**
- **or, (is Emera 25%or 333.27 x $60 M = $ 196 M**

Annual Shortfall starts at $341 M to $ 380 Million

Slide 3

The only way to decrease the debt is to sell off some of the assets.

I propose, SELL THE POWER HOUSE. I want to buy it. For the rest of this discussion I will use the first person, “I” and “my” to refer to the purchase, but I can assure you I don’t have Five Billion dollars. But imagine if someone did. Take five billion dollars off the debt, today, and the debt becomes much more manageable.

What I don’t advocate, and I want to very strongly emphasize, “**don’t sell it to a private utility company.”** It is, and will be even more so, much too valuable. It must remain in our own hands, as taxpayers and rate payers.

Some people have naively commented to me that we already own it. Well we don’t, really. The banks do. And I don’t want to own it that way, anyway; the way it is said I own the highways and bridges. Highways and bridges don’t make any money for me, and they wear out quickly.

I want to own the Power House, just like I own my house. It will make money for me, and my heirs, directly, for a long time, while providing an immediate solution to the Province’s debt problem in the bargain.

It can be done, quite easily. In theory. Getting two Newfoundlanders to hold their heads together long enough might be a little harder.

OWN Muskrat Falls

Since the revenue cannot be increased,
The Solution is, Decrease the Debt!!!

- **Sell the PowerHouse, for $5 Billion, cash, right now, to 50,000 new shareholders (citizens)**
- **PowerHouse will include dams, control structures, turbines, generators, building, up to the point where the conductors exit through the bushings**
- **Transmission Line (LIL and LTA, conductor, switch yards, transformers, converter stations, towers, and submarine crossing) remains with NL Hydro**

Slide 4

With $5 Billion taken off the Muskrat Falls debt, the $12.7 Billion is immediately reduced to $7.7 Billion, which is fairly close to the original estimates. In the early analysis it was said that the project could “pay for itself”, with its own revenues. I will not confuse the numbers with the so-called “equity” that the government claims to have in the project. “Equity” with borrowed money is “equity” in name only. The result on the province’s debt is the same.

Similarly, I will not take into account, savings on Holyrood oil consumption, or operating costs of the Power House.

When comparing alternative solutions, my engineering text books told me there is no need to waste time evaluating components that are common to all alternatives.

Therefore, in the forthcoming analysis, only the differences need to be compared. That is, $12.7 Billion debt versus a $7.7 Billion debt.

So, by reducing the debt, it stands that the repayment period can also be reduced. I have used 25 years just to provide a number for annual payments. Perhaps 30 years is also appropriate. But the concept remains the same. It will still be a far cry from 57 years.

With $ 7.7 Billion debt remaining, the Transmission Line mortgage should be repaid in 25 years (not 57 years)

P = $ 7.7 Billion

***i* = 3.5%**

***n* = 25 years**

Annual payment = $467 Million

Total repaid $467M x 25 yrs. = <u>$11.675 Billion</u>

Slide 5

With a $7.7 Billion debt, over 25 years, revenues from the sale of power, the shortfall in the annual payment in the first year is $240 Million.

With the $12.7 Billion debt, over 57 years, in the first year, the shortfall is $350 Million.

The so-called "rate mitigation plan" presented to the public few months ago, assured the public the $350 million shortfall could be accommodated. Taking that as a fact, then the $240 Million should be all that more simple. I have not made the calculation, but it is likely that this can be accommodated through the oil savings, and "profit" from Baie d'Espoir, without having to affect the normal expenditures of the province.

With annual increases in power purchase price, similar to that seen in the past few years, the annual shortfall will decrease each year. By Year 15 the revenue should be able to meet the annual debt repayments, and by Year 20, will exceed it.

OWN Muskrat Falls

- **In Year 1, repayment shortfall is $240 Million, instead of $350 Million**
- **The shortfall will decrease each year, and can be made up by NL Hydro profits from existing facilities, or as others have already proposed here**
- **By Year 15, with the modest 3% annual increase in electricity value, the revenue will meet the mortgage**
- **And by Year 20, the revenue = $550 Million per year,**
- **Exceeding the mortgage by $83 Million per year**

Slide 6

Which brings me to the question, "Why would anybody want to invest in the Power

House, if not to immediately start turning a dividend?”

Although, it might be argued perhaps a few people will want to invest out of a sense of duty, or patriotism; “patriotism” described by Samuel Johnson as “the last refuge of a scoundrel,” I prefer the definition of patriotism, as “holding elected officials accountable for their actions.”

By investing one’s own money, voluntarily, in the project we are telling the government that we are not satisfied with how the project has been handled, or even their plan for handling it in the future, and that the investors/shareholders will be responsible for it, and pay for it, and reap the benefits.

I propose that for the first ten years, there will be no dividends paid on the shareholders’ capital. That will make more money available for the repayment of the Transmission Line debt.

For the second ten years, dividend will be accumulated, but not paid out.

For the next ten years, the accumulated dividends will be paid out and the gross revenue will be split 50/50. Bear in mind that the citizen shareholders have by now saved the government and Hydro, ten or twelve billion dollars in interest payments.

Thirty years is as long as any contract should be negotiated. Hydro projects are known to last much longer, and are often referred to as having a perpetual life. Therefore, the firstcontract must have a re-negotiation clause. It would be easy to say, for the basis of an initial calculation, but a bit foolhardy to rely on it, that the 50/50 arrangement continue forever.

OWN Muskrat Falls

- **So, how will the shareholders be repaid?**
- **For first ten years, no dividends paid out. NL Hydro uses all revenue toward Transmission Line debt**
- **Next ten years, dividends paid at 3.5%, accumulated on books, but not paid out; loaned to NL Hydro, which uses it toward Transmission Lines**
- **Next ten years, (to Year 30), 50/50 split on gross revenue**
- **Reminder of project life, split to be negotiated, every twenty years, while share value increases**

Slide 7

Where’s the Advantage?

First of all, the advantage accrues to all the taxpayer/ratepayers of the province. Instead of repaying a total of $29 Billion to the banks, the amount is more like $12 Billion, a considerable savings.

The banks will not be pleased with this proposal. So the government must show me that the loans cannot be re-negotiated. Then they must tell me who negotiated a loan without an early re-payment schedule, and why he (or she) did that.

I took great comfort in Premier Dunderdale's testimony to the Inquiry when she said "governments can do anything they want to do." Therefore, the government can find a way to repay a loan early, if they want to. I think I have a solution, but it doesn't need discussion here now.

At the same time, over the first thirty years, the ratepayers will have paid the equivalent of the bank's interest to themselves, the shareholders, who are also ratepayers.

My calculations show that the amount paid to each shareholder, on a $100,000 share will be about double an annual utility bill, for an electrically heated home.

OWN Muskrat Falls

- **Where's the Advantage?**
- **Instead of repaying $29.4 Billion to Banks**
- **Ratepayers pay $11.7 Billion to Banks for a $12.7 Billion Project**
- **Savings $17.7 Billion**
- **At the same time, ratepayers will have paid other ratepayers, who own almost 50% of the project**

Slide 8

Some people will question "no dividends for the first ten years."

My suggestion for the source of this $100,000 share is from a RRSP , at least, for myself anyway. There is approximately a Trillion dollars locked up in RRSP's by about six million Canadians.

In the year a Canadian turns 71, he is required to "unlock" the RRSP's and convert them. Of course, if he is foolish enough, he can cash it all in, and then pay the taxes as if it were earned income in that year. A few days ago, someone earning $600,000 a year, on my money, sat in this chair and said this mess is the fault of the taxpayers. A couple months ago his predecessor told Judge Leblanc the same thing. Well, if it's my fault, I accept the blame, and I'm willing to pay my share, right now.

Last week i went to the bank and I established a RIF for $100,000 that is there now for the government to have, right away. Take it, pay off my part of the debt, and start paying me a fair return on the production of electricity. In order to refuse my offer, someone must tell me why the government cannot repay its debt early, if it wants to.

There are rules concerning the annuities, such as minimum annual withdrawals, which generally favour the recipient, assuming he lives a normal Canadian lifespan, and a little beyond. After age 90, though, the rules are no so favourable, as the government is getting itchy about its taxes, and wants you to die.

There are about 30,000 Newfoundlanders between the ages of 65 and 70. There are more than a million other Canadians in that age bracket.

If a person went to a bank today, and asked to withdraw $100,000 from a RRSP, the bank would give him $70,000 only, as the bank is required to withhold a 30 % tax. When tax time comes round the next year, the recipient will likely pay more, depending on his tax bracket.

If he should die, without having withdrawn the RRSP's, the RRSP funds is considered income in the deceased's final year, which, if there are considerable funds in the account, puts him in a high tax bracket, leaving little for his heirs.

OWN Muskrat Falls

- **WHA-A-T ???? No dividends for ten years??**
- **RRSP's converted to RIF's;**
- **If you went to the bank today, to withdraw $100,000 of your RRSP, they would give you $70,000, at most**
- **At least 30% tax on your $100,000**
- **If you died today, your heirs would net even less**

Slide 9

If you converted the $100,000 to an annuity, and withdrew it over ten years, the tax paid will still be about the same, and the bank will have made money off your money, in the meantime. The government would still have waited ten years for the tax.

So my proposal is that the annuity be immediately converted to a share in Muskrat Falls Power House. With a stroke of his pen, Bill Morneau can change the annuity rules to allow this investment, just as the RRSP Home Ownership rules were recently changed to benefit the banks, CMHC and the building industry.

The government will still collect its tax in the form of the dividend deferred on the shares for the first ten years.

The Power House debt can be wiped out, meaning no interest to the banks. Revenue from Day 1 of operation can be directed to the Transmission Line debt alone.

more, tax would still be the same

- **So, my proposal:**
- **Put the full $100,000 towards Muskrat Falls Power House**
- **With 50,000 shareholders**
- **Equals $5 Billion, and no debt to repay on the Power House**
- **Initially, 100% of Power House revenue is directed to repayment of Transmission Line loans**

OWN Muskrat Falls

- **If you converted your $100,000 to a RIF, over ten years, or**

Slide 10

People willing to put their own money upfront, to pay for the Power House, and eliminate the massive interest payment that would be paid over the next 57 years, can do so by setting up a Co-op, under existing NL legislation, and pay their money forward to the project.

Hydro would continue to be the legal owner of the project, and the revenue would immediately accrue without paying it to the banks.

It might be possible to raise funds to pay off the entire debt, though I am not suggesting it now. Instead of all the revenue, and more, being paid to the banks, it would immediately start paying returns to those who paid off the debt.

- **Article 5 *"a society that has as its objective the promotion of the economic or social interests of its members...."***
- **NL Hydro would continue to legally own the facility, but the Co-op would be the owner of its assets (like the bank owns your house, but in your name, until repaid)**

OWN Muskrat Falls

- **How can shareholders OWN Muskrat Falls Power House?**
- **Set up a Co-op under existing NL Co-op rules**

Slide 11

Setting up a Co op is a simple thing.

An added benefit to having Co op shareholders is that it forces the government to be open and transparent about its future dealings concerning Muskrat Falls. No more "done deals". That date, 2041, is going to be a very important date to Muskrat Falls, especially with 37 years remaining on a mortgage that can't be repaid.

- **The Co-op could be called MFLCo-op (the legislation says Co-op must appear in its name) with 50,000 shareholders**
- **Its own Board of Directors (like CFLCO)**
- **Its own Constitution, its objective, to "bail out" NL gov't. (social) and profit its members**
- **Future Government decisions about the Power House would have to include the Co-op. Accountability !!!!**

OWN Muskrat Falls

- **The Co-op would be set up like CFLCo (3 shareholders own Churchill Falls, NL Hydro is one of them)**

Slide 12

- **Why would a person invest his RRSP?**

- **The majority of RRSP annuities are not spent. They are left as taxable inheritances**

- **RRSP investment would be restricted to no more than 25% (say) of one's total holdings (Feds could control that)**

- **(Investment outside RRSP's would also be welcome.)**

- **The value of the dividends will continue to increase, for "our children and grandchildren"**

- **After 25 years, or so, the gov't or Hydro, can begin to buy back shares, at their current value, from any who want to sell**

- **Shareholders would be able buy and sell their shares to new shareholders**

- **Remaining shareholders continue to collect profit, at the same rate as NL Hydro**

Slide 13

How will you find 50,000 shareholders to invest in a Co op to bail out Muskrat Falls Power House? I'm not advocating a "Go Fund Me" page, but close to it.

TAKE CHARGE is an insert in every electric utility bill in this province. Very likely, every utility in the country has a similar insert. There are also television commercials that promote the illogical use of energy savings light fixtures in an electric heated house.

TAKE CHARGE can be used to promote this idea. About thirty years ago, or so, the same insert was used to promote the purchase of Fortis shares.

The biggest obstacle to be overcome will be to change the negative publicity around the Project to one with the positive aspect of valuable economic return to its shareholders. It is the nature of the Newfoundlander not to co-operate when it is for the common good

The idea will have to be analyzed much more closely than I have shown. If the government were honest in its current discussions they would perform that analysis right now, and present it as an alternative to the secret discussions already underway.

Show it as another alternative to rate mitigation plans. Show the benefits and costs in an economic analysis. Show it in simple language on a TAKE CHARGE insert.

OWN Muskrat Falls

- **Q ...How will you find 50,000 shareholders ???**
- **Answer....TAKE CHARGE !!!!!**
- **NF Power monthly utility bill (and probably every other utility in Canada) includes an insert, with all kinds of information**
- **Promote the OWN Muskrat Falls idea with a professional 'prospectus' of the plan as an insert of utility bill (Fortis shares were promoted same way 30 years ago))**
- **Change the negative doom and gloom Muskrat Falls thinking to a positive one**
- **Will need a new way of thinking**
- **Sell the investment idea to our own ratepayers !!!!**

Curriculum Vitae Overton Colbourne, P.Eng.

Professional Engineer registered NL 1979

Past President, PEGNL 2004-05
Fellow, Canadian Society of Civil Engineers
Fellow, Engineers Canada
Member, Canadian Dam Association
Member, CBP&PL Public Advisory Committee, Forest Managements Standards, CSA Z809, and FSC National Boreal Standard

Education B. Eng. Civil) MUN 1977
Additional training Concrete rehabilitation, Pulp and paper technology, managerial accounting, wastewater treatment, water treatment, and wharf structures rehabilitation

Employment status semi-retired, consulting engineer to two clients, on an as-required basis

Recent Employment
Emera Maritime Link Project,

Valuable Life Experience, 2001, twenty two days in a witness box, in Supreme Court NL, examined and cross examined by eight lawyers, in a civil construction claim