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2014-09-10

Ms. Cheryl Blundon
Newfoundland and Labrador
Board of Commissioners of Public Utilities
120 Torbay Road
St. John's, NL A1A 5B2

Dear Ms. Blundon:

RE: An Application by Newfoundland and Labrador Hydro for approval of a capital project to supply and install 100 MW of combustion turbine generation, pursuant to section 41 of the *ACT.*

Please find enclosed the original and twelve (12) copies my submission regarding the above-noted matter. Paper copies will follow.

If you have any questions, please do not hesitate to contact me, via email danny.liberal@gmail.com or (709) 685-5719.

Sincerely yours,

Danny Dumaresque
Intervenor

Encl.
cc. **NEWFOUNDLAND AND LABRADOR HYDRO**
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Mr. Gerard Hayes, E-Mail: ghayes@newfoundlandpower.com
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Newfoundland and Labrador
Board of Commissioners of Public Utilities
120 Torbay Road
St. John's, NL A1A 5B2

Dear Ms. Blundon:

RE: Written Submission regarding the Application by Newfoundland and Labrador Hydro 100 MW Combustion Turbine Generator

Please find enclosed the original and twelve (12) copies of this letter which is my submission respecting the noted Application.

On May 7, 2014 the Board issued An Order Of The Board No. P.U. 16(2014) in which it granted approval to Newfoundland and Labrador Hydro to proceed with the purchase and installation of the 100 MW of combustion turbine generation at the Holyrood Thermal Generating Station. On Page 4 of that Order *the Board accepts that a separate process should be established to address issues such as generation alternatives, reliability, prudence, costs and cost recovery from ratepayers.*

Other Intervenors have questioned the generation alternatives to this project and the manner in which the costs will be recovered from ratepayers. I am confident these issues will be addressed accordingly.

The following is my submission which will pay particular attention to the prudence of the manner this generation was procured, the reliability of the equipment contracted and the value for money received.

PRUDENCE
(provident care in the management of ratepayer's money)

On April 07, 2014 Newfoundland and Labrador Hydro issued a Call for Tenders for the Engineering Procurement and Construction for a Turnkey 100 MW (Nominal) Combustion Turbine Generator at the Holyrood Thermal Generating Station- 2014-57952-TB.

The CEO of Nalcor indicated at the June 4, 2014 AGM that the corporation had been working on getting this generation since 2010 and indeed a 50 MW unit was included in the Generation Plan for the Island Isolated and Infeed Options presented to the Board in early 2011. In my opinion the procurement of this required generation could have been approached in at least two ways:

1. Purchase a new CT plant directly from a manufacturer and contract out the engineering and construction.
2. Purchase a turnkey package which would include the engineering, procurement and construction of the plant.

As we know by now Newfoundland and Labrador Hydro has decided after 4 years of deliberation to select the second option and we have contracted the turbine and generator as outlined below:

In the response to CG-NP-NLH-001 Newfoundland and Labrador Hydro confirmed that the 100 MW (nominal) combustion turbine procured by Hydro is as follows:

<u>COMBUSTION TURBINE</u>

Manufacturer:	Siemens (Westinghouse)
Model:	SGT6-3000E (501D5A)
Serial Number:	37A7750
Year of Manufacture:	2007

<u>GENERATOR</u>

Manufacturer:	Siemens
Model:	SGEN6-100A-2P
Serial Number:	12009742
Year of Manufacture:	2009

This confirms that the turbine is 7 years old and the generator is 5 years old. The reliability of this plant and the value for money received with this purchase will be addressed later in this Submission.

Before outlining the attributes of Option 1, I would like to point out some pertinent requirements of the Tender Call and the successful ProEnegy Services LLC Tender Bid, where applicable:

IT 6 Tender Security

1. Tenderer shall provide, at its cost and with its Tender, Tender security for ten percent (10%) of the total of Tendered Prices as recorded in Schedule A- Schedule of Prices. If paid by certified cheque it must be drawn on a Canadian chartered bank payable to the owner.

PROENERGY TENDER: On Page 2 of Schedule A it *SPECIFIED*: Tender Submission section (d) ii. A certified cheque in the amount of $USD 6,400,000 drawn on a Canadian chartered bank payable to the Owner is enclosed. A copy of the cheque (Attachment 1) shows it to be a CASHIER'S CHECK drawn on US bank 8723 Sedalia Main. The exchange rate on that day was 1.10 so we could expect to receive approx. $7,100,000 CAN$. On Appendix X: Schedule of Prices the Total = $99,827,669. Ten percent (10%) of this price would be $9,982,766.90 therefore the only security shown with the Tender Submission is less **$2,882,766.90**.

IT 15 Evaluation of Tender

1. Owner reserves the right not to award the Contract. Owner reserves the right to reject any or all Tenders or parts thereof. Award of contract is subject to Board and Regulatory Approval.
2. The lowest Tender or part thereof will not necessarily be accepted. Price will not be the sole basis for evaluating Tenders.

SP 5 Warranty

A two (2) year warranty shall be provided on all parts, including CTG and balance of plant and labour from the time of acceptance of the commissioned plant by the Owner. NOTE: It does not request a **Manufacturer's Warranty** which would be the normal requirement.

PROENERGY CONTRACT: GC 20 Guarantees is the section governing SP 5 Warranty and the only aspect explicitly noted is that " promptly upon receipt of Notice of Owner prior to the expiration of the warranty period as to any Defects in such workmanship or Material, or deficiencies in performance, Contractor shall remedy such Defects or deficiencies as its expense and to the reasonable satisfaction of the Owner; provided that such defects or deficiencies in performance must have appeared with one (1) year after the date of Substantial Acceptance. Further it states that the Warranty could go two (2) years on condition that the company operates the plant for 2 years. Nowhere does it explicitly state that there is a **Manufacturer's** warranty or that **the warranty** covers all parts, including the CTG and balance of plant.

The Merits of OPTION 1: Direct Purchase of CT Plant.

While I cannot profess to know all the consequences of contracting the combustion turbine generator plant directly from the manufacturer, it would clearly provide the following:

1. **Guaranteed cost of a custom made plant**
2. **Manufacturer's Warranty of at least one (1) year**
3. **Latest technology for greater efficiency and lowest emissions since 30 new Models have been commissioned in the past 5 years.**

Further in this Submission the cost of new combustion turbine plants will be discussed but at this point is worth noting what we have received in accepting the tender from ProEnergy Services LLC:

1. **No opportunity to guaranteed plant cost because ENERGY PARTS SOLUTIONS, a subsidiary of PROENERGY SERVICES LLC, was a broker who bought the plant from the original owner. Meanwhile, there is no confirmation of legal title to this plant and with the due diligence applied by Newfoundland and Labrador, surely it was known that this company was not the original owner. Also, it is clear from the Inspection Report on the ProEnergy plant that it will have to be modified for our fuel, air and water conditions.**
2. **There is no Manufacturer's Warrant.**
3. **We are purchasing seven (7) year old technology to the point that the computer system may be obsolete.**

THE RELIABILITY OF THE PROENERGY CTG PLANT

On April 24, 2014 Liberty Consulting Group, advisors to the PUB in the ongoing investigation and hearing into supply issues and power outages on the Island Interconnected system, filed its interim report and recommended that:

Hydro should treat the securing of new generation as a first priority; reach a prompt decision on a preferred option and proceed expeditiously towards an in-service date of December 1, 2014 or, if not possible, by December 1, 2015 at the latest.

As indicated above, the acknowledgement by CEO Martin and the documentation filed confirms that extensive research has been done by Hydro staff for over 4 years to find a combustion turbine. It is agreed that Hydro staff were searching all known manufacturers and industry brokers in North America, if not globally. In the early stages, it appears their work was focused

on securing a brand new CT Unit. On June 4, 2014 CEO Martin confirms that this changed in 2013 when their search revealed the availability of an after-market 100 MW (nominal) Unit. This information was brought to Mr. Martin and it was demonstrated that this unused Unit was capable of delivering twice as much power, could be installed a year early and within the same budget as a new 60 MW Unit which led Mr. Martin to say "why not, go for it".

On May 26, 2014 I posed a Request for Information GT-DD-NLH-002 in which I asked Hydro to please provide copies of all inspections and particularly, any third party inspection of this unit confirming its readiness (reliability).

On August 5, 2014 Hydro relied as follows:

A third party inspection of the unit was completed between April 28 and May 1, 2014 to evaluate the condition and suitability of the unit for use. The unit was found to be in good condition and suitable for use. The inspection report is attached.

On June 4, 2014 CEO Martin confirmed at the 2013 Nalcor Annual Meeting that an Independent Engineer's Report had been done on the unit and indeed a "deep inspection" had been carried out and "in hand". Since I have not received any other reports in response to my question I can only assume that *the inspection report* noted above is the only such report.

The Report

In April of this year AMEC Americas Limited of Oakville, Ontario was contracted by Hydro to undertake a **third party visual inspection/assessment** of the unit to determine if it was stored properly and its storage managed in such a way as to maintain its viability for service in Newfoundland, and to provide an opinion on its suitability for service at the Holyrood site.

The Report *Newfoundland and Labrador Hydro GT Inspection Report* was prepared by Mr. Blair Seckington, Director of Power Technology of AMEC Americas Limited on the basis of his visit to Memphis, Tennessee April 28-May 1, 2014. The Final Report was presented to Nalcor Energy's Mr. Stephen Parsons, P. Eng. On May 30, 2014, 14 days after the contract for nearly $100 million was signed with Proenergy Services LLC.

Apart from the pictures and maintenance records the complete Report was 4 pages. (See GT-CA-NLH-005, Attachment 2) In comparison, the same company and the same Engineer filed a Final Report on December 19, 2011 entitled Holyrood Thermal Generation Station: **Gas Turbine Condition Assessment and Options Study** on a 13.5 MW Gas Turbine. This 231 page Report covered every aspect of readiness and reliability including Level 3 Engineering Inspections of all internal components of this small generator. (See NP-NLH-022, Attachment 1, Holyrood Blackstart)

In documents filed with the PUB Mr. Seckington and his company AMEC was contracted for 3 years to do the *Holyrood Condition Report* which is presently ongoing. In the same year, the company was contracted under the *Muskrat Falls Project Contract Number* LC-EV-108 and in 2013 it was contracted to do the *Newfoundland and Labrador Hydro Facilities Winter Readiness Review.* The final report of the last contract was delivered to Newfoundland and Labrador Hydro on April 16, 2014- 12 days before he began the investigation of the Gas Turbine Unit. Needless to say, this individual and his company's financial relationship with Hydro gives the perception of a conflict of interest.

Internal Inspection

On Page 5 of the Final Report Mr. Seckington notes that *AMEC was contracted to undertake a third party visual inspection/assessment of the unit* so there was no checking of the internal integrity of any of the components in this unit.

The inspection of the internal components of the turbine and generator would have been done by getting inside the stack opening and removing all inspection covers to take pictures of internal components. No such inspections were done.

Furthermore, the maintenance of the internal integrity of these components is to make sure that no oxygen could get inside and cause corrosion. This is done by enclosing the equipment with a nitrogen blanket. This means filling all compartments with nitrogen and capping the openings to prevent any leakage. Scheduled checks should have to be done to insure that there was no such leakage. While the Report included some maintenance logs showing the unit was being observed since October 2009, no reports or logs noting the presence of nitrogen are to be found.

Although CEO Martin told the Nalcor AGM a '*deep inspection'* of the package had been done, clearly it was not. The foregoing details the only inspection done on this unit and clearly due diligence for reliability was not achieved with a walk-around and visual undertaking- a shameful dereliction of duty for such an expensive and critical component of our power generation system for the foreseeable future.

Storage

This Report confirms the Turbine is 7 years old and the Generator 5 years old at the time of inspection. Also on Page 5 it is noted that *the equipment has been in storage since approximately October 2009* and indeed storage reports from this warehouse in Memphis, Tenn. are since October 2009. There is no reference to where the Turbine had been from 2007-2009. In an attempt to review original PO/specifications for the Gas Turbine, Mr. Seckington concluded that *none were available for review during this period.* Nothing in the information provided to the PUB to date shows the **original owner and supporting documentation of original purchase**.

As mentioned above, there were some storage checklists to review which led the author to conclude that *it appears that the equipment is being monitored on a regular basis.* In response to a question concerning the storage of this unit at the Nalcor AGM in June, 2014, CEO Martin said that *GE has a contract for maintenance* of the unit. There is no reference to GE, assuming General Electric or any other company with such initials, in this inspection report.

Location of stored GT Components

Mr. Seckington notes that an indicative walk-down and visual inspection was undertaken and noted that *major pieces of equipment per the inventory list were accounted for* and that all the components were stored in five areas, some indoor while others were outdoors and pictures show that some equipment was stored on the roof of one of these spaces.

Overall observations

Notes taken from this walk-down concluded the following:

- No significant rusting or corrosion of various parts
- Undisturbed dust coating in some ..equipment
- No evidence of vermin or birds nesting in equipment
- Based on the inventory of parts, the stored materials appear to be complete (at least major elements).
- The GT seems in good condition in term of its visible external elements.

It is noteworthy that the computer equipment … *may be obsolete and require replacement by newer systems.*

The unit is only designed for burning natural gas so a new fuel handling system and burner system to use No. 2 diesel will have to be installed.

Mr. Seckington concludes that *overall..the turbine visited seems in good condition and …should be suitable for application at Holyrood, provided:*

a. *The liquid fuel system to be provided by ProEnergy is suitable*
b. *The air intake system and air filter materials are modified so they will be suitable for salt water*
c. *The blackstart propose to be added to the existing system is intergrated*
d. *The NOx emissions capability requirements can be met by the existing water injection system*

It is quite clear that this walk-down and visual inspection of this 7 year old gas turbine shows serious concerns about the integrity of the generation package and its reliability to guarantee electricity this peak demand season. If this was the only inspection, Hydro failed to exercise due diligence in the inspection of this critical element of peak power generation.

The Warranty

In response to a question on this unit at the AGM of Nalcor on June 4, 2014 CEO Martin confirmed that while most units only carry a 1 year warranty there is *a two year warranty on this unit.* All information to date confirms that the Manufacturer's Warranty expired 1 year after construction and it was not transferable.

In response to RFI GT-NP-NLH-022 which asked for the details on the warranty of the CT, Hydro states that the terms of the warranty associated with the CT is attached and the base warranty period is 12 months after substantial completion with an option to extend the warranty period to 24 months if the contractor, ProEnergy is the operator of the plant for 24 months.

Section 11.1 General Warranty states the following:

The Contractor (PROENERGY) warrants that:

a. The Work shall be of good quality and shall be free of defects in materials and workmanship
b. The Work shall be in accordance with the General Inspection Principles (GIP)
c. The Work shall conform in all material respects to the Scope of Work and all applicable Laws and Governmental Authorizations in effect at Substantial Completion.

In the contract between Hydro and ProEnergy, section SC 20 Guarantees outlines the obligations of the Seller and it confirms that the Warranty is only good for 12 months unless the Seller is the operator of the plant for 24 months. It remains to be confirmed but it certainly appears that there is **no Manufacturer's Warranty** on the unit.

THE VALUE FOR MONEY

The addition of the new generation into the Island power system must be the most reliable option available but equally we must be vigilant that it also bring the best value for money to ratepayers. NL Hydro informed the PUB earlier this year that a contract had been signed between them and ProEnergy of Missouri, USA for this generating unit on May 16, 2014.

On May 29, 2014 Contract # 57952 Engineering Procurement & Construction for a Turnkey 100 MW (Nominal) Combustion Turbine Generator at Holyrood Generating Station was awarded to ProEnergy for $99,827,669.00.

Since it has been confirmed that the Gas Turbine unit is 7 years and although never used, I was concerned about its reliability but equally concerned about its cost.

Over the past few weeks I have researched two issues:

a. The cost of a new single cycle combustion turbine, SGT6-3000E (501D5A)
b. The cost of the new but unused, after-market turbine, the SGT6-3000E (5015DA) which Hydro has purchased.

The Cost of a New SGT6-3000E (501D5A)

The Siemens Westinghouse 501D5A 100 MW (nominal) unit has been manufactured since 1993 and in 2006 it was renamed under the new model designation SGT6-3000E. This Series was retired from production in 2011.

In order to ascertain the cost of a this new CT Generator my research identified a Professional Appraisal of the same Model in 2004, sworn Testimony from a Regulatory Auditor attesting to their value in 2007 and the most current estimated value from the leading Industry reference The *Gas Turbine World Handbook.*

The R. W. Beck Appraisal

On November 19, 2004 the Appraisal Company R.W.Beck was requested to perform a limited appraisal to determine the estimated fair market value of the Assets. (Appendix 3) The Assets were 3 x SWPC 501 D5A 100 MW (Nominal) Combustion Turbine and Auxiliaries.

These three Units were manufactured in 2001 and 2002 and were purchased by a Missouri Utility, Aquila, to build their own generating facility. After the market crash in 2002, these units were kept in their storage control and in 2004 they were taken from storage to be installed on the South Harper generating site.

This Appraisal company completed the work in compliance with American standards and described and inspected every component of the Assets including the Combustion Turbines, Generators, Auxiliaries, Transformers and Generator Breakers. The condition of these Assets were verified to be in mint condition and these Assets were assessed at fair market value in November, 2004 of $70,796,850 or **$23,598,950 PER PLANT**.

Since no documentation were provided in my requests for all reports associated with the purchase of this Unit, I can only assume that there was no Professional Appraisal completed before the EPC contract was signed for nearly **$100,000,000**.

Missouri Public Service Commission Utility Services Division Testimony

In a further attempt to ascertain the historical price for these units, I reviewed the testimony of Cary G. Featherstone in Case No. ER-2007-0004. (Appendix 3) Mr. Featherstone was a Regulatory Auditor with the Missouri Public Service Commission. In this testimony Mr. Featherstone dealt with the cost incurred in purchasing and installing 5 x 100 MW (nominal)

501D5A GT units. A utility, Aquila Inc. acquired 3 of these units in August 2002 and installed them at the South Harper facility in late June 2005.

On Page 38 of this testimony it is stated:

As of December 31, 2006, which is the update period used in this case used for the supplemental direct testimony filed on January 27, 2007, the total completed South Harper costs were $117.0 million…The above installation costs include the Total Company South Harper turbines and construction cost. (transmission cost are excluded)

Therefore, in 2007 the total cost of procurement, engineering and construction cost; therein the cost of the new 501D5A 100MW (Nominal) GT plant, installed was **$39,000,000** per unit.

It is also noteworthy on Page 55 of this Testimony that *during an audit in Case No. EO-2005-0156, Aquila provided supporting information on the appraisals per the South Harper valuation issue (Date Request No. 5 in Case No. EO-2005-0156). In material supplied by Aquila, the staff learned that on September 23, 2004, the Rolls Royce Power Ventures offered to sell Aquila two new Siemens 501D5A natural gas-fired turbines that were manufactured in 2001 and placed in storage in Houston and Germany. Both units were offered for $43 million, or $21.5 million each.*

During the Testimony in this case it was revealed that the Utility provided a copy of the 2004-2005 *Gas Turbine World* Handbook to support their costing and that it was in line with others in the industry.

On Page 57 of this Testimony it states:

Gas Turbine World does surveys of the industry and contacts turbine manufacturers to determine its pricing information. Some of its date is for actual purchases made by companies-regulated utilities and merchant companies alike. While there may be added costs for these turbine prices because a utility may want specific features based on individual needs like duel fuel source burning and fast-start capability, typically these are prices what the industry relies on to trend costs of turbine equipment.

Additionally, to determine present value of the price for after-market gas turbines it is common if not mandatory that Professional Appraisers are used to determine such cost. Appraisers such as R.W. Beck were identified in this Testimony. (R.W.Beck was bought by another American company in 2009 and these services are presently being delivered by a company, Leidos. The market for these gas turbines change and certainly after-market units are always available at steep discounts. Discounts of 30% are common in the current marketplace according to industry advisors.

Gas Turbine World 2013 GTW Handbook

Volume 30 of the Gas Turbine World GTW Handbook (Appendix 4) is the latest edition of this assessment into the prices of new single cycle plants manufactured in the United States. The prices they have listed are ex plant which does not include engineering, construction or owner project costs.

On page 38 of this Edition it states under the Scope of Supply that such plants include the following:

The basic scope of supply for an operational simple cycle power plant typically includes gas turbine, electric generator, dry low NOx combustion and auxiliary mechanical and electrical systems.
NOTE: The CTG Package includes the turbine, generator, mechanical and electrical balance of plant. It would not normally include the step-up transformer and black-start capability.

The full description of these components, including the Balance of Plant components, are detailed on the same page of this Journal.

Although the Series Production SGTS-3000E (W501D5A) 100 MW (Nominal) retired in 2011, a few of these units are still available on special order.

On Page 44 of this GTW Handbook Edition it identifies the unit described above to have a **2013** Budget Plant Price of **$32,500,000 USD.** It requires repeating, a brand new CTG plant with a full Manufacturer's Warranty of precisely the same specifications of what Hydro has now purchased would cost **$32,500,000 USD**, picked up at the plant. It should also be noted that Hydro did cover the cost of transporting this package from the US to Holyrood.

The Cost of The SGT6-3000E (501D5A) 100 MW (Nominal)

As identified earlier a EPC Contract signed on May 16, 2014 Newfoundland and Labrador Hydro awarded ProEnergy of Missouri, USA. nearly $100,000,000 to provide and install the turbine plant described above.

Over the past few weeks leading up to the identification of the GT Model, I have contacted people in the selling of new and after-market combustion turbines in the US and communicated with other brokers by telephone and email.

In the early stage of this inquiry I was told that such a unit could be purchased and installed for less than $50,000,000 but I thought this was idle gossip. It would be reasonable to conclude that others in the brokering of these units would underscore the market value since they did not get the business.

However, after reviewing the literature noted above on the Appraisal and the Testimony pertaining to the same Models combined with the current market value in *Gas Turbine World Handbook* it is clear that new 100 MW (Nominal) 501D5A models can be purchased and installed for less than $50 million in the US.

Document Search for the Unit Purchased

Although Hydro knew about this CTG unit since early 2014 the specific Model was not included in its Application for funding in April, 2014 and it was only after a careful review of a Project Update given to the PUB on July 25, 2014 that the specific Model was identified. Upon learning this information I undertook a search of the internet and found that this Unit was being advertised for sale by 3 combustion turbine brokers as follows:

a. Energy Parts Solution, a Division of ProEnergy Services, of Houston, Texas USA, acting as a Broker for this Unit
b. Used Equipment Network, UEN "Your Used Equipment Resource" an Internet Broker.
c. CFAS Enterprises, After Market Utility Power Equipment Brokerage, of New Hyde Park, New York USA

Energy Parts provided a picture of the turbine, the same picture was used by CFAS Enterprises and all three outlined the specifications of the turbine and generator and expected performance statistics as follows:

New Siemens SGT6-3000E 100 MW (Nominal) Gas Turbine Package For Sale

Gas Turbine Model	SGT6-3000E (501D5A)
Year	2007
Fuel	Natural Gas
Generator Model	SGEN6-100A-2P
Generator Rating	120 MVA, .90 pf (at 40C)
Voltage	13.8 kv
Expected Performance Data	
Net GT Power	102.9 MW
Net GT Heat Rate	10,289 BTU/ kw-hr
Barometric Pressure	14.271 psia
Inlet Air Temperature	95F
Relative Humidity	60%
Evaporative Cooler	ON
Fuel Lower Heating Value	20,981 BTU/lb LHV

While the pictures and other information were the same I decided to contact the two companies which were advertising the Energy Parts Gas Turbine Package and see if this was indeed, the very same package.

On July 28, 2014 and August 8, 2014 confirmation was received that this was the same unit advertised by Energy Parts and that it had been sold 3-4 months ago.

In addition to the above, it was also confirmed that Energy Parts was the authorized Brokers for this Gas Turbine package.

Cost Verification

The most prudent business practise to establish cost of this unit would have been to commission a Professional Appraisal of the Package by an independent appraisal company in the United States. However, there is no evidence that Hydro commissioned any evaluation of the fair market value of this unit.

To ascertain value in the absence of such information I contacted the companies advertising the unit. While I am not prepared to show the source I can confirm that Energy Parts Solutions confirmed they were representing the owners, who were requesting **$22,000,000** for the package but they were told to forward all reasonable offers. This unit had been on the market for many years and it was clear that all offers would be considered and one would likely get the package for considerably less than $22,000,000.

Apart from the price, it is noteworthy that Energy Parts was not the owner and there is no documentation in the Tender Submission made by this company on April 21, 2014 that they were the legal owner and/or had the legal authority to sell this combustion turbine plant.

On July 28, 2014 I received a telephone call from Used Equipment Network in which they confirmed that the unit had been sold 4 months earlier but that it would not carry any Manufacturer's Warranty since it would have expired one year after manufacturing. When asked about the selling price, the gentleman confirmed that while the final price was unknown, the asking price was **$22,000,000**.

With this information there is no doubt that the Gas Turbine Package Hydro has contracted for installation at Holyrood is the unit that was widely circulating on the internet for a negotiable price of **$22,000,000**.

Installation Cost

In the tender documents released on April 10, 2014 Hydro requested all bidders to allocate $8,000,000 for construction of a building Gas Turbine plant. Outside of this special expenditure there are no other additions to the installation outside of the normal request.

In my review of the literature available and conversations with industry it is widely accepted that an installation cost of $15,000,000 would be reasonable. In Exhibit CE-47 Rev. 1(Public) submitted to the PUB in July, 2011 by Newfoundland and Labrador Hydro, it was confirmed that

a high level estimate to purchase and install a new 50 MW gas turbine would be $40,000,000 and that there was an allocation of $15,000,000 to cover *site acquisition/preparation, fuel storage/distribution, environmental enhancement options, integration into the Island grid, engineering/project management (internal and external consultant).*

It is noteworthy that the three other bidders who responded to the Tender Call put their installation cost less than $15,000,000.

Therefore, while I cannot provide an audit of all costs outlined in the Scope of Work and the Installation Cost it is very difficult, if not impossible, to account for an expenditure over $60,000,000 as outlined below:

UNIT	COST (CAN $)
Gas Turbine Package	$25,000,000
Installation	$17,000,000
Building	$ 8,000,000
Contingency	$10,000,000
Total	$60,000,000

Needless to say the inability to reasonably account for nearly **$40,000,000** is very disturbing.

The Public Utilities Board in Order No. P.U. 16(2014) granted approval for the expenditure of $119,000,000 for the purchase and installation of this unit on May 7, 2014 because early approval was critical to get it in service for this coming winter and peak demand on the Island power system.

In its Order the Board acknowledges that *an application of this nature would normally be subjected to full regulatory review prior to an Order being issued. The Board accepts that a separate process should be established to address issues such as generation alternatives, reliability, prudence, costs and cost recovery from ratepayers. This process will allow requests for information, filing of evidence and submission, and a public hearing if required.*

Conclusion

I submit that based on the information which I have gathered and the documentation which has been supplied by Newfoundland and Labrador Hydro in their Response to RFIs raises considerable concern about the prudence in the decision-making and tender process, the reliability of the chosen option and if the ratepayers are getting the best value for money. As you can appreciate from the documentation provided there are many unanswered and troubling questions surrounding the project. Furthermore, I do not believe the issues can be fully understood without calling witnesses to the evidence and experts from the industry.

RECOMMENDATION

It is with this in mind that I hereby request the Board to hold a public hearing on this Application by Newfoundland and Labrador Hydro. It is only through the public hearing process will I, as an Intervenor, be able to call witnesses to defend evidence and bring expert witnesses and have the issues resolved to the satisfaction of ratepayers. Many unanswered questions remain including;

1. Why was the tender accepted.
2. Why did we opt for 7 year old technology over brand new units with full Manufacturer's Warranty.
3. Why was there no Professional Appraisal.
4. Why was there no internal inspection and truly Independent Engineer's Report.
5. Why was there no negotiation of the final price knowing the market price of the unit.
6. Why do we not know the Original Owner and the price paid in 2007.
7. Why do we not have the Original Purchase Order.
8. Why is there a 7 year old turbine and a 5 year old generator.
9. When was Nalcor and Proenergy introduced and by whom.
10. Do we have the legal opinion that a Manufacturer's Warrant or equivalent exists on this unit.
11. Why was the contract signed before the final inspection report was filed.
12. Is the expenditure a prudent one.
13. Do Nalcor perform industry due diligence.
14. Has these units operated in climates such as ours and using diesel instead of natural gas. If so, please provide a summary of the results.
15. How compatible is this unit with existing equipment at Holyrood.
16. Why is there a $8 million allowance for a building instead of going to public tender to our construction industry.
17. When and how did Hydro learn this company was under investigation by the FBI and other American judicial Agencies.
18. What additional due diligence was performed by Nalcor upon learning of these judicial investigations.
19. What role will Proenergy's Canadian subsidiary play, if any.
20. Why does the record not disclose where the turbine was for its first 2 years.
21. Was the option of powering this unit with LNG explored.
22. What are the specific emissions to come from a 30 day use of this unit at full power using our fuel not natural gas.
23. Why would we knowingly buy technology that would not meet emissions requirements without Ministerial exemption.

I hereby advise the The Public Utilities Board of Newfoundland and Labrador that it is my intention to call such witnesses and experts to have these and other questions answered and the public is assured that we had a proper public tender process, this unit is the most reliable and indeed we are getting the best value for money.

If you have any questions, please do not hesitate to contact me, via email danny.liberal@gmail.com or (709) 685-5719.

Sincerely yours,

Danny Dumaresque
Intervenor

Encl.

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