Q. What documentation governs operation of generation that Hydro does not own on the Island; i.e., license, connection agreements, grid code, etc? Please file copies of such documentation.

A. The following documents are attached:

- CA-NLH-010 Attachment 1, which is a Service Agreement with Corner Brook Pulp and Paper, as approved by Order No. P.U. 4(2012);
- CA-NLH-010 Attachments 2 through 5, which are called "Operations Agreements" but are, in fact, schedules to the Power Purchase Agreements which Hydro has with the non-utility generators for the purchase of power and energy. These "Operations Agreements" set out the technical and operating requirements aspects of those Power Purchase Agreements;
- CA-NLH-010 Attachments 6 through 9, which are Hydro's Operating Instructions with regard to the above-noted Operating Agreements; and
- CA-NLH-010 Attachments 10 and 11, which are, respectively, Operating Instructions with regard to Corner Brook Pulp and Paper energy exchanges and with regard to Island Generation Supply – Gross Continuous Unit Ratings.

NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

AN ORDER OF THE BOARD

NO. P.U. 4(2012)

IN THE MATTER OF the *Electrical Power Control Act, 1994* SNL 1994, Chapter E-5.1 (the "*EPCA*") and the *Public Utilities Act*, RSNL 1990, Chapter P-47 (the "*Act*"), as amended, and regulations thereunder;

AND

IN THE MATTER OF an application by Newfoundland and Labrador Hydro for the approval of certain rules and regulations pertaining to the supply of electrical power and energy to one of its industrial customers, Corner Brook Pulp and Paper Limited.

WHEREAS Newfoundland and Labrador Hydro ("Hydro") is a corporation continued and existing under the *Hydro Corporation Act, 2007*, is a public utility within the meaning of the *Act*, and is also subject to the provisions of the *EPCA*; and

WHEREAS on December 22, 2011, Hydro filed an application (the "Application") seeking approval on a permanent basis of certain rules and regulations pertaining to the supply of electrical power and energy to one of its industrial customers, Corner Brook Pulp and Paper Limited ("CBPP"), pursuant to Section 71 of the *Act*; and

WHEREAS on December 23, 2011 the Board advised the Consumer Advocate, the Industrial Customers and Newfoundland Power Inc. that comments on the Application must be provided to the Board by January 24, 2012; and

WHEREAS on January 24, 2012 the Board received correspondence advising that Newfoundland Power Inc. and the Industrial Customers had no comment in relation to the Application; and

WHEREAS on January 25, 2012 the Board received correspondence advising that the Consumer Advocate had no comment in relation to the Application; and

WHEREAS on April 17, 2009 the Board issued Order No. P.U. 17(2009) which approved on a pilot basis, for a period of no longer than two years, a CBPP Service Agreement with a demand credit rate structure intended to facilitate more efficient use of the CBPP's hydraulic generating resources; and

WHEREAS on March 24, 2011, in Order No. P.U. 6(2011), the Board extended the CBPP Service Agreement on a pilot basis to July 15, 2011 and ordered Hydro to file an application for approval of a service agreement for CBPP by June 15, 2011; and

WHEREAS on July 8, 2011, in Order No. P.U. 15(2011), the Board extended the CBPP Service Agreement on a pilot basis until a further Order of the Board and ordered Hydro to apply for approval of a service agreement for CBPP no later than December 31, 2011; and

WHEREAS the Board finds that the report filed by Hydro with the Application shows that it is possible that the CBPP Service Agreement may result in fuel savings and benefits to some or all customers but Hydro is unable to demonstrate the full impacts given that storage levels have been high and there has been little to no displacement of fuel consumption at Holyrood Thermal Generating Station since the implementation of the pilot project; and

WHEREAS the Board finds that given high storage levels and uncertainties surrounding Hydro's Industrial Customers' rates as a result of the outstanding issues surrounding the Rate Stabilization Plan and the length of time since Hydro's last general rate application, it is not appropriate to approve the CBPP Service Agreement on a permanent basis at this time.

IT IS THEREFORE ORDERED THAT:

1. The Service Agreement for Corner Brook Pulp and Paper Limited, as set out in the attached Schedule "A", is approved on a pilot basis until a further Order of the Board.

2. Hydro shall file with its next general rate application a proposal for approval of a Service Agreement for Corner Brook Pulp and Paper Limited and shall attach a report which sets out the impacts of the Service Agreement initially approved in Order No. P.U. 17(2009) for Corner Brook Pulp and Paper Limited, including analysis in relation to potential and actual fuel savings at Holyrood, the efficiency factor at the Holyrood Thermal Generating Station, the Rate Stabilization Plan, and the allocation of costs in revenue requirement.

3. Hydro shall pay all expenses of the Board arising from this Application.

DATED at St. John's, Newfoundland and Labrador, this 9th day of February, 2012.

Darlene Whalen, P.Eng.
Vice-Chair

Dwanda Newman
Commissioner

James Oxford
Commissioner

Cheryl Blundon
Board Secretary

Order No. P. U. 4(2012)

Schedule "A"

Newfoundland and Labrador Hydro

Service Agreement

with

Corner Brook Pulp and Paper Limited

THIS SERVICE AGREEMENT made at St. John's, in the Province of Newfoundland and Labrador on the day of .

BETWEEN: **NEWFOUNDLAND AND LABRADOR HYDRO**, a corporation and an agent of the Crown constituted by statute, renamed and continued by the Hydro Corporation Act, 2007, Revised Statutes of Newfoundland and Labrador, Chapter H-16, (hereinafter called "Hydro") of the first part;

AND **CORNER BROOK PULP AND PAPER LIMITED**, a company organized under the laws of Newfoundland and Labrador (hereinafter called the "Customer") of the second part.

WHEREAS Hydro has agreed to sell Electrical Power and Energy to the Customer and the Customer has agreed to purchase the same from Hydro according to the Rates, Rules and Regulations set by the Board of Commissioners of Public Utilities for the Province of Newfoundland and Labrador and by the terms of this Agreement;

AND WHEREAS the Customer has hydro-electric generating capability which the parties wish to be operated in a manner which optimizes energy production;

THEREFORE THIS AGREEMENT WITNESSETH that the parties agree as follows:

ARTICLE 1
INTERPRETATION

1.01 In this Agreement, including the recitals, unless the context otherwise requires,

(a) "**Amount of Power on Order"** means the Power contracted for in accordance with Article 2;

(b) "**Approved Planned Outage**" means an outage or reduction of capacity of the Customer's generation or transmission system undertaken by the Customer for scheduled maintenance and approved by Hydro not less than one week in advance of the start of that outage;

(c) **"Billing Demand"** means the components of the Customer's monthly Power consumption for which Demand charges apply as determined in accordance with Articles 3 and 10;

(d) "**Board"** means the Board of Commissioners of Public Utilities for Newfoundland and Labrador;

(e) "**Capacity Request**" means Hydro's request to the Customer to provide an amount of capacity equal to its Generating Capacity;

(f) "**Customer's Total 60 Hz Demand**" means the Demand at any particular time determined by adding the amount of the Generation Output, and the amount supplied to the Customer at the Hydro Delivery Points, less the amount received by Newfoundland Power at the Delivery Points to Newfoundland Power;

(g) "**Delivery Points to Newfoundland Power**" means the 66,000 Volt terminals of the station power transformers at Marble Mountain and Pasadena, both of which are serviced from Deer Lake Power's L1 transmission line or at such other location or locations that Hydro and the Customer mutually agree in writing;

(h) **"Demand"** means the amount of Power averaged over each consecutive period of fifteen minutes duration, commencing on the hour and ending each fifteen minute period thereafter and measured by a demand meter of a type approved for revenue metering by the appropriate department of the Government of Canada;

(i) **"Electricity"** includes Power and Energy;

(j) **"Energy"** means the amount of electricity delivered in a given period of time and measured in kilowatt hours;

(k) **"Firm Energy**" means the Energy supplied during a month at the Hydro Delivery Points net of the Energy supplied at the Delivery Points to Newfoundland Power less Interruptible Energy, Generation Outage Energy, Oil-fired Boiler Replacement Energy and Secondary Energy. The Firm Energy exclusive of Frequency Converter Replacement Energy can in no case exceed the Amount of Power on Order for the period multiplied by the hours in that month;

(l) **"Firm Power"** means, except as varied by paragraph 3.02(a) and subject to Clause 3.03, the Demand normally associated with the Amount of Power on Order;

(m) "**Frequency Converter Replacement Energy**" means the reduced capability of Hydro's 50/60 Hz frequency converter multiplied by the duration, in hours, of the outage or reduction in capability to Hydro's 50/60 Hz frequency converter;

(n) "**Frequency Converter Replacement Power**" means the Power taken by the Customer in excess of the Amount of Power on Order due to an outage or reduction in capability to Hydro's 50/60 Hz frequency converter to a maximum of 18,000 kW, which is the normal maximum capability of Hydro's 50/60 Hz frequency converter;

(o) **"Generating Capacity"** means 99,100 kW, being the amount of Power the Customer is able to generate at 60 Hz from its hydraulic generating resources, or to generate at 50 Hz from its hydraulic generating resources and have converted to 60 Hz, but does not include capacity from generating facilities dedicated to the generation of power and energy for sale or transfer to Hydro or to a third party;

(p) **"Generation Outage"** means an outage or reduction of the Customer's Generating Capacity due to equipment failure, Approved Planned Outages or natural causes beyond the control of the Customer including but not limited to frazil ice and low intake water, but not including an outage to those facilities dedicated to the generation of power and energy for sale to Hydro or to a third party and not including an outage or reduction caused by Hydro's 50/60 Hz frequency converter;

(q) **"Generation Outage Demand"** means the Power taken by the Customer during a period of Capacity Request which exceeds the Amount of Power on Order and which is required to temporarily replace that Generating Capacity which is rendered unavailable to the Customer due to a Generation Outage;

(r) **"Generation Outage Energy"** means the Energy associated with Generation Outage Demand;

(s) **"Generation Output"** means the total amount of 60 Hz Demand supplied by the Customer at any time as measured at the generator terminals of its 60 Hz generators plus the amount of Demand measured at the 60 Hz terminals of the 50Hz – 60Hz frequency converter;

(t) **"Hydro Delivery Points"** means: (i) Hydro's 66,000 volt bus in its Massey Drive Terminal Station at Corner Brook, (ii) the line side insulators of the Customer's terminal structure near the east end of its Deer Lake Power Plant being the termination point of Hydro's 66,000 volt line, and (iii) the 66,000 volt 60 cycle bus and 50 cycle buses in the No. 1 and No. 2 Substation of the Customer, or at such other location or locations that Hydro and the Customer mutually agree in writing;

(u) **"Interruptible Demand**" means, that part of the Customer's Total 60 Hz Demand in any 15 minute interval, which exceeds the sum of

(i) The greater of the Generation Output and the Generation Capacity, and

(ii) The Amount of Power on Order,

and which may be interrupted, in whole or in part, at the discretion of Hydro, is supplied in accordance with Clause 4.01, and, for greater certainty, Interruptible Demand does not include any Demand associated with Oil-Fired Boiler Replacement Power, Frequency Converter Replacement Power or Secondary Energy;

(v) **"Interruptible Energy"** means the Energy associated with Interruptible Demand;

(w) **"Maximum Demand"** means the greatest amount of Power during the appropriate Month or part of a Month, as the case may be, averaged over each consecutive period of fifteen minutes duration commencing on the hour and ending each fifteen minute period thereafter, and measured by a demand meter of a type approved for revenue metering by the appropriate department of the Government of Canada;

(x) **"Month"** means a calendar month;

(y) **"Non-Firm Energy"** means Energy associated with Interruptible Demand, Generation Outage Demand, Oil-Fired Boiler Replacement Power and Supplemental Energy;

(z) "**Oil-Fired Boiler Replacement Power**" means the Power taken by the Customer during a period of a Capacity Request which exceeds the amount of Power on Order up to 15,000 kW, being the amount of Power the Customer requires from Hydro for use in its electric boiler to produce process steam, a load that the Customer is normally able to displace by using its No. 7 oil-fired steam boiler;

(aa) **"Power"** means the amount of electrical power delivered at any time and measured in kilowatts;

(bb) **"Province"** means the the Province of Newfoundland and Labrador;

(cc) **"Rate Schedules"** means the schedules of rates that are approved by the Board for the sale and purchase of Power and Energy;

(dd) **"Secondary Energy"** means that Energy Hydro is willing to sell, according to Clause 5.06, at a rate approved by the Board and which would be surplus to its needs and, if not sold, would likely result in spillage at one or more of Hydro's hydraulic generating stations;

(ee) **"Specifically Assigned Charge"** means the payment made by the Customer in each Month, calculated according to a method approved by the Board, for the use of Specifically Assigned Plant;

(ff) **"Specifically Assigned Plant"** means that equipment and those facilities which are owned by Hydro and used to serve the Customer only;

(gg) "**Supplemental Energy**" means all energy taken in a Month in excess of Firm Energy, Generation Outage Energy, Interruptible Energy, Oil-Fired Boiler Replacement Energy and energy supplied to the electric boiler for Secondary Energy.

1.02 Hydro and the Customer agree that they are bound by this Agreement and by the agreements and covenants contained in the Rates Schedules. In the event of a conflict between this Agreement and the Rates Schedules, the Rates Schedules shall have priority.

1.03 In this Agreement all references to dollar amounts and all references to any other money amounts are, unless specifically otherwise provided, expressed in terms of coin or currency of Canada which at the time of payment or determination shall be legal tender herein for the payment of public and private debts.

1.04 Words in this Agreement importing the singular number shall include the plural and vice versa and words importing the masculine gender shall include the feminine and neuter genders.

1.05 Where a word is defined anywhere in this Agreement, other parts of speech and tenses of the same word have corresponding meanings.

1.06 Wherever in this Agreement a number of days is prescribed for any purpose, the days shall be reckoned exclusively of the first and inclusively of the last.

1.07 The headings of all the articles are inserted for convenience of reference only and shall not affect the construction or interpretation of this Agreement.

1.08 Any reference in this Agreement to an Article, a Clause, a subclause or a paragraph shall, unless the context otherwise specifically requires, be taken as a reference to an article, a clause, a subclause or a paragraph of this Agreement.

1.09 This Agreement may be executed in two or more counterparts, each of which when so executed shall be deemed to be an original, but all of such counterparts together shall constitute one and the same instrument.

ARTICLE 2
AMOUNT OF FIRM POWER

2.01 Subject to this Agreement, Hydro agrees to deliver to the Customer and the Customer agrees to purchase from Hydro the Amount of Power on Order. Aside from times when Hydro has made a Capacity Request, Hydro agrees to make reasonable efforts to make available Supplemental Energy, which the Customer may use to facilitate its efficient generation of Energy, subject always to Hydro's capability to deliver it which Hydro shall determine in its sole discretion.

2.02 The Customer shall declare to Hydro in writing, not later than October 1 of each calendar year, its Amount of Power on Order for the following calendar year. Such declarations may provide for an Amount of Power on Order to apply throughout the calendar year, or may provide for one or more successive increases at specified times during the calendar year, but subject to Clause 2.05, may not provide for a decrease other than a decrease to take effect on January 1st of that following calendar year. The Amount of Power on Order shall in no event be greater than 75,000 kilowatts.

2.03 Hydro will supply all future Power requirements requested by the Customer additional to the 75,000 kilowatts provided, however, that the Customer's requests for such additional Power be made upon adequate notice in order that Hydro may make suitable extensions or additions to its system.

2.04 If Hydro cannot fully comply with a declaration of Amount of Power on Order made in accordance with Article 2.02 it will, as soon as practicable and in any event not later than November 1 of the year in which the declaration was made, advise the Customer of the extent to which it can comply. If more than one industrial customer requests an increase in their Amount of Power on Order and Hydro cannot in its judgment provide enough Power to satisfy all of the timely requests it has received, Hydro will offer additional Amounts of Power on Order to the industrial customers who made those requests in such amounts as are prorated in accordance to the quantity of additional Amounts of Power on Order in the timely requests it has received from those customers.

2.05 If the Customer increases its Generating Capacity such that it can decrease or eliminate the amount of Power it requires from Hydro, then, provided the Customer gives Hydro thirty-six Month's written notice of the reduction, the Customer may reduce or eliminate its Amount of Power on Order and its Billing Demand effective on the date that the new generation is to go into service as indicated in that written notice.

ARTICLE 3
PURCHASE AND SALE OF POWER AND ENERGY

3.01 The sale and purchase of Power and Energy shall be at such prices and upon such terms and conditions as are set out in the Rate Schedules and this Agreement.

3.02 Subject to Clause 2.05 and Article 10, the Customer's Billing Demands, which shall each be charged at the applicable rates as approved by the Board, shall comprise the following:

(a) the Billing Demand for Firm Power, which in each Month shall be the greater of:

(i) the Amount of Power on Order,

(ii) the lesser of 75% of the Amount of Power on Order for the prior calendar year and, the Amount of Power on Order for the prior calendar year less 20,000 kW,

(iii) the Amount of Power on Order plus the maximum excess Demand taken up to that time in that calendar year determined by the application of paragraphs (b) and (c) of this Clause 3.02,

(b) During periods when Hydro has not issued a Capacity Request the excess Demand is the amount of Interruptible Demand supplied by Hydro in excess of the maximum allowable Interruptible Demand;

(c) During periods in which Hydro has issued a Capacity Request the excess Demand is the amount of Demand supplied by Hydro in excess of the Amount of Power on Order, the maximum allowable Interruptible Demand, and as applicable, for each 15-minute demand interval during that period the maximum available Generation Outage Demand, the maximum Frequency Converter Replacement Power, and the electric boiler Demand for Oil-Fired Boiler Replacement Power.

3.03 Notwithstanding that the Billing Demand for Firm Power shall have, by operation of Clause 3.02, exceeded the Power on Order declared for that calendar year in accordance with Article 2, Hydro is not obliged to provide any amount of Power in excess of the Power on Order.

3.04 Notwithstanding anything to the contrary herein, the Customer shall pay in each Month its Specifically Assigned Charge, its applicable Demand charges, and its Energy charges. Its Energy charges shall comprise its Firm Energy, Frequency Converter Replacement Energy, Interruptible Energy, Generation Outage Energy,

Oil-fired Boiler Replacement Energy, Secondary Energy and Supplemental Energy taken in that Month.

3.05 Supplemental Energy shall be charged at the Non-Firm Energy Rate for the Month.

3.06 Frequency Converter Replacement Energy shall be charged at Firm Energy rates for the Month but without a demand charge.

ARTICLE 4
INTERRUPTIBLE POWER

4.01 The Customer may in any Month take an amount of Interruptible Demand and Energy in addition to the Amount of Power of Order which shall be billed at the Non-Firm Demand and Energy rates approved by the Board. Provided the Amount of Power on Order is equal to or greater than 20,000 kW, the amount of Interruptible Demand and Energy available shall be the greater of 10% of the Amount of Power on Order and 5,000 kW. If the Amount of Power on Order is less than 20,000 kW, the Amount of Interruptible Demand and Energy available shall be 25% of the Amount of Power on Order. If Hydro is willing and able to serve the Customer's Interruptible Demand, then the following shall apply:

(a) The Customer shall, if practicable, make a prior request for, or otherwise as soon as practicable notify Hydro of its requirement, specifying the amount and duration of its Interruptible Demand requirements. Such request or notification may be made by telephone and confirmed by facsimile transmission to Hydro's officials at its Energy Control Centre, who shall advise the Customer if such Interruptible Power will be made available.

(b) If serving the Customer's Interruptible Demand would result in Hydro generating from, or increasing or prolonging generation from a standby or emergency energy source, then Hydro will so advise the Customer. If the Customer wishes to purchase Interruptible Demand and Energy at such a time or times, that Power and Energy shall be charged for as calculated by the method or formula approved by the Board.

(c) Notwithstanding anything contrary herein, if service of the Interruptible Demand is disrupted by Hydro or is curtailed by the Customer as a decision to reject the more expensive standby or emergency energy source (which for the purposes of this clause shall be deemed to be a reduction of Hydro of Interruptible Demand), the

Billing Demand for Interruptible Power for the Month shall be determined as follows:

(i) If there is a total interruption of Interruptible Demand and Interruptible Energy by Hydro for a whole Month, the Customer shall not be required to make any payment for Interruptible Demand and Energy that Month.

(ii) If there is a total interruption of Interruptible Demand for part of a Month, the Billing Demand for that Interruptible Demand for that Month shall be reduced by a number of kilowatts bearing the same ratio to that Billing Demand as the number of hours during which the interruption occurs bears to the total number of hours in that Month.

(iii) If Hydro requires a reduction of Interruptible Demand for a whole Month, then, the reduced Billing Demand for Interruptible Demand for that Month shall be substituted for the Billing Demand for Interruptible Demand for the same Month, when determining the price of Power and Energy for that Month.

(iv) If Hydro requires the reduction of Interruptible Demand for part of a Month, then, subject to subparagraph (v) of this paragraph 4.01(c), there shall, when determining the price of Interruptible Power and Energy for the Months in which the reduction occurs, be substituted for the Billing Demand for Interruptible Demand for that Month, the number of kilowatts obtained by adding

(a) the reduced Billing Demand for Interruptible Demand for the part of the month during which the reduction was made, averaged over the whole of that Month;

to

(b) the Billing Demand for Interruptible Demand for the part of the Month during which no reduction was made, averaged over the whole of that Month.

(v) In any case arising under subparagraph (iii) or subparagraph (iv) of this paragraph 4.01(c), where a reduction of Interruptible Demand is made for a whole Month or part thereof and the Maximum Demand for Interruptible Demand over that same period is greater than the reduced Billing Demand for Interruptible Demand for that same period, then, instead of that reduced Billing Demand, that Maximum Demand for such period shall be substituted for the Billing Demand for Interruptible Demand for that period when

determining the price of Power and Energy for the Month in which the reduction occurs, but, if in any period during which a reduction occurs, the Maximum Demand for Interruptible Demand is less than the reduced Billing Demand for Interruptible Demand, no account shall be taken of that Maximum Demand.

ARTICLE 5
GENERATION OUTAGE POWER AND SECONDARY ENERGY

5.01 In the event that the Customer experiences or requires a Generation Outage, in addition to its Power on Order and any applicable Interruptible Power it may be taking, it may take an amount of Generation Outage Demand and Energy at Non-Firm Rates. The availability of Generation Outage Demand shall be subject to Hydro's capability to deliver it, which Hydro shall determine at its sole discretion. The Generation Outage Demand taken in any instance shall not exceed the amount of generating capacity rendered unavailable because of the Generation Outage. If Hydro is willing and able to provide the Customer with Generation Outage Demand and Energy, then the following shall apply:

(a) The Customer shall, if practicable, make a prior request for, or otherwise as soon as practicable notify Hydro of its requirement, specifying the amount and duration of its Generation Outage Demand requirements. Such request or notification may be made by telephone and confirmed by facsimile transmission to Hydro's officials at its Energy Control Centre, who shall advise the Customer if such Generation Outage Demand will be made available. While requesting or taking Generation Outage Demand and Energy, the Customer shall notify Hydro of all circumstances and particulars as to the outage as soon as practicable and shall keep Hydro informed as those circumstances and particulars change. The Customer shall not make undue requests for Generation Outage Demand and Energy and it shall restore normal operating conditions as soon as reasonably possible.

(b) If serving the Generation Outage Demand would result in Hydro generating from, or increasing or prolonging generation from a standby or emergency energy source, then Hydro will so advise the Customer. If the Customer wishes to purchase Generation Outage Demand and Energy at such a time or times, that Power and Energy shall be charged for as calculated by the method or formula approved by the Board.

(c) Notwithstanding anything contrary herein, if service of the Generation Outage Demand is disrupted by Hydro or is curtailed by the Customer

as a decision to reject the more expensive Energy provided from the standby or emergency energy source, the Billing Demand for the Generation Outage for that day shall be reduced in proportion to the number of hours in that day for which the more expensive energy was rejected.

(d) For billing purposes, a daily Generation Outage Demand shall be determined for each day which shall be calculated as the Maximum Demand taken during each day when Generation Outage Demand was taken, less the Billing Demand for Firm Power and less the Frequency Converter Replacement Power and Oil Fired Boiler Replacement Power taken during that fifteen minute interval and the maximum Interruptible Demand for that Month. The Generation Outage Demand billed shall be the amount calculated by totalling the daily Generation Outage Demands for the Month and dividing that total by the number of days in the Month.

Oil-Fired Boiler Replacement Power

5.02 In the event that the Customer experiences or requires an outage to its No. 7 oil-fired boiler, in addition to its Power on Order and any applicable Interruptible Power it may be taking, it may take an amount of Oil-Fired Replacement Power at Non-Firm Rates. The availability of Oil-Fired Boiler Replacement Power shall be subject to Hydro's capability to deliver it, which Hydro shall determine at its sole discretion. The Oil-Fired Boiler Replacement Power taken in any instance shall not exceed the amount of demand taken on the electric boiler needed to replace the amount of steam unavailable because of the No. 7 oil-fired boiler outage.

If Hydro is willing and able to provide the Customer with Oil-Fired Replacement Power, then the following shall apply:

(a) Subject to operational limitations, the Customer shall first maximize the amount of steam produced from all of its other oil-fired boilers during outages to the No. 7 oil-fired boiler so as to minimize the amount of demand taken on the electric boiler.

(b) The Customer shall, if practicable, make a prior request for, or otherwise as soon as practicable notify Hydro of its requirement, specifying the amount and duration of its Oil-Fired Boiler Replacement Power requirements. Such request or notification may be made by telephone and confirmed by facsimile transmission to Hydro's officials at its Energy Control Centre, who shall advise the Customer if such Oil-Fired Boiler Replacement Power will be made available. While requesting or taking Oil-Fired Boiler Replacement Power, the Customer shall notify Hydro of all circumstances and particulars as to the outage as soon as practicable

and shall keep Hydro informed as those circumstances and particulars change. The Customer shall not make undue requests for Oil-Fired Boiler Replacement Power and it shall restore normal operating conditions as soon as reasonably possible.

(c) If serving the Oil-Fired Boiler Replacement Power would result in Hydro generating from, or increasing or prolonging generation from a standby or emergency energy source, then Hydro will so advise the Customer. If the Customer wishes to purchase Oil-Fired Boiler Replacement Power at such a time or times, that Power and Energy shall be charged for as calculated by the method or formula approved by the Board.

(d) Notwithstanding anything contrary herein, if service of the Customer's Electric Boiler is disrupted by Hydro or is curtailed by the Customer as a decision to reject the more expensive Energy provided from the standby or emergency energy source, the Billing Demand associated with the Oil-Fired Boiler Replacement Power for that day shall be reduced in proportion to the number of hours in that day for which the more expensive energy was rejected.

(e) For billing purposes, a daily Demand for the Oil-Fired Boiler Replacement Power shall be determined for each day which shall be calculated as the Maximum Demand taken during each day when Oil-Fired Boiler Replacement Power was taken, less the Billing Demand for Firm Power, the Generation Outage Demand and the Frequency Converter Replacement Power for that fifteen-minute interval and, the maximum Interruptible Demand for that Month. The Oil-Fired Boiler Replacement Demand billed, if applicable, shall be the amount calculated by totalling the daily Oil-Fired Boiler Replacement Demands for the Month and dividing that total by the number of days in the Month.

5.03 Generation Outage Energy and Oil-Fired Boiler Replacement Energy, and the associated Power, shall be charged at the Non Firm Energy Rate applicable during the period of the Capacity Request and Hydro shall notify the Customer of the applicable Non Firm Energy Rate at the time of the Capacity Request and shall give notice of any change in the rate which occurs during the Capacity Request period.

5.04 If the Customer is experiencing an unplanned Generation Outage or an unplanned outage to No. 7 oil-fired boiler during a Capacity Request period, then Hydro will supply the applicable Demand and Energy subject to Hydro's capability to deliver it which Hydro shall determine at its sole discretion. Hydro shall make reasonable efforts to supply such Demand and Energy.

5.05 The Customer shall by the end of each November verify its ability to provide the Generating Capacity by operating its generation so that the 60 Hz Generation Output and the Demand at the 60 Hz terminals of the frequency converter, simultaneously, equal or exceed the Generating Capacity for a period of one continuous hour. If the Generating Capacity is not verified the Customer's Amount of Power on Order for the following calendar year shall increase by the amount of the shortfall.

5.06 If Hydro has surplus Energy capability and the Customer desires to purchase it, and provided that appropriate metering is in place, Hydro will deliver Secondary Energy to the Customer for use in its electric boilers. The quantity and availability of Secondary Energy shall be determined by Hydro in its sole discretion, however, once declared to be available, Secondary Energy shall remain available for a period of not less than 72 hours. The rate to be paid for Secondary Energy shall be determined by the Board.

ARTICLE 6
CHARACTERISTICS OF POWER SERVICE AND POINTS OF DELIVERY

6.01 The Power and Energy to be supplied under this Agreement will be delivered to the Customer at three (3) phase alternating current having normal frequencies of fifty (50) and sixty (60) cycles and at a voltage of approximately 66,000 and delivery will be made at the Hydro Delivery Points.

6.02 Hydro will exercise its best endeavours to limit variation from the normal frequency and voltage to tolerable values.

ARTICLE 7
POWER FACTOR

7.01 The Customer agrees to take and use the Power contracted for in this Agreement at a power factor of not less than ninety percent (90%) lagging at the point of delivery specified in this Agreement.

7.02 Should the power factor be consistently less than ninety percent (90%) lagging, the Customer, upon written notification from Hydro, agrees to install suitable corrective equipment to bring the power factor to a minimum of ninety percent (90%) lagging.

7.03 If the Customer should install static condensers to correct the lagging power factor, the equipment shall be so installed that it can be completely disconnected at the request of Hydro.

ARTICLE 8
METERING

8.01 The metering equipment and meters to register the amount of Demand and Energy to be taken by the Customer under this Agreement shall be furnished by Hydro and if required to be located on the Customer's premises will be installed by Hydro in a suitable place satisfactory to Hydro and provided by the Customer, and in such manner as to register accurately the total amount of Demand and Energy taken by the Customer under this Agreement.

8.02 If the metering is installed on the low side of transformers that are Specifically Assigned Plant or owned by the Customer, an appropriate adjustment will be made to account for losses in the transformers. Also, appropriate adjustments will be made to recognize the Power and Energy delivered to Newfoundland Power at Marble Mountain and Pasadena from the Customer's generation and transmission systems.

8.03 The Customer shall have the right, at its own expense, to install, equip and maintain check meters adjacent to the meters of Hydro.

8.04 Authorized employees of Hydro shall have the right of access to all such meters at all reasonable times for the purpose of reading, inspecting, testing, repairing or replacing them. Should any meter fail to register accurately, Hydro may charge for the Demand and Energy supplied during the period when the registration was inaccurate, either,

(a) on the basis of the amount of Demand and Energy charged for

(i) during the corresponding term immediately succeeding or preceding the period of alleged inaccurate registration, or

(ii) during the corresponding term in the previous calendar year; or

(b) on the basis of the amount of Demand and Energy supplied as established by available evidence,

whichever basis appears most fair and accurate.

ARTICLE 9
LIABILITY FOR SERVICE

9.01 Subject to the provisions of the Rate Schedules and this Agreement, the Power and Energy herein contracted for will be made available for use by the Customer during twenty-four (24) hours on each and every day of the term of this Agreement.

9.02 The obligation of Hydro to furnish Power and Energy under this Agreement is expressly subject to all accidents or causes that may occur at any time and affect the generation or transmission of such Power and Energy, and in any such event, but subject to Clause 9.04, Hydro shall have the right in its discretion to reduce or, if necessary, to interrupt the supply of Power and Energy under this Agreement.

9.03 Hydro agrees to take all reasonable precautions to prevent any reduction or interruption of the supply of Power and Energy or any variation in the frequency or voltage of such supply, and whenever any such reduction, interruption or variation occurs, Hydro shall use all reasonable diligence to restore its service promptly.

9.04 (1) Subject to Clause 9.04(2) hereof, Hydro shall be liable for and in respect of only that direct loss or damage to the physical property of the Customer caused by any negligent act or omission of Hydro its servants or agents. Customer agrees that for the purpose of this Clause 9.04, "direct loss or damage to the physical property of the Customer" shall not be construed to include damages for inconvenience, mental anguish, loss of profits, loss of earnings or any other indirect or consequential damages or losses.

9.04 (2) Hydro's liability under subclause 9.04(1) applies only when the direct loss or damage to the Customer arising from a single occurrence exceeds the sum of $100,000.00. In no event shall the liability of Hydro exceed the sum of $1,000,000.00 for any single occurrence.

9.04 (3) Customer further agrees that any damages to which it may be entitled pursuant to clause 9.04(1) shall be reduced to reflect the extent to which such losses or damages could reasonably have been reduced if the Customer had taken reasonable protective measures.

9.05 Hydro shall have the right temporarily to interrupt its service hereunder in order to maintain or make necessary changes to its system, but, except in cases of emergency or accident, the service shall be interrupted only at such time or times as will be least inconvenient to the Customer, and Hydro shall use all reasonable diligence to complete promptly such repairs or necessary changes.

ARTICLE 10
REDUCED BILLING DEMAND

10.01 If at any time during the term of this Agreement the operation of the works of either party is suspended in whole or in part by reason of war, rebellion, civil disturbance, strikes, serious epidemics, fire or other fortuitous event, then, such party will not be liable to the other party to purchase or, as the case may be, to supply Power and Energy hereunder until the cause of such suspension has been removed and in every such event, the party whose operations are so suspended shall use all reasonable diligence to remove the cause of the suspension.

10.02 (1) For the purposes of this Clause 10.02,

a) the expression "reduced Billing Demand" means the number of kilowatts to which the Billing Demand is reduced in any of the circumstances referred to in subclauses (2) or (3) of this Clause 10.02, and

b) the expression Maximum Demand means

i. during periods where there is no Capacity Request, the Customer's Total 60 Hz Demand less the Generation Capacity, and which in no instance can be less than zero.

ii. during a period for which a Capacity Request is in effect, the power delivered at the Hydro Delivery Points less power received by Newfoundland Power at the Delivery Points to Newfoundland Power.

(2) If the Customer is prevented from taking an amount of Power because of a suspension of its operations due to a reason listed in Clause 10.01, and any such interruption or reduction lasts for one hour or longer, then Hydro shall, on the request of the Customer, allow a proportionate reduction of the Billing Demand as calculated pursuant to subclauses (4) through (9) of this Clause 10.02, provided however that, except for reduced Billing Demands that occur pursuant to paragraphs 10.02(4)(b) or (c), in no such case shall the Billing Demand be reduced below 0.85 of the Amount of Power on Order unless Hydro is unable to deliver Power and Energy in accordance with this Agreement.

(3) If the supply of Power and Energy by Hydro is interrupted or reduced for any of the reasons referred to in Clause 9.02, 9.05 or 10.01, and any such interruption or reduction lasts for one hour or longer, then Hydro shall, on the request of the Customer, allow a proportionate reduction of the

payment as calculated pursuant to subclauses (5) through (9) of this Clause 10.02.

(4) For those times when the Customer is prevented from taking an amount of Power because the Customer's mill operations are suspended or curtailed due to a strike by the employees of the Customer, the Customer's Billing Demand shall be calculated as follows:

(a) for the first 15 days of the strike and for that portion of the strike which exceeds 120 days, the Billing Demand shall be determined in the manner set out in subclauses (5) to (9) of this clause 10.02;

(b) for those whole Months during the period that commences following the first 15 days of the strike and ends not later than 120 days after the strike began, the reduced Billing Demand shall be the Customer's Maximum Demand in those Months;

(c) for those part Months that comprise periods that include;

(i) a period that commences following the first 15 days of the strike and ends not later than 120 days after the strike began,

together with one or both of

(ii) a period when the Customer is not affected by a strike or other suspension of its operations due to a reason listed in Clause 10.01,

and

(iii) a period where a strike has continued in excess of 120 days, or where the Customer is affected by any other suspension of its operations due to a reason listed in Clause 10.01,

the Customer's Billing Demand shall be determined by adding

(iv) the Maximum Demand for the part of the Month described in subparagraph (i) averaged over the whole of the Month,

(v) the greater of the Maximum Demand for Firm Power and the Amount of Power on Order for the part of the Month described in subparagraph (ii), if any, averaged over the whole of the Month

and

(vi) the reduced Billing Demand applicable to the period described in subparagraph (iii) averaged over the whole of the Month.

(5) If there is a total interruption of the supply of Power and Energy by Hydro for a whole Month, the Customer shall not be required to make any payment for that Month.

(6) If there is a total interruption of Power for part of a Month, the Billing Demand for that Month shall be reduced by a number of kilowatts bearing the same ratio to that Billing Demand as the number of hours during which the interruption occurs bears to the total number of hours in that Month.

(7) If the reduction of Power is made for a whole Month, then, subject to clause (9) of this Clause 10.02, the reduced Billing Demand for that Month shall be substituted for the Billing Demand for the same Month, when determining the price of Power and Energy for that Month.

(8) If the reduction of Power is made for part of a Month, then, subject to subclause (9) of this Clause 10.02, there shall, when determining the price of Power and Energy for the Months in which the reduction occurs, be substituted for the Billing Demand for that Month, the number of kilowatts obtained by adding

(a) the reduced Billing Demand for the part of the month during which the reduction was made, averaged over the whole of that Month;

to

(b) the Billing Demand for the part of the Month during which no reduction was made, averaged over the whole of that Month.

(9) In any case arising under subclause (7) or subclause (8) of this Clause 10.02, where a reduction of Power is made for a whole Month or part thereof and the Maximum Demand for that same period is greater than the reduced Billing Demand for that same period, then, instead of the reduced Billing Demand, the Maximum Demand for such period shall be substituted for the Billing Demand for that period when determining the price of Power and Energy for the Month in which the reduction occurs, but, if in any period during which a reduction occurs, the Maximum

Demand is less than the reduced Billing Demand no account shall be taken of that Maximum Demand.

(10) Where a Billing Demand, a reduced Billing Demand or a Maximum Demand for a part of a Month is to be averaged for the whole of that Month in accordance with subclause (8) of this Clause 10.02, the averaging shall be done by dividing the Billing Demand, the reduced Billing Demand or the Maximum Demand, as the case may be, by the total number of hours in the whole of that Month and multiplying the result by the number of hours to which the Billing Demand, the reduced Billing Demand or the Maximum Demand relates.

(11) In addition to the reductions in Billing Demand that may be made in accordance with this Article 10, Hydro may, in its sole judgment and discretion, make other Billing Demand adjustments from time to time to decrease the Customer's bill to reflect unusual or unanticipated conditions or to facilitate the testing of equipment or processes by the Customer.

ARTICLE 11
CONSTRUCTION OR INSTALLATION OF TRANSMISSION LINES OR APPARATUS

11.01 For the consideration aforesaid, the Customer hereby grants to Hydro the right to construct transmission lines and accessory apparatus on locations approved by the Customer on, under or over the property of the Customer for the purpose of serving the Customer and the other customers of Hydro, together with the right of access to the property of the Customer at all times for the construction of such lines and apparatus and for the repair, maintenance and removal thereof, provided that nothing in this clause shall entitle Hydro to construct transmission lines and accessory apparatus on or over the Customer's property if such transmission lines are not directly connected with the Customer's premises or some part thereof.

11.02 The Customer shall not erect any building, structure or object on or over any right-of-way referred to in Clause 11.01 without the written approval of Hydro, but subject to that limitation the Customer shall be entitled to make fair and reasonable use of all lands subjected to the said right-of-way.

11.03 Any changes that the Customer may request Hydro to make in the location of any lines or apparatus constructed pursuant to Clause 11.01, shall be made by Hydro, but the Customer shall bear the expense of any such changes to the extent that such lines or apparatus supply Power to the Customer.

11.04 All transmission lines and apparatus of Hydro furnished and installed by it on the Customer's premises shall remain the property of Hydro, and Hydro shall be

entitled to remove such transmission lines and apparatus on the expiry or termination of this Agreement.

11.05 For the purpose of using the power service of Hydro, the Customer shall install properly designed and suitable apparatus in accordance with good engineering practice, and shall at all times operate and maintain such apparatus so as to avoid causing any undue disturbance on the system of Hydro, and so that the current shall be approximately equal on all three of its phases.

11.06 If, at any time, the unbalance in current between any two of its phases is, in the judgment of Hydro, excessive to a degree that the power supply system of Hydro and/or the electrical equipment of any other customer of Hydro is adversely affected, then it shall be the responsibility of the Customer to take such reasonable remedial measures as may be necessary to reduce the unbalance to an acceptable value.

11.07 If, at any time during the term of this Agreement, Hydro desires to improve the continuity of power service to any of its customers, Hydro and the Customer will co-operate and use their best endeavours to carry out the improvements either by changes to existing equipment or additions to the original installations of either Hydro or the Customer.

11.08 The Customer shall not proceed with the construction of or major alterations of its equipment or structures associated with any terminal substation at which Power and Energy is being delivered until Hydro is satisfied that the proposals for such construction or alteration are in accordance with good engineering practice and the laws and regulations of the Province, provided that any examination of the Customer's proposals by Hydro shall not render Hydro responsible in any way for the construction or alteration proposed, even if electrical connection is made by Hydro, whether or not any changes suggested by Hydro shall have been made by the Customer.

ARTICLE 12
RESPONSIBILITY FOR DAMAGES

12.01 Beyond the point of delivery, the Customer shall indemnify and hold Hydro harmless with respect to any and all claims that may be made for injuries or damages to persons or property caused in any manner by electric current or by the presence or use on the Customer's premises of electric circuits or apparatus, whether owned by Hydro or by the Customer, unless and to the extent that such injuries or damages are caused by negligence on the part of the employees of Hydro.

12.02 Up to the point of delivery, Hydro shall indemnify and hold the Customer harmless with respect to any and all claims that may be made for injuries or damages to persons or property caused in any manner by electric current or by the presence or use on the Customer's premises of electric circuits or apparatus owned by Hydro and resulting from or arising out of the negligence of Hydro's employees or other persons for whom Hydro would in law be liable, unless and to the extent that such injuries or damages are caused by negligence on the part of the employees of the Customer.

12.03 If any of the transmission lines or apparatus installed by Hydro on the Customer's premises should be destroyed or damaged by the negligence of the Customer, its servants or agents, the Customer shall reimburse Hydro for the cost of their replacement or repair.

ARTICLE 13
PAYMENT OF ACCOUNTS AND NOTICE OF CLAIMS OF CUSTOMER

13.01 Hydro will render its accounts monthly and the Customer shall, within twenty (20) days after the date of rendering any such account, make payment in lawful money of Canada at the office of Hydro in St. John's, Newfoundland, or in such other place in the said Province as Hydro may designate, without deduction for any claim or counterclaim which the Customer may have to claim to have against Hydro arising under this Agreement or otherwise.

13.02 All amounts in arrears after the expiration of the period of twenty (20) days referred to in Clause 13.01 shall bear interest at the rate of one and one-half (1-1/2%) percent per Month.

13.03 If the Customer is in default for more than thirty (30) days in paying any amount due Hydro under this Agreement, then, without prejudice to its other recourses and without liability therefore, Hydro shall, upon ten (10) days written notice to the Customer of its intention so to do, be entitled to suspend the supply of Power and Energy to the Customer until the said amount is paid, and if the supply is so suspended, the Customer shall not be relieved of its obligations under this Agreement.

13.04 The Customer and Hydro will submit to the other in writing every claim or counterclaim which each may have or claim to have against the other arising under this Agreement within sixty days of the day upon which the Customer or Hydro has knowledge of the event giving rise to such a claim.

13.05 The Customer and Hydro shall be deemed to have waived all rights for the recovery of any claim or counterclaim that has not been submitted to the other party pursuant to and in accordance with Clause 13.04.

ARTICLE 14
ARBITRATION

14.01 If a settlement of any claim made by the Customer in accordance with Clause 13.04 is not agreed to by both parties, the matters in dispute shall be submitted, within three months from the time the claim was submitted, for decision to a board of arbitrators consisting of three members, one to be named by each party to this Agreement and the third to be named by the two arbitrators so chosen, and the decision of any two members of the board of arbitrators shall be final and binding upon both parties.

14.02 The charges of the third member of a board of arbitrators who shall be the chairman of that board, shall be borne by the losing party, and the parties shall bear the costs or charges of their own appointees. Any arbitration hearing commenced under this Article shall be held in St. John's or such other place as the parties mutually agree.

14.03 If the two appointees of the parties are unable to agree upon the third arbitrator or chairman, the chairman shall be appointed upon application of either party to the Trial Division of the Supreme Court of Newfoundland and Labrador or a judge of that Division.

14.04 The period of delay for appointment by the parties to this Agreement of their respective nominees shall be seven days after notification by the other party to this Agreement of its nominee, and the period for agreement by the two nominees on the chairman shall be ten days.

14.05 The provisions of the Arbitration Act, Chapter A - 14 of the Revised Statutes of Newfoundland and Labrador, 1990, as now or hereafter amended shall apply to any arbitration held pursuant to this Article 14.

ARTICLE 15
MODIFICATION OR TERMINATION OF AGREEMENT

15.01 Except, where otherwise specifically provided in this Agreement and only to the extent so provided, all previous communications between the parties to this Agreement, either oral or written, with reference to the subject matter of this Agreement, are hereby abrogated and this Agreement shall constitute the sole and complete agreement of the parties hereto in respect of the matters herein set forth.

15.02 At any time during the currency of this Agreement, the Customer may terminate it by giving to Hydro two years previous notice in writing of its intention so to do.

15.03 Any amendment, change or modification of this Agreement shall be binding upon the parties hereto or either of them only if such amendment, change or modification is in writing and is executed by each of the parties to this Agreement by its duly authorized officers or agents and in accordance with its regulations or by-laws.

15.04 Subject to Article 10, if the Customer voluntarily or forcibly abandons its operations, commits an act of bankruptcy or liquidates its assets, then, there shall, forthwith, become due and payable to Hydro by the Customer, as stipulated and liquidated damages without burden or proof thereof, a lump sum equal to:

(a) 0.85 of its then current Billing Demand for Firm Power, at the Firm Power Demand rate, multiplied by 24;

plus

(b) the remaining net book value of Specifically Assigned Plant, less its salvage value.

ARTICLE 16
SUCCESSORS AND ASSIGNS

16.01 This Agreement shall be binding upon and enure to the benefit of the parties hereto and their respective successors and assigns, but it shall not be assignable by the Customer without the written consent of Hydro.

ARTICLE 17
GOVERNING LAW AND FORUM

17.01 This Agreement shall be governed by and interpreted in accordance with the laws of the Province, and every action or other proceeding arising hereunder shall be determined exclusively by a court of competent jurisdiction in the Province, subject to the right of appeal to the Supreme Court of Canada where such appeal lies.

ARTICLE 18
ADDRESS FOR SERVICE

18.01 Subject to Clauses 18.02 and 18.03, any notice, request or other instrument which is required or permitted to be given, made or served under this Agreement by either of the parties hereto, except for notices or requests pertaining to Interruptible Demand, Generation Outages or Secondary Energy, shall be given, made or served in writing and shall be deemed to be properly given, made or served if personally delivered, or sent by prepaid telegram or facsimile transmission, or mailed by prepaid registered post, addressed, if service is to be made

(a) on Hydro, to

The Secretary
Newfoundland and Labrador Hydro
Hydro Place
P.O. Box 12400
St. John's, Newfoundland
CANADA. A1B 4K7
FAX: (709) 737-1782
or

(b) on the Customer, to

Mill Manager
Corner Brook Pulp and Paper Limited
P.O. Box 2001
Corner Brook, Newfoundland
A2H 6J4

18.02 Any notice, request or other instrument given, made or served as provided in Clause 18.01 shall be deemed to have been received by the party hereto to which it is addressed, if personally served on the date of delivery, or if mailed three days after the time of its being so mailed, or if sent by prepaid telegram or facsimile transmission, one day after the date of sending.

18.03 Except for notices for Interruptible Demand, Generation Outage Demand, or Secondary Energy, whenever this Agreement requires a notice to be given or a request to be made on a Sunday or legal holiday, such notice or request may be given or made on the first business day occurring thereafter, and, whenever in this Agreement the time within which any right will lapse or expire shall terminate on a Sunday or legal holiday, such time will continue to run until the next succeeding business day. Notices or requests pertaining to Interruptible Demand, Generation Outages or Secondary Energy may be given and received by and to the appropriate nominees of the respective parties by voice or electronic communication provided that it is confirmed in writing and transmitted or delivered by facsimile, courier or mail as soon as practicable.

18.04 Either of the parties hereto may change the address to which a notice, request or other instrument may be sent to it by giving to the other party to this Agreement notice of such change, and thereafter, every notice, request or other instrument shall be delivered or mailed in the manner prescribed in Clause 18.01 to such party at the new address.

IN WITNESS WHEREOF Newfoundland and Labrador Hydro and the Customer has each executed this Agreement by causing it to be executed in accordance with its by-laws or regulations and by its duly authorized officers or agents, the day and year first above written.

THE CORPORATE SEAL of
Newfoundland and Labrador Hydro was hereunder
affixed in the presence of: _____

_____ _____
Witness

DULY EXECUTED by
Corner Brook Pulp and Paper Limited
in accordance with its Regulations
or By-Laws in the presence of:

_____

_____ _____
Witness

CO-GENERATION OPERATING PROCEDURES AND GUIDELINES AGREEMENT

BETWEEN

NEWFOUNDLAND AND LABRADOR HYDRO

AND
CORNER BROOK PULP AND PAPER LIMITED
With respect to the Co-Generation Facility known as:

CORNER BROOK CO-GENERATION PROJECT

Issue Date:
January, 2003

Review Date:

Number: 0

1.0 INTRODUCTION

This Operations Agreement defines the terms of the agreement between Newfoundland and Labrador Hydro, hereinafter referred to as "Hydro" and Corner Brook Pulp and Paper Limited, hereinafter referred to as the "Seller", for the operation, maintenance, and supply of power from the Co-Generation Facility known as the Corner Brook Co-Generation Project. This agreement is incorporated into the Power Purchase Agreement between Hydro and the Seller dated December 21, 2000 as Operation Procedures and Guidelines . This Agreement further defines the operating procedures identified in the Power Purchase Agreement, but does not alter the conditions of service outlined in that Agreement.

This Agreement states the minimum requirements for safe and effective parallel operation of Hydro's system with the Seller's Facility. The Operating Agreement is intended for use by the Seller and Hydro when operating equipment which will have an effect on the other party's equipment or system.

The Seller shall operate its generating equipment as per the terms of the Power Purchase Agreement and in compliance with this Agreement. In order to operate in parallel with Hydro's system, certain protective devices (relays, circuit breakers, etc.) are required by Hydro and shall be maintained as outlined in this Agreement. The purpose of these devices is to promptly disconnect the Seller's Facilities from the Interconnected Grid system whenever faults or abnormal conditions occur.

The Parties shall ensure only appropriately Qualified personnel shall operate and maintain the equipment covered by this agreement. Before performing the operations described in this document the necessary safety procedures relative to this type of equipment shall be carried out.

2.0 DEFINITIONS

2.1 **Seller's Facility** means the plant and equipment owned by the Seller to generate and deliver power and energy under the Power Purchase Agreement.

2.2 **Operating Control** means having the exclusive authority to perform, direct, or authorize, the operation of all devices under its control. Operating Control is not synonymous with ownership, nor does it necessarily convey total independence of action.

2.3 **Controlling Authority** means the organizational position which has Operating Control of specific apparatus or equipment. The Controlling Authority for Hydro and the Seller are specified in Schedule E.

2.4 **Scheduled Outage** means an outage to any transmission line, substation or generating equipment which is deliberately arranged at a preselected time.

2.5 **Qualified** means assessed as satisfactory in reference to personal competency and is:

1) trained in the operation of high voltage equipment according to utility standards and is competent in switching; and

2) familiar with rules, procedures, apparatus, equipment and dangers with respect to work and operation.

3.0 OWNERSHIP

3.1 The Seller owns the 66 kV breaker at the Seller's Corner Brook Co-Generation Plant (refer to Schedule A).

The Seller also owns the potential and current transformers used in the metering to measure the power and energy supplied by the Seller to Hydro. These potential and current transformers shall be approved for revenue metering by Industry Canada.

3.2 The Hydro owned equipment is the equipment defined as the Interconnection Plant in the Appendix A of the Power Purchase Agreement.

4.0 OPERATING PRINCIPLES

4.1 Hydro has Operating Control of the 66 kV breaker at the Seller's Corner Brook Co-Generation Plant.

4.2 The Seller has Operating Control of its Facilities excluding the 66 kV breaker at the Corner Brook Co-Generation Plant.

4.3 The Seller shall be responsible for the correct operation of the devices under its Operating Control. The Seller shall not operate devices under Hydro's Operating Control unless such action is specifically requested or authorized by Hydro or it is necessary for the protection of the Seller’s Facilities.

4.4 Any operating services related to the Seller’s Co-generation Facility provided by Hydro at the request of the Seller shall be paid for by the Seller.

4.5.1 The Seller shall operate the Seller's Facility so as to avoid unacceptable voltage flicker or voltage level. The Seller shall not impose harmonic distortion levels on the Interconnected Grid which exceed the minimum levels established by the latest revision of the Institute of Electrical and Electronic Engineers Standard 519, which is the IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems.

4.5.2 If Hydro, acting reasonably, determines that the Seller's equipment or operation is causing the conditions outlined in 4.5.1, the Seller shall be responsible to correct these in a timely manner the cost of which shall be borne entirely by the Seller.

4.6 The Seller shall at the request of the Hydro Controlling Authority alter the electrical output of the Seller's Facility as required for planned work, transmission security constraints or emergency conditions. This is limited to temporary shut down of the Seller's Facility.

4.7 The Seller shall maintain its equipment in good order. The Seller has the right to shutdown the Seller's Facility for maintenance. Hydro reserves the right to inspect from time to time the Seller's facilities that impact on Hydro's System or employees.

The Seller shall discontinue parallel operation when requested by Hydro, upon such notice that is reasonable under the circumstances;

a) To facilitate maintenance, test or repair of Hydro's facilities,

b) during Hydro system emergencies,

c) when the Seller's generating equipment is interfering with Hydro's customers on the system,

d) when an inspection of the Seller's generating equipment reveals a condition hazardous to Hydro's system,

e) when there is an apparent lack of scheduled maintenance for protection and control equipment required by Hydro as a condition of parallel operation; and

f) for other causes which Hydro may deem necessary for emergency, system reliability, public safety and safety of Hydro's or Seller's staff.

4.8 The Seller shall, upon request by Hydro, provide a quarterly report containing information on a monthly basis related to the operation of the Seller's Facility. The items to be reported include information on operating hours, unit starts and the date, time and duration of all forced, automatic and planned interruptions of the Seller's Facility output (refer to Schedule F for sample reporting form).

5.0 MAINTENANCE RESPONSIBILITIES

5.1 Hydro shall perform all routine and emergency maintenance and repair on the Hydro owned equipment as defined in section 3.2. Hydro may elect to repair this equipment in normal working hours even though this may prevent the delivery of energy by the Seller. If the Seller is willing to pay for the extra cost of work being done outside normal working hours, Hydro shall endeavour to accommodate such a request. The cost incurred by Hydro for routine and emergency maintenance and repair of the Hydro owned equipment, as defined in Section 3.2, shall be borne by the Seller. These costs shall be reasonable and in line with utility practice for the work done. Upon the request of the Seller, Hydro shall provide a detailed cost breakdown for any charge.

5.2 The Seller is fully responsible for routine and emergency maintenance and repair on all Seller owned equipment.

5.3 The Seller is responsible for maintaining the relaying, and auxiliary control facilities, required by Hydro to be connected to Hydro's system (see Schedule B). The Seller shall perform periodic verification of their relaying and control facilities in accordance with the test schedule in Schedule C.

5.4 The Seller shall maintain Seller owned switches, transmission line equipment, and battery equipment as per the procedures identified in Schedule D.

5.5 The Seller shall submit an annual Equipment Maintenance report to Hydro outlining the maintenance completed on the equipment outlined in Schedules C and D during the year.

5.6 The Seller shall inform Hydro of any changes to the Seller's Facility's electrical protection including equipment and settings. The portion of this protection that affects Hydro's system and customers shall be designed, set, and installed in a manner acceptable to Hydro for the Seller to continue delivering power to Hydro. The Seller shall obtain prior acceptance by Hydro for any modification or setting changes to this protection equipment. The Seller shall inform Hydro of any changes to the Seller's Facility power devices such as transformers, generator, capacitor or station service transformer.

5.7 Hydro and the Seller will discuss planned outages of their respective equipment. They will endeavour to coordinate the maintenance of their respective facilities to minimize interruptions to Hydro's customers and the Seller's generator.

5.8 By April 1 of each year, each party to this agreement shall provide information to the other party's Controlling Authority on Scheduled Outages expected to take place that year which will affect the Seller's ability to deliver power to Hydro. These scheduled outages will be confirmed by the appropriate Controlling Authority 5 working days in advance.

6.0 COMMUNICATION

6.1 The Seller's Controlling Authority shall take operating instructions, including requirements for generator shutdown, from Hydro's Controlling Authority or its delegate. Therefore, they shall be able to reach each other by telephone at anytime. A set of phone numbers is listed in Schedule E for this purpose.

6.2 Connection of the Seller's Facility to the Interconnected Grid following a forced shutdown or a shutdown requested by the Hydro Controlling Authority shall receive prior approval from the Hydro Controlling Authority.

6.3 The Seller's Controlling Authority shall keep the Hydro Controlling Authority or his delegate informed of the following items to enable the Hydro Controlling Authority to be fully aware of all generation operating on the power system and for analysis following system disturbances:

6.3.1 The time at which the Seller's Facility is connected to the Hydro system;

6.3.2 The time at which the Seller's Facility is disconnected from the Hydro system;

6.3.3 The time at which the Seller's Facility breaker trips; and

6.3.4 Any time the Seller's Facility becomes isolated from the main power system or experiences unusual voltage or frequency levels.

6.4 In the event of a generator shutdown for any reason the Seller's Controlling Authority shall contact the Hydro Controlling Authority or its delegate for further instruction. The Hydro Controlling Authority or its delegate shall establish if the shutdown is due to system problems and will instruct the Seller’s Controlling Authority. Under no circumstances shall the Seller reconnect to the Hydro system until authorized by the Hydro Controlling Authority or its delegate.

6.5 In the event that abnormal operation of the Sellers Facility occurs, such as over or under voltage, over or under frequency or, voltage unbalance, and the Seller cannot contact Hydro's Controlling Authority or its delegate, then the Seller shall separate the Seller's Facility from the Hydro system.

6.6 The Seller's Controlling Authority shall advise the Hydro Controlling Authority of any planned operations which may affect the Hydro System.

6.7 The Hydro Controlling Authority shall advise the Seller's Controlling Authority of any planned operations which may affect the Seller's operations.

6.8 The Seller shall maintain a continuous communication link to Hydro's Controlling Authority in order for Hydro to monitor the output of the Seller’s Facility and the status of the 66 kV breaker.

7.0 PROTECTION AND CONTROL REQUIREMENTS

7.1 The Seller shall maintain its protection and control devices to:

a) reliably and adequately protect the Seller's facilities from any abnormal conditions on the Seller's facility which may cause damage. This includes protection for any abnormal conditions, such as, open phase conditions, abnormal voltage and frequency conditions which may be caused by abnormal conditions on Hydro's interconnecting system,

b) provide adequate control for operation into a nominal 60 Hz system ± 2 Hz with ± 10% voltage deviation from a nominal 66 kV voltage at the interconnection point,

c) operate in accordance with the settings specified in Schedule B,

d) provide synchronizing capabilities, and

e) provide reliable and adequate protection and control to detect voltage and frequency conditions which occur when Hydro facilities serving the Seller are disconnected from the system and isolate the Seller's generation from the isolated system if frequency and voltage control is not maintained,

7.2 The protection and control devices and appropriate settings shall be determined in the design process and form Schedule B, Protective Relays and Settings. These devices and settings, once determined and approved, shall not be changed or modified without a request in writing from the Seller and approval in writing from Hydro. Schedule B shall be changed accordingly.

7.3 The Seller shall promptly report the relay targets, annunciator or event recorder data, to Hydro's Controlling Authority following an operation of its protection devices.

8.0 REVIEW OF OPERATIONS AGREEMENT

8.1 A review of this agreement may be initiated by either party from time to time. Hydro shall initiate a review of this agreement every two years.

This Operating Agreement for the Corner Brook Co-Generation Project shall be incorporated in to the "Agreement for Non-Utility Generated Power and Energy" between Corner Brook Pulp and Paper Limited and Newfoundland and Labrador Hydro dated December 21, 2000.

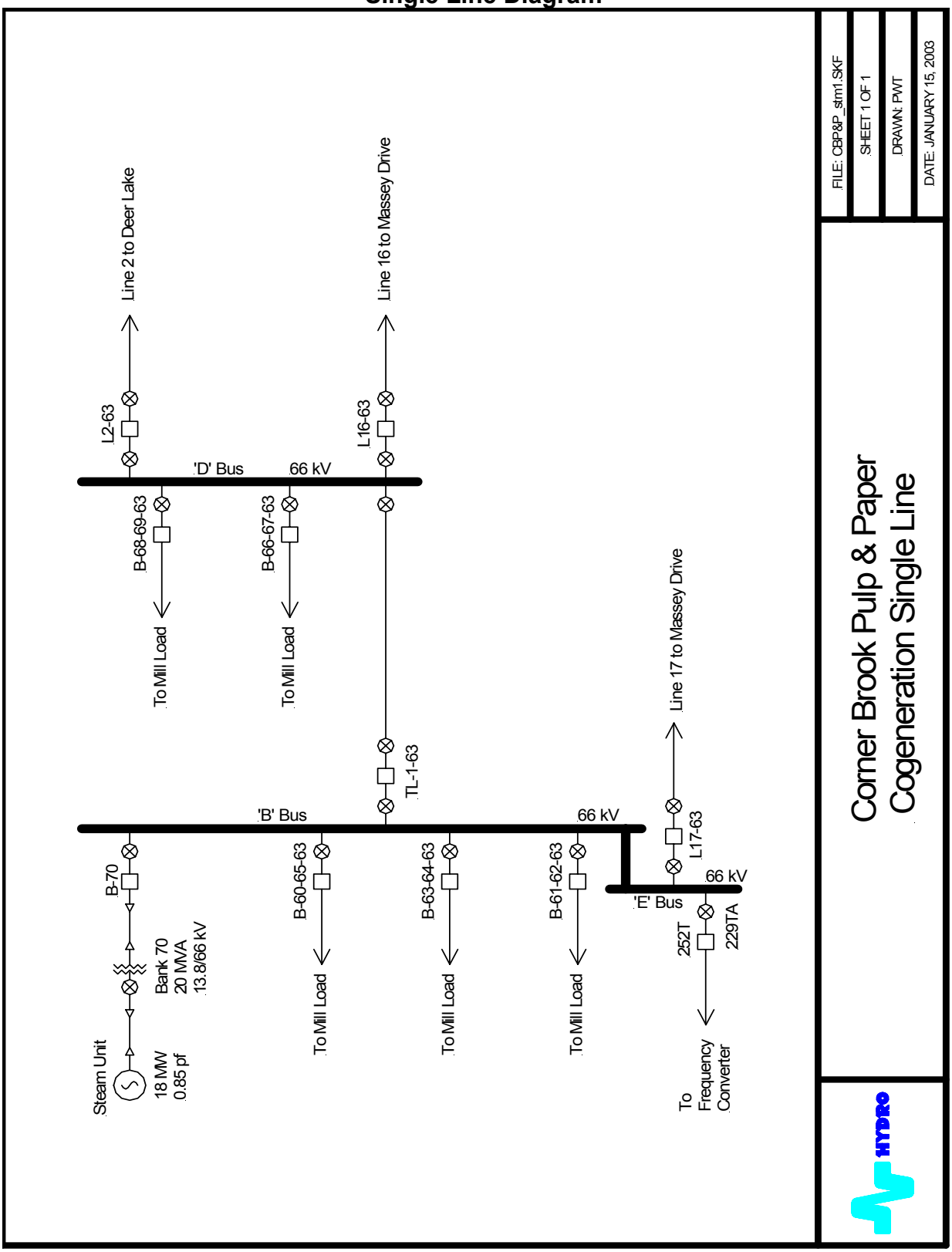
for Newfoundland and Labrador Hydro:

_____ _____
Date

for Corner Brook Pulp and Paper Limited:

_____ _____
Date

SCHEDULE A
Single Line Diagram



SCHEDULE B

The following settings are those presented as of 03-01-17 (letter dated Sept. 18, 2002) and are subject to change during the final commissioning later this month. Setting changes made and agreed to by both parties during the commissioning shall be an update to this schedule.

Device Number	Description	Settings	Devices Operated
51V	7UM621(F11 & F12)	140% Ig Def Time 3 secs 500% Ig Instantaneous	B-70
87G	7UM621(F11 & F12)	13% Ig Instantaneous Slope to follow	B-70
81	7UM621(F11 & F12)	56.4 Hz 10 secs	B-70
27	7UM621(F11 & F12)	9.7 KV 6 secs 8.9 KV 3 secs	B-70
59	7UM621(F11 & F12)	15.9 kV 3 secs 17.9 KV .75 secs	B-70
46G	7UM621(F11 & F12)	10% Ig 20secs. 60% Ig Time to match $I_2^{2t=30}$	B-70
51T	SEL 551	41.1 MVA TD 5 Curve U3	B-70
51NT	SEL 551	20.5 MVA TD 5 Curve U3	B-70

SCHEDULE C

Protection and Control Verification Schedule

1. Seller's station, generator and transmission line protection systems which can impact on the Hydro System shall be verified every three years or as required due to protection operations.

2. The Seller shall advise Hydro giving 4 weeks notice if reasonably possible as to when verification is to take place so that if required by Hydro its P&C staff can observe:

   - relay recalibration
   - test tripping of generator breaker and interconnection breaker
   - measurement and analysis of secondary AC voltages and currents to confirm measuring circuit integrity

3. Specific Protection to be Observed:

   - All generator or interconnection protection systems which trip the breaker
   - Confirm that settings that are approved by Hydro are applied to the following protection systems

     (a) over and under frequency
     (b) over and under voltage
     (c) unbalance protection
     (d) substation protection
     (e) transmission line protection

SCHEDULE D-1

66 kV BREAKER

Inspection Every Month:

1. Make a visual inspection of the primary connections and grounding.
2. Make a visual inspection of the insulators for cracked skirts.
3. Check for gas leaks and record gas pressure.
4. Inspect general condition of control cabinets and cabinet heaters.
5. Record breaker operations.

Maintenance Every Three Years

1. Perform contact resistance tests.
2. Perform breaker timing tests.
3. Perform insulation tests.
4. Check high voltage terminations.
5. Check heaters.
6. Record breaker operations and gas pressure.

SCHEDULE D-2

STATION CONTROL SYSTEMS BATTERY INSPECTION

The D.C. Battery should become part of a monthly inspection routine.

1. Check that the battery charger D.C. voltmeter reading is within the normal range - investigate any deviations.

2. Check that the battery charge ammeter reading indicates that the battery drain is normal --- investigate any deviations.

3. Record D.C. system voltage.

*4. Record the corrected relative density of the electrolyte and the voltage of the pilot cell and determine if an equalize charge is required.

5. Inspect the battery plates (if visible) for any signs of deterioration and correct.

*6 Top up the electrolyte to the upper limit using distilled or approved water - excessive water loss is an indication of overcharging and should be investigated.

7. Wipe down cells as required.

Note: Items with an asterisk (*) do not apply where maintenance free batteries are used.

Maintenance Every Four Years:

The D.C. Battery is to be subjected to a discharge low check. Replace the battery if they go below 80% capacity.

SCHEDULE E

TELEPHONE CONTACTS

The Seller

OWNER:
[redacted]
Steam Plant Superintendent
[redacted]

OPERATOR (Controlling Authority):
Steam Plant Operator
[redacted]

Steam Plant Foreman
[redacted]

[redacted]
Electrical Supervisor
[redacted]

Hydro

MANAGER - SYSTEM OPERATIONS:
[redacted]
Hydro Place - St. John's, NF
[redacted]

ECC SUPERINTENDENT:
[redacted]
ECC - St. John's, NF
[redacted]

ECC SHIFT SUPERVISOR (Controlling Authority)
(24 hours/day)
[redacted]

ECC SYSTEM OPERATOR
(24 hours/day)
[redacted]

SCHEDULE F

DEFINITIONS

The following defines the information requested on the Seller's Unit Performance:

A. UNIT IDENTIFICATION

A unique description for the unit as well as indication of the month and year being report on.

B. UNIT GENERATION INFORMATION

The data in this section are useful in the analysis of Seller's unit performance data.

Actual Generation

The number of electrical kilowatt-hours (kWh) generated by the unit during the month.

Maximum Capacity

Maximum capacity the unit can sustain over a specified period of time.

D. UNIT TIME INFORMATION

Operating Hours (normal operation)

The number of hours the unit was electrically connected to serve utility load.

Operating Hours (derated operation)

The number of hours the unit was synchronized but operating at reduced loads due to planned maintenance or forced equipment outages and other problems.

Average Size of Derating

The average MW lost as a result of deratings during the reporting period.

SCHEDULE F (cont'd.)

DEFINITIONS

D. **UNIT TIME INFORMATION** (cont'd.)

Outage Information

Specific information on the time duration, type and cause of the outage for the reporting period.

Time information should include the day(s) and the hour the outage started and ended.

Outage types are:

Forced Outage (FO)	-	cannot be deferred.
Maintenance Outage (MO)	-	can be deferred beyond the end of the next weekend.
Planned Outage (PO)	-	planned well in advance, usually occurs 1-2 times a year.

Comments/Cause can be used to provide detailed information on the outage e.g. equipment failure, utility feeder trip, etc.

OPERATIONS AGREEMENT

AMONG

NEWFOUNDLAND AND LABRADOR HYDRO,

NEWFOUNDLAND POWER

AND

Fermeuse Wind Power Corp.

With respect to the Non-Utility Generation Facility known as:

Fermeuse Wind Project

THIS AGREEMENT made as of the 25th day of August, 2008

BETWEEN: **NEWFOUNDLAND AND LABRADOR HYDRO**, a Crown corporation (hereinafter, "Hydro")

AND: **NEWFOUNDLAND POWER INC.**, a Newfoundland corporation (hereinafter, "Newfoundland Power")

AND: **FERMEUSE WIND POWER CORP.**, a Canadian corporation (hereinafter, "the Seller")

WHEREAS:

A contract dated the 18th day of June, 2007, relating to the supply and purchase of power from a generation facility known as the Fermeuse Wind Project (hereinafter, "the Seller's Facility"), was entered into between Hydro and SkyPower Corp. and assigned by SkyPower Corp. to the Seller effective as of the date hereof (hereinafter, "the Power Purchase Agreement"); and

It is desirable that minimum requirements be established for the safe and effective parallel operation of the Seller's Facility with the Interconnected Grid, which requirements shall govern the operation by the parties' personnel when operating equipment, which will have an effect on the other party's equipment or system.

NOW THEREFORE in consideration of the mutual covenants and agreements herein contained it is agreed between the parties as follows:

1.0 GENERAL

1.1 The Seller shall operate its generating equipment in parallel with the Interconnected Grid in accordance with Good Utility Practice designed to ensure that it does not have adverse effects on the general public or customers, personnel or equipment of Hydro or Newfoundland Power. In order to operate generation in parallel with the Interconnected Grid , Hydro and Newfoundland Power require certain protective devices (relays, circuit breakers, etc.), which must be maintained as outlined in this agreement. The purpose of these devices is to promptly disconnect the Seller's Facility from the Interconnected Grid whenever faults or abnormal conditions occur.

1.2 Neither Hydro nor Newfoundland Power will assume any responsibility for protection of the Seller's equipment. The Seller is fully responsible for protecting its equipment in such a manner that faults, system operations, or other disturbances on the Interconnected Grid do not cause damage to the Seller's equipment. The Seller shall provide adequate protection and control to prevent damage or unnecessary outages or power quality concerns to either Hydro facilities, Newfoundland Power's facilities or those of their respective customers, the whole in accordance with the specific requirements of this Agreement.

1.3 The Seller shall indemnify and hold Hydro and Newfoundland Power harmless for injury or death to persons including employees of either party and damage to property including property of either party or others arising out of or in connection with (a) the engineering, design, construction, maintenance, repair, operation, supervision, inspection, testing, protection or ownership of the Seller's Facility, or (b) the making of replacements, additions, betterments to, or reconstruction of the Seller's Facility. The Seller is solely responsible for providing adequate protection for the parallel operation of the Seller's Facility and releases Hydro and Newfoundland Power from any liability for damages or injury to the Seller's Facility arising out of such parallel operation. The Seller shall be required to maintain in force commercial general liability insurance in a minimum amount of Five million dollars ($5,000,000.00) in order to support its indemnity obligations hereunder. The insurance policy shall provide that Hydro and Newfoundland Power are named as additional insured, contain a cross liability cause and provide that the insurer shall endeavour to provide Hydro and Newfoundland Power with a minimum of 15 days prior written notice of cancellation, termination or amendment of the policy in a manner prejudicial to the interests of Hydro or Newfoundland Power.

1.4 The Parties shall ensure that only appropriately Qualified personnel shall operate and maintain the equipment covered by this Agreement.

1.5 Before performing the operations described in this Agreement, the necessary safety procedures relative to this type of equipment must be carried out.

2.0 DEFINITIONS

2.1 **Agent** means a person designated in writing to the other parties by either Hydro, Newfoundland Power or the Seller to perform specified operations on behalf of the party designating this person.

2.2 **Controlling Authority** means the organizational position which has operating control of specific apparatus or equipment. The Controlling Authorities for Hydro, Newfoundland Power and the Seller are specified in Schedule E.

2.3 **Interconnected Grid** means the interconnected transmission and distribution systems situated on the island part of the Province and owned by Hydro or by Newfoundland Power;

2.4 **Interconnection Plant** means the equipment and plant at the Interconnection Point which Hydro or Newfoundland Power will install, operate and maintain, as will be more particularly described in Appendix C in the Power Purchase Agreement;

2.5 **Interconnection Point** means that point where the Seller's Facility connects to the Interconnected Grid as described in Section 3.1 hereof;

2.6 **Seller's Facility** means the wind power plant and equipment owned by the Seller to generate and deliver power and energy under the Power Purchase Agreement between Hydro and the Seller.

2.7 **Seller's Interconnection Equipment** means that portion of the Seller's Facility that is a located on Newfoundland Power lands at or near the Newfoundland Power Fermeuse Substation.

2.8 **Operating Control** means having the exclusive authority to perform, direct, or authorize the operation of all devices as designated. Operating Control is not synonymous with ownership, nor does it necessarily convey total independence of action.

2.9 **Qualified**, in relation to an individual, means a worker who is:

1) trained to Newfoundland Power's Standards or to Hydro's Standards or otherwise professionally qualified for the responsibilities assigned to this individual; and

2) familiar with relevant rules, procedures, apparatus, equipment and dangers with respect to work and operation.

2.10 **Scheduled Outage** means an outage to any transmission line, substation or generating equipment which is deliberately arranged at a pre-selected time.

3.0 OWNERSHIP

3.1 The Seller's parallel connection to the Interconnected Grid shall be a 60 Hz alternating current supply at 66 kV. The Interconnection Point will be at Newfoundland Power's Fermeuse Substation located in Fermeuse, where the Seller's 66 kV transmission line conductors will connect to the Newfoundland Power 66 kV disconnect switch on the Seller's side of the Newfoundland Power circuit breaker supplying the Seller Facility. The disconnect switch designation is FER-902E-DL, and the circuit breaker is designated FER-902E-B. Newfoundland

Power's cost of maintaining the disconnect switch, the circuit breaker and associated protection and control equipment shall be borne by the Seller.

The Newfoundland Power owned equipment is more fully described as the Interconnection Plant in the Power Purchase Agreement - Appendix C

3.2 The Seller owns the three phase 66 kV line from Newfoundland Power's disconnect switch FER-902E-DL at the Fermeuse Substation to the Substation servicing the Fermeuse Wind Project.

3.3 Newfoundland Power owns the revenue metering class potential transformers and current transformers which meet Industry Canada specifications, for the purpose of metering the power and energy sold by the Seller to Hydro.

3.4 Hydro owns the export bi-directional metering equipment which registers the power and energy supplied from the Seller's Facility and sold to Hydro at the Fermeuse Substation as well as the sale of electricity to the Seller by Newfoundland Power as contemplated by Section 3.6. Newfoundland Power must maintain communications acceptable to Hydro in order for Hydro to automatically obtain the revenue metering data from the metering equipment.

3.5 The Seller shall own, install and maintain a system of metering that will record the energy sold to Hydro, the data from which may be used by Hydro as an estimator of energy purchases during those instances of primary export metering failure.

3.6 Power and energy required by the Seller from the Interconnected Grid shall be supplied by Newfoundland Power in accordance with the terms and conditions of the *Newfoundland Power Inc. Schedule of Rates, Rules and Regulations* approved from time to time by the Board of Commissioners of Public Utilities.

4.0 OPERATING PRINCIPLES

4.1 Newfoundland Power has Operating Control of the 3-phase air break disconnect switch designated FER-902E-DL, and the circuit breaker designated FER-902E-B. The Seller shall not be permitted to operate Newfoundland Power's disconnect switch or the circuit breaker designated FER-902E-B, except that Newfoundland Power acknowledges and agrees that the circuit breaker FER-902E-B might be opened as a result of a transfer trip from the Seller's protection system. Furthermore, Newfoundland Power shall provide a signal, which can be sent back to the Seller's SCADA indicating the open or closed status of the circuit breaker FER-902E-B.

4.2 The Seller shall be responsible for the correct operation of the devices under its Operating Control. The Seller shall not operate devices under Newfoundland Power's Operating Control, except for the transfer trip capability indicated above.

4.3 On the request of a Controlling Authority, another Controlling Authority's Agents shall provide the required isolation of equipment as required.

4.4 Any operating services provided by Newfoundland Power at the request of the Seller, or otherwise in accordance with this Agreement, shall be paid for by the Seller. Charges will be based on Newfoundland Power's loaded costs plus mark-up as normally charged for non-tariff services. Charges will be assessed for significant services, such as labour and travel expenses of Newfoundland Power staff to Fermeuse Substation to operate and maintain the Interconnected Plant, but not for minor services such as the remote operation of equipment by Newfoundland Power staff.

4.5 The Seller shall operate the Seller's Facility so as to avoid unacceptable voltage flicker or voltage level, as set out below.

4.5.1 The Seller shall ensure that sudden voltage changes which result from generator starting, capacitor/ reactor switching, etc., and which are covered under CAN/CSA-C61000-3-7, IEC 6100-3-7 and IEEE Standard 1547, is limited to less than 2%.

4.5.2 The Seller shall ensure that flicker levels as per IEEE Standard 1453-2004 "IEEE Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems" Table 1 have flicker levels maintained within the following limits:

$$Pst = 0.8$$
$$Plt = 0.6$$

4.5.3 The Seller shall not impose harmonic distortion levels on the Newfoundland Power system which exceed the minimum levels established by the latest revision of Institute of Electrical and Electronic Engineers Standard 519, which is the IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems.

4.6 If Hydro or Newfoundland Power determines, that the Seller's equipment or operation is causing the unacceptable conditions outlined in 4.5, the Seller shall be responsible to correct these in a timely manner, any cost incurred by the Seller as a result shall be borne entirely by the Seller.

4.7 The Seller shall adjust voltage set points and Seller's Facility power factor, subject to equipment limits, at the request of the Newfoundland Power

Controlling Authority. However, on-load tap changers on the Seller's main step-up transformer are not required. If power factor or voltage set point adjustments are required frequently by Newfoundland Power, Seller may be required to provide Newfoundland Power with the ability to directly make such adjustments via communication with the Seller's SCADA.

4.8 The Seller's Facility voltage-var schedule, voltage regulator and transformer ratio settings will be jointly determined by Newfoundland Power and the Seller to ensure proper co-ordination of voltage and regulator action. If abnormal voltage or power quality complaints result from operation of the Seller's generation, such generating equipment shall be disconnected until the problem is resolved. Newfoundland Power shall notify Hydro of the complaints and action taken. All parties shall cooperate to diligently pursue correction of any such problem.

4.9 The Seller shall at the request of the Newfoundland Power Controlling Authority alter the electrical output of the Seller's Facility as required for planned work, transmission security constraints or emergency conditions. This may include but is not limited to temporary reduced output or temporary shut down of the Seller's Facility. This may also include increased output within the capability of the Seller's Facility. Newfoundland Power shall notify Hydro of the request to alter output.

4.10 The Seller, Newfoundland Power and Hydro shall maintain their respective equipment in good order. Hydro and Newfoundland Power shall have the right to periodically inspect the Seller's facility to confirm that equipment that may impact upon the Interconnected Grid or employees of Hydro or Newfoundland Power is in good order.

4.11 The Seller shall immediately discontinue parallel operation when requested by Newfoundland Power:

1) to facilitate emergency maintenance, test or repair of Newfoundland Power facilities;

2) to facilitate an emergency request from Hydro;

3) during emergencies on the Interconnected Grid;

4) when the Seller's generating equipment adversely affecting customers on the Interconnected Grid;

5) when an inspection of the Seller's generating equipment reveals a condition hazardous to the Interconnected Grid;

6) when there is an apparent lack of scheduled maintenance of protection/control equipment required by Hydro or Newfoundland Power as a condition of parallel operation;

7) when the response by the Seller to a determination by either Hydro or Newfoundland Power made under cause 4.6 is deemed by either utility to be unreasonable or insufficient, and;

8) for other cause which Hydro or Newfoundland Power may deem necessary for emergency, system reliability, public safety and safety of Hydro, Newfoundland Power or Seller staff.

If the parallel operation is not discontinued within a reasonable time given the circumstances, Newfoundland Power may, in their absolute discretion, immediately disconnect the Seller's facility, through the operation of circuit breaker FER-902E-B. If emergency circumstances are such, the disconnection may proceed without notification. If practicable, Newfoundland Power shall notify Hydro of the decision to disconnect.

Neither Hydro nor Newfoundland Power shall be liable to the Seller for any loss or damage including, without limitation, special or consequential damages or damages due to loss of use or production which result, either directly or indirectly, from a request or action of Newfoundland Power to immediately discontinue parallel operation in accordance with the terms of this Agreement.

4.12 The Seller shall provide an annual report to Hydro containing information on a monthly basis related to the operation of the Seller's Facility. The items to be reported include information on environmental conditions, operating hours, unit starts along with the date, time and duration of all forced, automatic and planned interruptions of the Seller's Facility output (refer to Schedule G3 for a detailed listing of required reporting information). Portions of this report will be made available to Newfoundland Power for system analysis.

4.13 Hydro may request a special report containing information on each turbine such as; Megawatt-hours, Megavar-hours, Kilovolts, operating hours, rotor speed, wind speed, air temperature, and air pressure. This report would be collected on a monthly basis and be in CIM (XML Format) electronic form. This information will be used for generation planning and analysis.

4.14 This Agreement is based on the Seller Facility as outlined in Schedule A. Any material change to the electrical characteristics of the Seller Facility must be approved in advance, in writing, by both Newfoundland Power and Hydro.

5.0 MAINTENANCE RESPONSIBILITIES

5.1.1 Newfoundland Power is responsible for routine and emergency maintenance and repair of all Newfoundland Power owned equipment as defined in section 3.1. Newfoundland Power may elect to repair its equipment at any time, even though this may prevent the delivery of energy by the Seller. If the Seller is willing to pay for the extra cost of work being done at a time other than as proposed by Newfoundland Power, Newfoundland Power will endeavour to accommodate such a request. The direct costs incurred by Newfoundland Power for routine and emergency maintenance and repair of the Newfoundland Power owned equipment, as defined in Section 3.1, shall be borne by the Seller. Maintenance and repairs of the Newfoundland Power owned equipment shall be in accordance with Good Utility Practice. Costs of such maintenance and repairs shall be reasonable. Upon the request of the Seller, Newfoundland Power shall provide a detailed cost breakdown for any charge.

5.2 Hydro is responsible for emergency and routine maintenance to its assets on the Interconnected Grid. While undertaking this responsibility there may be occasions where energy delivery by the Seller is affected. Hydro may elect to repair its equipment during normal working hours even though this may prevent the delivery of energy by the Seller. If the Seller is willing to pay for the extra costs associated with performing this work outside normal working hours, Hydro will endeavour to accommodate such a request.

5.3 The Seller is fully responsible for routine and emergency maintenance and repair on all of the Seller's owned equipment.

5.4 The Seller shall be responsible for maintaining the relaying, and auxiliary control equipment located at the Seller's Facility that is required by Hydro and Newfoundland Power for parallel operation with the Interconnected Grid (see Schedule B). The Seller shall perform periodic verification of their relaying and control Facility in accordance with the test schedule in Schedule C. These are the minimum maintenance requirements.

5.5 The Seller shall maintain Seller owned switches, transmission line equipment, and battery equipment as per the procedures identified in Schedule D, which states the minimum maintenance requirements.

5.6 The Seller shall submit an annual Equipment Maintenance report to Newfoundland Power and Hydro outlining the maintenance completed during the year on the equipment outlined in Schedule C and D.

5.7 The Seller shall inform Newfoundland Power and Hydro of any proposed changes to the Seller's Facility's electrical protection including equipment and settings. The portion of this protection that affects Newfoundland Power's

system and customers shall be set, installed, and maintained in a manner acceptable to Newfoundland Power for the Seller to continue delivering power to Hydro. The Seller shall obtain prior acceptance by Newfoundland Power and Hydro for any modification or setting changes to this protection equipment, which acceptance shall not be unreasonably withheld, conditioned or delayed. The Seller shall inform Hydro and Newfoundland Power of any proposed changes to the Seller's Facility power devices such as transformers, generator, or station service transformer.

5.8 Newfoundland Power and the Seller will discuss planned outages of their respective equipment. They will endeavour to coordinate the maintenance of their respective facilities to minimize interruptions to Newfoundland Power's customers and the Seller's generators.

5.9 By April 1 of each year, each party to this Agreement shall provide to the other parties Controlling Authorities information on Scheduled Outages expected to take place that year which will affect the Seller's ability to deliver power to Hydro. These Scheduled Outages will be confirmed at least five (5) working days in advance by the appropriate Controlling Authority.

6.0 ISOLATION & GROUNDING

6.1 When the Seller requires isolation and or grounding by means of a device(s) under Newfoundland Power control, the Seller shall request that Newfoundland Power provide isolation and / or grounding. Once Newfoundland Power completes the isolation and / or grounding, the Seller will then lock the associated Newfoundland Power equipment at the Fermeuse Substation using the Seller's locks. Entrance to the Newfoundland Power Substation by the Seller will be under escort by Newfoundland Power staff.

6.2 When the Newfoundland Power requires isolation and / or grounding by means of a device(s) under the Seller's control, Newfoundland Power shall request that the Seller provide isolation and / or grounding. Once the Seller completes the isolation and / or grounding, Newfoundland Power will then lock the associated Seller's equipment at the Seller's Substation using Newfoundland Power's lock. Entrance to the Seller's Substation by the Newfoundland Power will be under escort by the Seller's staff.

6.3 Only the person in responsible charge of the isolation and / or grounding has the right to direct the removal of grounds and / or isolation as well as the removal of locks except if that person is unable to continue to exercise his responsibilities due to illness, injury or other cause. In that case, the work shall cease and a qualified substitute may be appointed by the organization initiating the isolation and / or grounding, to direct the removal of grounds and / or isolation as well as the removal of locks.

7.0 COMMUNICATION

7.1 The Seller's Controlling Authority shall take operating instructions, including requirements for generator shutdown, from Newfoundland Power's Controlling Authority or its delegate. Therefore, each shall be able to reach the other by telephone on a 24 hours per day basis. The Seller shall provide 24 hours per day control over the plant in order to facilitate a request for emergency shutdown. A set of phone numbers is listed in Schedule E for this purpose.

If at any time the Seller operates in such a manner that in Hydro's or Newfoundland Power's opinion, power quality is adversely affected or, the safety and security of the Interconnected Grid or of Hydro's or Newfoundland Power's connected customers is threatened, Hydro or Newfoundland Power may give notice thereof to the Seller, which may be given by telephone to an employee of the Seller who has been designated in Schedule E, and the Seller shall promptly take action to remedy the said problem. If the problem continues for more than fifteen minutes after the notice, then Hydro or Newfoundland Power may, in their absolute discretion, discontinue the receipt of all Power and Energy or the supply of all Power and Energy and neither Hydro nor Newfoundland Power shall be obliged to resume receipt of or supply of Power and Energy until the Seller has remedied the problem.

If the problem is of an emergency nature, Newfoundland Power may, in their absolute discretion, disconnect the Seller's Facility immediately and without notice.

7.2 Connection of the Seller's Facility to the Interconnected Grid following a forced shutdown or a shutdown requested by the Newfoundland Power Controlling Authority shall require prior approval from the Newfoundland Power Controlling Authority which approval shall be promptly given upon resolution of the problem causing the shutdown.

7.3 The Seller's Controlling Authority shall keep the Newfoundland Power Controlling Authority or his delegate informed of the following items to enable the Newfoundland Power Controlling Authority to be fully aware of all the Seller generation operating conditions from time to time, and to facilitate analysis following system disturbances:
1) The time and conditions associated with the Seller's Facility becoming isolated from the Interconnected Grid or unusual voltage or frequency levels; and

2) Conditions which will result in the Seller shutting down its generation for extended periods. Such conditions shall also be reported to the Hydro Controlling Authority.

7.4 In the event of a trip of the circuit breaker FER-902E-B at the interconnection Point, the Seller's Controlling Authority shall contact the Newfoundland Power Controlling Authority or its delegate for further instruction. The Newfoundland Power Controlling Authority or its delegate will establish if the trip or shutdown is due to problems on the Interconnected Grid and will instruct the Seller's Controlling Authority as required. Under no circumstances shall the Seller reconnect to the Newfoundland Power system until authorized by the Newfoundland Power Controlling Authority or its delegate. Also, under no circumstances shall the Newfoundland Power Controlling Authority or its delegate reconnect the Seller's Facility to the Newfoundland Power system without prior approval from the Seller's Controlling Authority.

7.5 In the event that abnormal operation of the Seller's Facility occurs, including exceeding acceptable limits as defined in Sections 4.5 and 8.2, and the Seller cannot contact the Newfoundland Power Controlling Authority or its delegate, and then the Seller shall separate the Seller's Facility from the Interconnected Grid.

7.6 The Seller's Controlling Authority shall advise the Newfoundland Power Controlling Authority of any planned operations which may affect the Interconnected Grid.

7.7 The Newfoundland Power Controlling Authority shall advise Hydro and the Seller's Controlling Authority of any planned operations which may affect the Seller's operations.

7.8 The Newfoundland Power Controlling Authority shall advise Hydro's Controlling Authority of all requests for an unscheduled shutdown of the Seller's facility.

7.9 The Seller is required to provide and maintain real time supervisory monitoring to the Newfoundland Power Controlling Authority. The Seller shall continuously provide real time SCADA telemetry, as per Schedule G.1. The real time information shall be time tagged using Universal Time Coordinates (UTC). The Seller is required to contact Newfoundland Power prior to interconnection to determine the interface requirements for Newfoundland Power's SCADA system. The real time supervisory monitoring system using UTC shall be in place and fully functioning prior to the connection of the first generating unit to the Interconnected Grid. Newfoundland Power shall provide this information to Hydro via the existing ICCP (Inter Control-Center Communications Protocol) data link.

7.10 Newfoundland Power shall maintain a standard telephone communications link to Hydro's export metering equipment, which Hydro will use for remote data acquisition and interrogation.

7.11 The Seller shall report to Hydro the Forced Outage event data as per Schedule G.2 on the next day after the event occurs.

8.0 SELLER ACCESS TO NEWFOUNDLAND POWER PROPERTY

8.1 During the term of this Agreement, the Seller shall have the right to install, inspect, maintain, repair and replace the Seller's Interconnection Equipment on lands owned by Newfoundland Power at or in the vicinity on Newfoundland Power's Fermeuse Substation.

8.2 The Seller's Interconnection Equipment shall be installed in the locations marked or delineated in Schedule H.

8.3 No change shall be made to the Seller's Interconnection Equipment or to the location of the Seller's Interconnection Equipment without the prior approval of Newfoundland Power, which approval shall not be unreasonably withheld, conditioned or delayed.

8.4 The Seller's rights as set out in Section 8.0 shall be subject to all of the other terms and conditions of this Agreement.

9.0 PROTECTION AND CONTROL REQUIREMENTS

9.1 Newfoundland Power shall maintain protection and control equipment for the Seller Interconnection in accordance with Good Utility Practice.

9.2 The Seller shall maintain its protection and control devices to:

1) adequately protect the Seller's transmission line from the Seller's end of the line;

2) maintain reliable and adequate protection for abnormal conditions and faults on the Seller's Facility which may cause damage. This includes protection for abnormal voltages, currents, and frequency emanating from the Interconnected Grid;

3) maintain reliable and adequate control for operation into a nominal 60Hz, 66 kV system. Deviation from nominal voltage shall be kept within, 0.95 and 1.05 per unit for the Seller's Facility. The Seller's Facility shall not automatically disconnect from the Interconnected Grid for variations in frequency from 58 to 61.2 Hz. There will be a 200 millisecond trip delay for continuous operation outside of this range;

4) detect voltage and frequency conditions which may occur when Newfoundland Power's and Hydro's facilities serving the Seller and other local customers are "islanded" from the Integrated Grid. The Seller's protection and control shall isolate the Seller's generation from the isolated system if frequency and voltage control are not maintained;

5) prevent any problems for the opening, and reclosing of the FER-902E-B breaker for connection with the Interconnected Grid;

6) maintain reliable and adequate start-up and shut down capabilities for the Seller's generation;

7) maintain Low Voltage ride through Capability consistent with current industry standards as outlined in Appendix G of the United States Federal Energy Regulatory Commission's document Large Generator Interconnection Agreement. The high voltage terminals of the 66/25 kV power transformer are the appropriate voltage monitoring points.

8) Operate in accordance with settings in Schedule B of this agreement.

9.3 The protection and control devices and the appropriate settings shall be determined in the design process and form Schedule B, Protective Relaying and Settings. These devices and settings once determined and approved, shall not be changed or modified without a request in writing from the Seller and approval in writing from Newfoundland Power and Hydro. Schedule B shall be changed accordingly.

9.4 The Seller shall promptly report the relay targets, annunciator or event recorder data, to the Newfoundland Power Controlling Authority following an operation of its protection devices. Similarly, Newfoundland Power and/or Hydro shall report to the Seller any relay operation that trips circuit breaker FER-902E-B.

10.0 REVIEW OF OPERATING AGREEMENT

10.1 Hydro will initiate a review of this Agreement every two years. A review of this Agreement may be initiated by either party at any time by providing written notice to the other parties. No change or modification of this Agreement shall be valid unless it is in writing and signed by each party.

11.0 GENERAL PROVISIONS

11.1 Governing Law
This Agreement shall be interpreted, governed, and construed under the laws of the Province of Newfoundland and Labrador as if executed and to be performed wholly within the Province of Newfoundland and Labrador.

11.2 Term of Agreement
This Agreement shall be in effect when signed by the parties and shall remain in effect thereafter as long as the Power Purchase Agreement remains in effect.

11.3 Consequential Damages
Newfoundland Power, Hydro and the Seller shall not bear any liability to the other for indirect, punitive or consequential damages.

11.4 Obligations Surviving Termination
Notwithstanding the termination of this Agreement for any cause, the obligations of the Seller set out in, or arising from, Sections 1.3, 4.4, 4.12, shall survive any termination and shall remain in force until discharged.

11.5 Successors
This Agreement shall ensure to the benefit of and be binding on the respective successors and permitted assigns of the parties.

11.6 Assignment
This Agreement is not assignable by either party without the prior written consent of the other parties. Such consent will not be unreasonably withheld, conditioned or delayed.

11.7 Force Majeure
It is agreed among the parties that neither party shall be held responsible for damages caused by delay or failure to perform undertakings under the terms of this Agreement when the delay or failure is due to strikes, fires, floods, acts of God or the Queen's enemies, lawful acts of public authorities, or delays or defaults caused by common carriers, which cannot reasonably be foreseen or provided against.

[execution page follows]

IN WITNESS WHEREOF Newfoundland and Labrador Hydro, Newfoundland Power Inc. and Fermeuse Wind Power Corp. have each executed this Agreement in accordance with its by-laws or regulations and by its duly authorized officers and agents, on the
25th day of AUGUST, 2008.

THE CORPORATE SEAL of Newfoundland and Labrador Hydro was hereunto affixed in the presence of:

Witness

Vice President Regulated Operations

Asst. Corporate Secretary

THE CORPORATE SEAL of Newfoundland Power Inc. was hereunto affixed in the presence of:

Sean La Cour

Geoff Emberley
Witness

THE CORPORATE SEAL of Fermeuse Wind Power Corp. was hereunto affixed in the presence of:

DAVID BACON

RICHARD GUTTMAN
Witness

SCHEDULE A

Single Line Diagram

This single line diagram is to be revised.

SCHEDULE B

PROTECTIVE RELAYING AND SETTINGS

(The following devices are preliminary until given final approval by all parties involved.)

<<<Need to add setting for Wind Speed at which the turbine will shutdown>>>>>

SCHEDULE C

Protection and Control Verification Schedule

1. Seller's substation, generator and transmission line protection systems which can impact on the Interconnected Grid shall be verified every five years or as required due to system performance concerns.

2. The Seller shall advise Hydro and Newfoundland Power giving at least 4 weeks notice as to when verification is to take place so that Hydro and Newfoundland Power P&C staff can observe:

   - relay verification and recalibration
   - test tripping of generator breaker(s) and the interconnection breaker
   - measurement and analysis of secondary AC voltages and current to confirm measuring circuit integrity

3. Specific Protection to be observed:

   - All generator, substation, and transmission line protection schemes which trip the breakers
   - Confirm that settings that are approved by Newfoundland Power are applied to the following protection

     (a) over and under frequency
     (b) over and under voltage
     (c) unbalance protection
     (d) substation protection
     (e) transmission line protection

   - Confirm the Hydro Supplied Low Voltage Ride Through Settings.

SCHEDULE D-1

AIR BREAK SWITCH

Inspection Every Three (3) Months:

1. Make sure that the switch is in its required operating position (either fully opened or fully closed).

2. Make a visual inspection of the insulators for cracked skirts and breakages of castings (such as pin and caps), other external parts and connections.

3. Make a visual check of the motor mechanism (if applicable).

4. Check that the mechanism space heater is functioning (if applicable).

No report is required for this three month inspection.

Maintenance Every Two Years: - Requires an Outage
Mechanical Mechanism and Interrupter (where Applicable)

1. Manually operate the switch and check: contact alignment toggles, stops, linkage, undue insulator movement.

2. Check all aluminium operating components for cracks.

3. Check contact pressure. Observe jaw spread as blade rotates in jaw.

4. Check the contacts for burns or wear.

5. Check the silver plating for peeling or wear.

6. Clean and lubricate contacts with low-temperature, multipurpose grease such as Lube 10A.

7. Check that line connections to the switch are tight.

8. Remove gearbox covers and inspect and lubricate gears.

9. Check switch grounding connections are tight and undamaged.

10. Lubricate all locations fitted with grease fittings.

11. Inspect and clean insulators.

12. Check shunts for tightness, fraying, or deterioration.

13. Test interrupter to ensure that contacts make and break and check that sequence of operation is correct. Check the position indicator (if applicable)

14. Perform Micro-ohm test across the entire switch. Record results.

15. Remove cover from electrical control mechanism. Check internally (if applicable).

16. Check that grounding (including ground mats if supplied) is tight and undamaged.

17. Clean and paint as required.

18. Test operate switch manually and electrically (as appropriate):

SCHEDULE D-2

25 kV BREAKER

Inspection Every Month:

1. Make a visual inspection of the primary connections and grounding.
2. Make a visual inspection of the insulators for cracked skirts.
3. Check for gas leaks and record gas pressure.
4. Inspect general condition of control cabinets and cabinet heaters.
5. Record breaker operations.

Maintenance Every Three Years

1. Perform contact resistance tests.
2. Perform breaker timing tests.
3. Perform insulation tests.
4. Check high voltage terminations.
5. Check heaters.
6. Record breaker operations and gas pressure.

SCHEDULE D-3

Transmission Line Maintenance - 66 kV Circuits

To maintain a reliable supply and assure minimum impact on the Hydro system, Hydro requires a combination of the following inspections and maintenance procedures or their equivalent.

Every 3 months	Visual Inspection
Every year	Snowmobile patrol
Every 3 years	Ground patrol
Every 5 years	Climbing inspection including inspection and testing of suspension type insulators
Every 15 years	Wood Poles Test and Treat (if applicable)

SCHEDULE D-4

STATION CONTROL SYSTEMS BATTERY INSPECTION

The D.C. Battery should become part of a monthly inspection routine.

1. Check that the battery charger D.C. voltmeter reading is within the normal range - investigate any deviations.

2. Check that the battery charge ammeter reading indicates that the battery drain is normal --- investigate any deviations.

3. Record D.C. system voltage.

*4. Record the corrected relative density of the electrolyte and the voltage of the pilot cell and determine if an equalize charge is required.

5. Inspect the battery plates (if visible) for any signs of deterioration and correct.

*6 Top up the electrolyte to the upper limit using distilled or approved water - excessive water loss is an indication of overcharging and should be investigated.

7. Wipe down cells as required.

Note: Items with an asterisk (*) do not apply where maintenance free batteries are used.

Maintenance Every Four Years:

The D.C. Battery is to be subjected to a discharge low check. Replace the battery if they go below 80% capacity.

SCHEDULE E

TELEPHONE CONTACTS

The Seller

The Seller

Sky Power Corp.
<<<number to be supplied>>>

Operator (Controlling Authority)
<<<number to be supplied>>>

Newfoundland Power

St. John's System Control Centre (Newfoundland Power Control Authority)
(709) 737 – 5993 (such number to be used only for power system control purposes)

Area Superintendent
(709) 466-8305

Hydro

MANAGER - SYSTEM OPERATIONS: [redacted]
Hydro Place - St. John's, NL
[redacted]

ECC SUPERINTENDENT: [redacted]
ECC - St. John's, NL
[redacted]

ECC SHIFT SUPERVISOR (Controlling Authority)
(24 hours/day) [redacted]

ECC SYSTEM OPERATOR
(24 hours/day) [redacted]

SCHEDULE F

Reserved

SCHEDULE G

G.1 Real Time SCADA to interface with Hydro Control Centre

Wind Farm

MegaWatt indication for wind farm (measured by NP at Fermeuse)
MegaVar indication for wind farm (measured by NP at Fermeuse)
KiloVolts indication for wind farm (measured by NP at Fermeuse)
66 kV breaker control & indication (measured by NP at Fermeuse)
Indication of number of wind turbines on-line (measured by Sky Power at Wind Farm)
Wind Speed Indication (measured by Sky Power at wind Farm)

G. 2 Forced Outage Event Data

Outages related to the wind farm are reportable to Hydro's Energy Control Centre. The following data shall be reported:

Date & Time of the event
MW Loss
Duration of the Outage
Cause of the event with description of any damage or failed component (Outage Type)
Number of turbines affected
Derating of the Wind Farm, if applicable
Estimated time to restore full wind farm generation capacity, if applicable.

Outage Information

Time information should include the day(s) and the hour the outage started and ended.

Outage types are:

Forced Outage (FO)	- cannot be deferred.
Maintenance Outage (MO)	- can be deferred beyond the end of the next weekend.
Planned Outage (PO)	- planned well in advance, usually occurs 1-2 times a year.

Comments/Cause can be used to provide detailed information on the outage e.g. equipment failure, utility feeder trip, etc.

The report shall include relay targets, annunciator or event recorder data associated with the operation of protection devices

G.3 Monthly Data Collection to be reported annually to Hydro

In addition to the annual report to Hydro, Hydro may make special requests for the monthly data during the year.

Wind Farm

Generation (MWh) for the year
Available Hours for the year
Operating Hours for the year
Number of Starts for the wind farm from an off line status
25 kV breaker indication for each day at 12:00 am

Planned/Maintenance Hours for the year
Planned/Maintenance MW Loss for the year, assuming wind speed prevailing at 12:00 am for the entire day
Number of Planned/Maintenance Events for the year

Forced Outage Hours as a result of equipment breakdown

Forced MW Loss assuming wind speed prevailing at 12:00 am
Number of Forced Events as a result of equipment breakdown

Each Turbine

Generation (MWh) for the year
Available Hours for the year
Operating Hours for the year
Number of Starts for the turbine from an off line status

Planned/Maintenance Hours for the year
Planned/Maintenance MW Loss for the year, assuming wind speed prevailing at 12:00 am on the day of the event
Number of Planned/Maintenance Events for the year

Forced Outage Hours as a result of equipment breakdown
Forced MW Loss assuming wind speed prevailing at 12:00 am
Number of Forced Events as a result of equipment breakdown

Environmental Conditions

Number of Days with too little wind, resulting in no production for the entire day
Number of Days with too much wind, resulting in no production for the entire day
If available from visual observation, lightning activity close to the wind farm - Date and times
If available from visual observation, other weather problems such as ice storms, hurricanes, other extreme weather storms.

Wind Direction Indication each day at 12:00 am
If available, air Temperature Indication each day at 12:00 am
If available, air Pressure Indication each day at 12:00 am

SCHEDULE H

DESIGNATED LOCATIONS OF SELLER EQUIPMENT AT OR NEAR THE NEWFOUNDLAND POWER FERMEUSE SUBSTATION

NON-UTILITY GENERATION OPERATIONS AGREEMENT

BETWEEN

NEWFOUNDLAND AND LABRADOR HYDRO

AND
ALGONQUIN POWER CORPORATION (RATTLE BROOK) INC.

With respect to the Non-Utility Generation Facility known as:

RATTLE BROOK SMALL HYDRO PROJECT

Issue Date:
March, 1997

Review Date:
November, 2000
Number: 2

1.0 INTRODUCTION

This Operations Agreement defines the terms of the agreement between Newfoundland and Labrador Hydro, hereinafter referred to as "Hydro" and Algonquin Power Corporation (Rattle Brook) Inc., hereinafter referred to as the "Seller", for the operation, maintenance, and supply of power from the Non-Utility Generation Facility known as the Rattle Brook Small Hydro Project. This agreement is incorporated into the Power Purchase Agreement between Hydro and the Seller dated January 3, 1995 as Appendix E. This Agreement further defines the operating procedures identified in the Power Purchase Agreement, but does not alter the conditions of service outlined in that Agreement.

This Operating Agreement states the minimum requirements for safe and effective parallel operation of Hydro's system with the Seller's Facility. The Operating Agreement is intended for use by the Seller and Hydro when operating equipment which will have an effect on the other party's equipment or system.

The Seller shall operate its generating equipment as per the terms of the Power Purchase Agreement and in compliance with this Operating Agreement. In order to operate in parallel with Hydro's system, certain protective devices (relays, circuit breakers, etc.) are required by Hydro and shall be maintained as outlined in this Operating Agreement. The purpose of these devices is to promptly disconnect the Seller's Facilities from Hydro's system whenever faults or abnormal conditions occur.

The Parties shall ensure only appropriately Qualified personnel shall operate and maintain the equipment covered by this agreement. Before performing the operations described in this document the necessary safety procedures relative to this type of equipment shall be carried out.

2.0 DEFINITIONS

2.1 **Seller's Facility** means the plant and equipment owned by the Seller to generate and deliver power and energy under the Power Purchase Agreement.

2.2 **Operating Control** means having the exclusive authority to perform, direct, or authorize, the operation of all devices under its control. Operating Control is not synonymous with ownership, nor does it necessarily convey total independence of action.

2.3 **Controlling Authority** means the organizational position which has Operating Control of specific apparatus or equipment. The Controlling Authority for Hydro and the Seller are specified in Schedule E.

2.4 **Work Protection** means a guarantee that an isolated/de-energized condition has been established for worker safety and shall continue to exist, except for approved tests.

2.5 **Condition Guarantee** means a guarantee, issued in support of a Work Protection, guaranteeing isolation/de-energizing at switches, or other devices under the Operating Control of the issuer. Such guarantees may be communicated orally but shall be logged or otherwise documented by the issuer.

2.6 **Agent** means a Qualified person delegated to perform specified operations.

2.7 **Hold-Off Procedure** means a procedure implemented by a Controlling Authority to limit operation of apparatus, to facilitate work or reduce hazards. When a Hold-Off is in effect on a line or other electrical apparatus, it will not be re-energized following an automatic trip until communication is established with the holder and their consent obtained. It is a basic requirement of Hold-Off Procedures that suitable communication be established and maintained between the Controlling Authority and the person holding the Hold-Off. Under no circumstances shall a Hold-Off be used in place of a Work Protection.

2.8 **Scheduled Outage** means an outage to any transmission line, substation or generating equipment which is deliberately arranged at a preselected time.

2.9 **Work Authority** means the person responsible and in charge of specific work/tests. It is the responsibility of the Work Authority to identify the need and make arrangements for adequate work protection.

2.10 **Qualified** means assessed as satisfactory in reference to personal competency and is:

1) trained in the operation of high voltage equipment according to utility standards and has passed Hydro's training course for switching;

2) familiar with rules, procedures, apparatus, equipment and dangers with respect to work and operation; and

3) trained and works in accordance with the latest revision of Hydro's Work Protection Code.

A list of the Seller's Qualified personnel shall be submitted to the Hydro Controlling authority annually.

3.0 OWNERSHIP

3.1 The Seller owns the 69 kV breaker at the Seller's Rattle Brook Plant (refer to Schedule A). This does not include the two 69 kV disconnect switches on the tap to Hydro's transmission line TL-253.

The Seller also owns the potential and current transformers used in the metering to measure the power and energy supplied by the Seller to Hydro. These potential and current transformers shall be approved for revenue metering by Industry Canada.

3.2 Hydro owns the two 69 kV disconnect switches tapping into transmission line TL-253 at the Seller's Generating Plant. Hydro also owns the metering equipment including the potential and current transformers used to measure the power and energy sold by Hydro and used by the Seller's station service at the Seller's Facilities.

The Hydro owned equipment is the equipment defined as the Interconnection Plant in the Appendix C of the Power Purchase Agreement.

4.0 OPERATING PRINCIPLES

4.1 Hydro has Operating Control of the two 69 kV disconnect switches and the 69 kV breaker at the Seller's Rattle Brook Plant.

4.2 The Seller has Operating Control of its Facilities excluding the 69 kV breaker at the Rattle Brook Plant.

4.3 The Seller shall be responsible for the correct operation of the devices under its Operating Control. The Seller shall not operate devices under Hydro's Operating Control unless such action is specifically requested by Hydro.

4.4 On the request of one Controlling Authority, the other Controlling Authority's staff or Agents shall provide the required timely isolation of equipment as required for emergency switching or to establish a Condition Guarantee.

4.5 Any operating services provided by Hydro at the request of the Seller shall be paid for by the Seller.

4.6.1 The Seller shall operate the Seller's Facility so as to avoid unacceptable voltage flicker or voltage level. The Seller shall not impose harmonic distortion levels on Hydro's system which exceed the minimum levels established by the latest revision of the Institute of Electrical and Electronic Engineers Standard 519, which is the IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems.

4.6.2 If Hydro determines that the Seller's equipment or operation is causing the conditions outlined in 4.6.1, the Seller shall be responsible to correct these in a timely manner the cost of which shall be borne entirely by the Seller.

4.6.3 If the Seller's Facility causes a voltage backfeed that is unacceptable to Hydro when Hydro's protective equipment operates to isolate one or more phases of the 3-phase supply, then the Seller shall modify his facility at his own expense to correct the backfeed problem. Hydro may determine that it is necessary to disconnect the Seller until the correction is made.

4.7 The Hydro Controlling Authority will adjust the generator voltage, subject to equipment limits, as required by Hydro for the safe, secure and efficient operation of Hydro's system.

The generator voltage regulator and transformer ratio settings shall be jointly determined by Hydro and the Seller to ensure proper co-ordination of voltage and regulator action. If abnormal voltage results from operation of the Seller's generation, as outlined in Section 4.6.1, such generating equipment shall be disconnected until the problem is resolved.

4.8 The Seller shall at the request of the Hydro Controlling Authority alter the electrical output of the Seller's Facility as required for planned work, transmission security constraints or emergency conditions. This may include but is not limited to reduced output or temporary shut down of the Seller's Facility. This may also include increased output within the capability of the Seller's Facility.

In addition, during the Winter Period and upon the request of Hydro's Controlling Authority, where the Seller has sufficient storage and unless doing so requires the Seller to spill water, the Seller shall maximize its generation during the daily peak hours (0800 to 2200 hours).

4.9 The Seller shall, upon Hydro's request and subject to water availability, and appropriate facilities being in place, operate its plant in isolated mode to supply the loads fed off transmission lines TL-253 and TL-251 (Jackson's Arm and Hampden Substations). This will reduce water spillage from the Seller's facility and provide power to Hydro's customers during extended outages to the main grid interconnection via the Howley Terminal Station. The Seller is not obligated to put appropriate facilities in place to operate its plant in isolated mode.

4.10 The Seller shall maintain its equipment in good order. Hydro reserves the right to inspect from time to time the Seller's facilities that impact on Hydro's System or employees.

The Seller shall immediately discontinue parallel operation when requested by Hydro:

a) To facilitate maintenance, test or repair of Hydro's facilities,

b) during Hydro system emergencies,

c) when the Seller's generating equipment is interfering with Hydro's customers on the system,

d) when an inspection of the Seller's generating equipment reveals a condition hazardous to Hydro's system,

e) when there is an apparent lack of scheduled maintenance for protection and control equipment required by Hydro as a condition of parallel operation; and

f) for other causes which Hydro may deem necessary for emergency, system reliability, public safety and safety of Hydro's or Seller's staff.

4.11 The Seller shall, upon request by Hydro, provide a quarterly report containing information on a monthly basis related to the operation of the Seller's Facility. The items to be reported include information on operating hours, unit starts and the date, time and duration of all forced, automatic and planned interruptions of the Seller's Facility output (refer to Schedule F for sample reporting form).

5.0 MAINTENANCE RESPONSIBILITIES

5.1 Hydro shall perform all routine and emergency maintenance and repair on the Hydro owned equipment as defined in section 3.2. Hydro may elect to repair this equipment in normal working hours even though this may prevent the delivery of energy by the Seller. If the Seller is willing to pay for the extra cost of work being done outside normal working hours, Hydro shall endeavour to accommodate such a request. The cost incurred by Hydro for routine and emergency maintenance and repair of the Hydro owned equipment, as defined in Section 3.2, shall be borne by the Seller. These costs shall be reasonable and in line with utility practice for the work done. Upon the request of the Seller, Hydro shall provide a detailed cost breakdown for any charge.

5.2 The Seller is fully responsible for routine and emergency maintenance and repair on all Seller owned equipment.

5.3 The Seller is responsible for maintaining the relaying, and auxiliary control facilities, required by Hydro to be connected to Hydro's system (see Schedule B). The Seller shall perform periodic verification of their relaying and control facilities in accordance with the test schedule in Schedule C.

5.4 The Seller shall maintain Seller owned switches, transmission line equipment, and battery equipment as per the procedures identified in Schedule D.

5.5 The Seller shall submit an annual Equipment Maintenance report to Hydro outlining the maintenance completed on the equipment outlined in Schedules C and D during the year.

5.6 The Seller shall inform Hydro of any changes to the Seller's Facility's electrical protection including equipment and settings. The portion of this protection that affects Hydro's system and customers shall be designed, set, and installed in a manner acceptable to Hydro for the Seller to continue delivering power to Hydro. The Seller shall obtain prior acceptance by Hydro for any modification or setting changes to this protection equipment. The Seller shall inform Hydro of any changes to the Seller's Facility power devices such as transformers, generator, capacitor or station service transformer.

5.7 Hydro and the Seller will discuss planned outages of their respective equipment. They will endeavour to coordinate the maintenance of their respective facilities to minimize interruptions to Hydro's customers and the Seller's generator.

5.8 By April 1 of each year, each party to this agreement shall provide information to the other party's Controlling Authority on Scheduled Outages expected to take place that year which will affect the Seller's ability to deliver power to Hydro. These scheduled outages will be confirmed by the appropriate Controlling Authority 5 working days in advance.

6.0 WORK PROTECTION

6.1 When work is done by the Seller on apparatus that can be isolated by devices under the control of the Seller, the work procedures and protection shall be in accordance with the Seller's practices and the Occupational Health and Safety Act of Newfoundland.

6.2 When the Seller requires isolation by means of a device(s) under Hydro control, the Seller shall request that Hydro provide a Condition Guarantee. The Seller shall then establish its own work protection.

6.3 When work is done by Hydro on apparatus that can be isolated by devices under Hydro's control, the protection provided shall be in accordance with Hydro's Work Protection Code.

6.4 When Hydro requires isolation by means of a device(s) under the Seller's operating control, a Condition Guarantee or verbal guarantee supported by written documentation shall be issued by the Seller to support the work protection issued by Hydro.

6.5 No one but the holder of a Condition Guarantee (formal or verbal) has the right to surrender the Guarantee except if the holder is unable to continue to exercise his responsibilities due to illness, injury or other cause. In this case the work shall cease and a qualified substitute may be appointed to surrender the Condition Guarantee for the absent holder. A list of qualified workers shall be provided to Hydro's Controlling Authority annually.

6.6 The Seller shall provide access to Hydro to inspect devices under the Seller's operating control that are required to establish Hydro work protection.

7.0 COMMUNICATION

7.1 The Seller's Controlling Authority shall take operating instructions, including requirements for generator shutdown, from Hydro's Controlling Authority or its delegate. Therefore, they shall be able to reach each other by telephone at anytime. A set of phone numbers is listed in Schedule E for this purpose.

7.2 Connection of the Seller's Facility to the Hydro system following a forced shutdown or a shutdown requested by the Hydro Controlling Authority shall receive prior approval from the Hydro Controlling Authority.

7.3 The Seller's Controlling Authority shall keep the Hydro Controlling Authority or his

delegate informed of the following items to enable the Hydro Controlling Authority to be fully aware of all generation operating on the power system and for analysis following system disturbances:

7.3.1 The time at which the Seller's Facility is connected to the Hydro system;

7.3.2 The time at which the Seller's Facility is disconnected from the Hydro system;

7.3.3 The time at which the Seller's Facility breaker trips;

7.3.4 Any time the Seller's Facility becomes isolated from the main power system or experiences unusual voltage or frequency levels; and

7.3.5 River flows and other hydraulic conditions which will result in the Seller shutting down its generation for extended periods or which may result in spilling.

7.4 In the event of a generator shutdown for any reason other than for water storage management the Seller's Controlling Authority shall contact the Hydro Controlling Authority or its delegate for further instruction. The Hydro Controlling Authority or its delegate shall establish if the shutdown is due to system problems and will instruct the Seller's Controlling Authority as required. Under no circumstances shall the Seller reconnect to the Hydro system until authorized by the Hydro Controlling Authority or its delegate.

7.5 In the event that abnormal operation of the Sellers Facility occurs, such as over or under voltage, over or under frequency or, voltage unbalance, and the Seller cannot contact Hydro's Controlling Authority or its delegate, then the Seller shall separate the Seller's Facility from the Hydro system.

7.6 The Seller's Controlling Authority shall advise the Hydro Controlling Authority of any planned operations which may affect the Hydro System.

7.7 The Hydro Controlling Authority shall advise the Seller's Controlling Authority of any planned operations which may affect the Seller's operations.

7.8 The Seller shall maintain a continuous communication link to Hydro's Controlling Authority in order for Hydro to maintain operating control of the Seller's voltage regulation equipment and enable Hydro to operate the breaker at the Interconnection Point.

8.0 PROTECTION AND CONTROL REQUIREMENTS

8.1 The Seller shall maintain its protection and control devices to:

a) Provide reliable and adequate protection at the Seller's end for faults on Hydro's lines TL 251, TL 252 and TL 253,

b) reliably and adequately protect the Seller's facilities from any abnormal conditions on the Seller's facility which may cause damage. This includes protection for any abnormal conditions, such as, open phase conditions, abnormal voltage and frequency conditions which may be caused by abnormal conditions on Hydro's interconnecting system,

c) provide adequate control for operation into a nominal 60 Hz system ± 2 Hz with ± 10% voltage deviation from a nominal 69 kV voltage at the interconnection point,

d) operate in accordance with the settings specified in Schedule B,

e) provide synchronizing capabilities,

f) provide reliable and adequate protection and control to detect voltage and frequency conditions which occur when Hydro facilities serving the Seller are disconnected from the system and isolate the Seller's generation from the isolated system if frequency and voltage control is not maintained,

g) where the Seller and Hydro agree to install appropriate facilities, provide control to operate on an isolated system when TL 251 is open at Howley, and

h) provide adequate protection to prevent any problems for operation of reclosing on TL 251, TL 252, and TL 253.

8.2 The protection and control devices and appropriate settings shall be determined in the design process and form Schedule B, Protective Relays and Settings. These devices and settings, once determined and approved, shall not be changed or modified without a request in writing from the Seller and approval in writing from Hydro. Schedule B shall be changed accordingly.

8.3 The Seller shall promptly report the relay targets, annunciator or event recorder data, to Hydro's Controlling Authority following an operation of its protection devices.

9.0 REVIEW OF OPERATIONS AGREEMENT

9.1 A review of this agreement may be initiated by either party from time to time. Hydro shall initiate a review of this agreement every two years.

This Operating Agreement for the Rattle Brook Hydro Project shall be incorporated as Appendix E to the "Agreement for Non-Utility Generated power and Energy" between Algonquin Power Corporation (Rattle Brook) Inc. and Newfoundland and Labrador Hydro dated January 3, 1995.

for Newfoundland and Labrador Hydro:

_____

_____
Date

for Algonquin Power Corporation (Rattle Brook) Inc.:

_____ _____
Date

SCHEDULE A

Single Line Diagram

SCHEDULE B

Device Number	Description	Settings	Devices Operated
Transformer 69/4.16KV			
	KCGG142 (GEC)		
51		CTR = 100:5 (20:1)	52L
		I> = 0.42In = 2.1A	52G
		Curve = VI3OXDT	
		t > TMS = 0.10	
50		CTR = 100:5 (20:1)	52L
		I >> = 0.84In = 4.2A	52G
		t >> = 0.6secs.	
51N		CTR = 200:5 (40:1)	52L
		Io > = 0.021In = 0.105A	52G
		Curve = VI3OXDT	
		to > TMS = 0.10	
50N		CTR = 200:5 (40:1)	52L
		Io >> = 0.21In = 1.05A	52G
		to >> = 0.0	
87	KBCH130 (GEC)		52L
		HV CTR = 100:5 (20:1)	52G
		LV CTR = 800:5 (160:1)	
		HV Ratio Corect. Factor = 1	
		LV Ratio Correct. Factor= 0.482	
		HV Vector Corection = Yd1	
		LV Vector Correction = YY0	
		Id > = 0.2In	
		I d >> = 4.9In	
		Iof = 0.35In	
		Tof = 300 secs.	

SCHEDULE B (cont'd.)

Device Number	Description				Settings	Devices Operated
Bus Fault						
27BG	BE1-27/59 (BASLER)					52L
			VTR	=	4200:120 (35:1)	52G
			Vr	=	70 V (Relay rated volts)	
		27	Vu	=	59.5 V	
		27	Tu	=	2.0 secs.	
		59	Vo	=	74.0 V	
		59	To	=	2.0 secs.	
Generator						
	M-3420 (BECKWITH)					52G
			CTR	=	600:5 (120:1)	
			VTR	=	4200:120 (35:1)	
		59#1	PU	=	124.8 V	
		59#1	TD	=	7200 cycles (120secs.)	
		59#2	PU	=	130.7 V	
		59#2	TD	=	60 cycles	

SCHEDULE C

Protection and Control Verification Schedule

1. Seller's station, generator and transmission line protection systems which can impact on the Hydro System shall be verified every three years or as required due to protection operations.

2. The Seller shall advise Hydro giving at least 4 weeks notice as to when verification is to take place so that Hydro P&C staff can observe:

   - relay recalibration
   - test tripping of generator breaker and interconnection breaker
   - measurement and analysis of secondary AC voltages and currents to confirm measuring circuit integrity

3. Specific Protection to be Observed:

   - All generator or interconnection protection systems which trip the breaker
   - Confirm that settings that are approved by Hydro are applied to the following protection systems

     (a) over and under frequency
     (b) over and under voltage
     (c) unbalance protection
     (d) substation protection
     (e) transmission line protection

SCHEDULE D-1

69 kV BREAKER

Inspection Every Month:

1. Make a visual inspection of the primary connections and grounding.
2. Make a visual inspection of the insulators for cracked skirts.
3. Check for gas leaks and record gas pressure.
4. Inspect general condition of control cabinets and cabinet heaters.
5. Record breaker operations.

Maintenance Every Three Years

1. Perform contact resistance tests.
2. Perform breaker timing tests.
3. Perform insulation tests.
4. Check high voltage terminations.
5. Check heaters.
6. Record breaker operations and gas pressure.

SCHEDULE D-2

STATION CONTROL SYSTEMS BATTERY INSPECTION

The D.C. Battery should become part of a monthly inspection routine.

1. Check that the battery charger D.C. voltmeter reading is within the normal range - investigate any deviations.

2. Check that the battery charge ammeter reading indicates that the battery drain is normal --- investigate any deviations.

3. Record D.C. system voltage.

*4. Record the corrected relative density of the electrolyte and the voltage of the pilot cell and determine if an equalize charge is required.

5. Inspect the battery plates (if visible) for any signs of deterioration and correct.

*6 Top up the electrolyte to the upper limit using distilled or approved water - excessive water loss is an indication of overcharging and should be investigated.

7. Wipe down cells as required.

Note: Items with an asterisk (*) do not apply where maintenance free batteries are used.

Maintenance Every Four Years:

The D.C. Battery is to be subjected to a discharge low check. Replace the battery if they go below 80% capacity.

SCHEDULE E

TELEPHONE CONTACTS

The Seller

OWNER:
[redacted]
Canadian Operations Manager
Algonquin Power
[redacted]

OPERATOR (Controlling Authority):
[redacted] - Operator
Rattle Brook G.S.
[redacted]

[redacted] – Backup Operator
[redacted]

Hydro

MANAGER - SYSTEM OPERATIONS:
[redacted]
Hydro Place - St. John's, NF
[redacted]

ECC SUPERINTENDENT:
[redacted]
ECC - St. John's, NF
[redacted]

ECC SHIFT SUPERVISOR (Controlling Authority)
(24 hours/day)
[redacted]

ECC SYSTEM OPERATOR
(24 hours/day)
[redacted]

SCHEDULE F

DEFINITIONS

The following defines the information requested on the Seller's Unit Performance:

A. **UNIT IDENTIFICATION**

A unique description for the unit as well as indication of the month and year being report on.

B. **UNIT GENERATION INFORMATION**

The data in this section are useful in the analysis of Seller's unit performance data.

Actual Generation

The number of electrical kilowatt-hours (kWh) generated by the unit during the month.

Maximum Capacity

Maximum capacity the unit can sustain over a specified period of time.

D. **UNIT TIME INFORMATION**

Operating Hours (normal operation)

The number of hours the unit was electrically connected to serve utility load.

Operating Hours (derated operation)

The number of hours the unit was synchronized but operating at reduced loads due to planned maintenance or forced equipment outages and other problems.

Average Size of Derating

The average MW lost as a result of deratings during the reporting period.

Outage Information

Specific information on the time duration, type and cause of the outage for the

reporting period.

Time information should include the day(s) and the hour the outage started and ended.

Outage types are:

Forced Outage (FO)	-	cannot be deferred.
Maintenance Outage (MO)	-	can be deferred beyond the end of the next weekend.
Planned Outage (PO)	-	planned well in advance, usually occurs 1-2 times a year.

Comments/Cause can be used to provide detailed information on the outage e.g. equipment failure, utility feeder trip, etc.

OPERATIONS AGREEMENT

AMONG

NEWFOUNDLAND AND LABRADOR HYDRO,

NEWFOUNDLAND POWER

AND

NeWind Group Inc.

With respect to the Non-Utility Generation Facility known as:

St. Lawrence Wind Project

Issue Date:
August 15, 2008

Review Date:

Number: 0

August 2008

THIS AGREEMENT made as of the day of August, 2008

BETWEEN: **NEWFOUNDLAND AND LABRADOR HYDRO**, a Crown corporation (hereinafter, "Hydro")

AND: **NEWFOUNDLAND POWER INC.**, a Newfoundland corporation (hereinafter, "Newfoundland Power")

AND: **NEWIND GROUP INC.**, a • corporation (hereinafter, "the Seller")

WHEREAS:

A contract dated the 22nd day of December, 2006, relating to the supply and purchase of power from a generation facility known as the St. Lawrence Wind Project (hereinafter, "the Seller's Facility"), was entered into between Hydro and the Seller (hereinafter, "the Power Purchase Agreement"); and

It is desirable that minimum requirements be established for the safe and effective parallel operation of the Seller's Facility with the Interconnected Grid, which requirements shall govern the operation by the parties' personnel when operating equipment, which will have an effect on the other party's equipment or system.

NOW THEREFORE in consideration of the mutual covenants and agreements herein contained it is agreed between the parties as follows:

1.0 GENERAL

1.1 The Seller may operate its generating equipment in parallel with the Interconnected Grid if it does not have adverse effects on the general public or customers, personnel or equipment of Hydro or Newfoundland Power. In order to operate generation in parallel with the Interconnected Grid , Hydro and Newfoundland Power require certain protective devices (relays, circuit breakers, etc.), which must be maintained as outlined in this agreement. The purpose of these devices is to promptly disconnect the Seller's Facility from the Interconnected Grid whenever faults or abnormal conditions occur.

1.2 Neither Hydro nor Newfoundland Power will assume any responsibility for protection of the Seller's equipment. The Seller is fully responsible for protecting its equipment in such a manner that faults, system operations, or other disturbances on the Interconnected Grid do not cause damage to the Seller's equipment. The Seller shall provide adequate protection and control to prevent damage or unnecessary outages or power quality concerns to either Hydro facilities, Newfoundland Power's facilities or those of their respective customers, the whole in accordance with the specific requirements of this Agreement.

1.3 The Seller shall indemnify and hold Hydro and Newfoundland Power harmless for injury or death to persons including employees of either party and damage to property including property of either party or others arising out of or in connection with (a) the engineering, design, construction, maintenance, repair, operation, supervision, inspection, testing, protection or ownership of the Seller's Facility, or (b) the making of replacements, additions, betterments to, or reconstruction of the Seller's Facility. The Seller is solely responsible for providing adequate protection for the parallel operation of the Seller's Facility and releases Hydro and Newfoundland Power from any liability for damages or injury to the Seller's Facility arising out of such parallel operation. The Seller shall be required to maintain in force commercial general liability insurance in a minimum amount of Five million dollars ($5,000,000.00) in order to support its indemnity obligations hereunder. The insurance policy shall provide that Hydro and Newfoundland Power are named as additional insured, contain a cross liability clause and provide that the insurer shall endeavour to provide Hydro and Newfoundland Power with a minimum of 15 days prior written notice of cancellation, termination or amendment of the policy in a manner prejudicial to the interests of Hydro or Newfoundland Power.

1.4 The Parties shall ensure that only appropriately Qualified personnel shall operate and maintain the equipment covered by this Agreement.

1.5 Before performing the operations described in this Agreement, the necessary safety procedures relative to this type of equipment must be carried out.

2.0 DEFINITIONS

2.1 **Agent** means a person designated in writing to the other parties by either Hydro, Newfoundland Power or the Seller to perform specified operations on behalf of the party designating this person.

2.2 **Controlling Authority** means the organizational position which has operating control of specific apparatus or equipment. The Controlling Authorities for Hydro, Newfoundland Power and the Seller are specified in Schedule E.

2.3 **Interconnected Grid** means the interconnected transmission and distribution systems situated on the island part of the Province and owned by Hydro or by Newfoundland Power;

2.4 **Interconnection Plant** means the equipment and plant at the Interconnection Point which Hydro or Newfoundland Power will install, operate and maintain, as will be more particularly described in Appendix C in the Power Purchase Agreement;

2.5 **Interconnection Point** means that point where the Seller's Facility connects to the Interconnected Grid as described in Section 3.1 hereof;

2.6 **Seller's Facility** means the wind power plant and equipment owned by the Seller to generate and deliver power and energy under the Power Purchase Agreement between Hydro and the Seller.

2.7 **Seller's Interconnection Equipment** means that portion of the Seller's Facility that is a located on Newfoundland Power lands at or near the Newfoundland Power Laurentian Substation.

2.8 **Operating Control** means having the exclusive authority to perform, direct, or authorize the operation of all devices as designated. Operating Control is not synonymous with ownership, nor does it necessarily convey total independence of action.

2.9 **Qualified**, in relation to an individual, means a worker who has been assessed as satisfactory in reference to personal competency and who is

1) trained to Newfoundland Power's Standards or to Hydro's Standards or otherwise professionally qualified for the responsibilities assigned to this individual;

2) familiar with relevant rules, procedures, apparatus, equipment and dangers with respect to work and operation.

2.10 **Scheduled Outage** means an outage to any transmission line, substation or generating equipment which is deliberately arranged at a pre-selected time.

3.0 OWNERSHIP

3.1 The Seller's parallel connection to the Interconnected Grid shall be a 60 Hz alternating current supply at 66 kV. The Interconnection Point will be at Newfoundland Power's Laurentian Substation located in St. Lawrence, where the Seller's 66 kV transmission line conductors will connect to the Newfoundland Power 66 kV disconnect switch on the Seller's side of the Newfoundland Power circuit breaker supplying the Seller Facility. The disconnect switch designation is LAU-901E-DL, and the circuit breaker is designated LAU-901E-B. Newfoundland Power's cost of maintaining the disconnect switch, the circuit breaker and associated protection and control equipment shall be borne by the Seller.

The Newfoundland Power owned equipment is more fully described as the Interconnection Plant in the Power Purchase Agreement - Appendix C

3.2 The Seller owns the three phase 66 kV line from Newfoundland Power's disconnect switch LAU-901E-DL at the Laurentian Substation to the Ryan's Hill Substation servicing the St. Lawrence Wind Project.

3.3 Newfoundland Power owns the revenue metering class potential transformers and current transformers which meet Industry Canada specifications, for the purpose of metering the power and energy sold by the Seller to Hydro.

3.4 Hydro owns the export bi-directional metering equipment which registers the power and energy supplied from the Seller's Facility and sold to Hydro at the Laurentian Substation as well as the sale of electricity to the Seller by Newfoundland Power as contemplated by Section 3.6. Newfoundland Power must maintain communications acceptable to Hydro in order for Hydro to automatically obtain the revenue metering data from the metering equipment.

3.5 The Seller shall own, install and maintain a system of metering that will record the energy sold to Hydro, the data from which may be used by Hydro as an estimator of energy purchases during those instances of primary export metering failure.

3.6 Power and energy required by the Seller from the Interconnected Grid shall be supplied by Newfoundland Power in accordance with the terms and conditions of the *Newfoundland Power Inc. Schedule of Rates, Rules and Regulations* approved from time to time by the Board of Commissioners of Public Utilities.

4.0 OPERATING PRINCIPLES

4.1 Newfoundland Power has Operating Control of the 3-phase air break disconnect switch designated LAU-901E-DL, and the circuit breaker designated LAU-901E-B. The Seller shall not be permitted to operate Newfoundland Power's disconnect switch or the circuit breaker designated LAU-901E-B, except that Newfoundland Power acknowledges and agrees that the circuit breaker LAU-901E-B might be opened as a result of a transfer trip from the Seller's protection system. Furthermore, Newfoundland Power shall provide a signal, which can be sent back to the Seller's SCADA indicating the open or closed status of the circuit breaker LAU-901E-B.

4.2 The Seller shall be responsible for the correct operation of the devices under its Operating Control. The Seller shall not operate devices under Newfoundland Power's Operating Control, expect for the transfer trip capability indicated above.

4.3 On the request of a Controlling Authority, another Controlling Authority's Agents shall provide the required isolation of equipment as required.

4.4 Any operating services provided by Newfoundland Power at the request of the Seller, or otherwise in accordance with this Agreement, shall be paid for by the Seller. Charges will be based on Newfoundland Power's loaded costs plus mark-up as normally charged for non-tariff services. Charges will be assessed for significant services, such as labour and travel expenses of Newfoundland Power staff to Laurentian Substation to operate and maintain the Interconnected Plant, but not for minor services such as the remote operation of equipment by Newfoundland Power staff.

4.5 The Seller shall operate the Seller's Facility so as to avoid unacceptable voltage flicker or voltage level, as set out below.

4.5.1 The Seller shall ensure that sudden voltage changes which result from generator starting, capacitor/ reactor switching, etc., and which are covered under CAN/CSA-C61000-3-7, IEC 6100-3-7 and IEEE Standard 1547, is limited to less than 2%.

4.5.2 The Seller shall ensure that flicker levels as per IEEE Standard 1453-2004 "IEEE Recommended Practice for Measurement and Limits of Voltage Fluctuations and Associated Light Flicker on AC Power Systems" Table 1 have flicker levels maintained within the following limits:

$$Pst = 0.8$$
$$Plt = 0.6$$

4.5.3 The Seller shall not impose harmonic distortion levels on the Newfoundland Power system which exceed the minimum levels established by the latest revision of Institute of Electrical and Electronic Engineers Standard 519, which is the IEEE Recommended Practice and Requirements for Harmonic Control in Electric Power Systems.

4.6 If Hydro or Newfoundland Power determines, in their absolute discretion, that the Seller's equipment or operation is causing the unacceptable conditions outlined in 4.5, the Seller shall be responsible to correct these in a timely manner, any cost incurred by the Seller as a result shall be borne entirely by the Seller.

4.7 The Seller shall adjust voltage set points and Seller's Facility power factor, subject to equipment limits, at the request of the Newfoundland Power Controlling Authority. However, on-load tap changers on the Seller's main step-up transformer are not required. If power factor or voltage set point adjustments are required frequently by Newfoundland Power, Seller may be required provide Newfoundland Power with the ability to directly make such adjustments via communication with the Seller's SCADA.

4.8 The Seller's Facility voltage-var schedule, voltage regulator and transformer ratio settings will be jointly determined by Newfoundland Power and the Seller to ensure proper co-ordination of voltage and regulator action. If abnormal voltage or power quality complaints result from operation of the Seller's generation, such generating equipment shall be disconnected until the problem is resolved. Newfoundland Power shall notify Hydro of the complaints and action taken. All parties shall cooperate to diligently pursue correction of any such problem.

4.9 The Seller shall at the request of the Newfoundland Power Controlling Authority alter the electrical output of the Seller's Facility as required for planned work, transmission security constraints or emergency conditions. This may include but is not limited to temporary reduced output or temporary shut down of the Seller's Facility. This may also include increased output within the capability of the Seller's Facility. Newfoundland Power shall notify Hydro of the request to alter output.

4.10 The Seller, Newfoundland Power and Hydro shall maintain their respective equipment in good order. Hydro and Newfoundland Power shall have the right to periodically inspect the Seller's facility to confirm that equipment that may impact upon the Interconnected Grid or employees of Hydro or Newfoundland Power is in good order.

4.11 The Seller shall immediately discontinue parallel operation when requested by Newfoundland Power:

1) to facilitate emergency maintenance, test or repair of Newfoundland Power facilities;

2) to facilitate an emergency request from Hydro;

3) during emergencies on the Interconnected Grid;

4) when the Seller's generating equipment is interfering with customers on the Interconnected Grid;

5) when an inspection of the Seller's generating equipment reveals a condition hazardous to the Interconnected Grid;

6) when there is an apparent lack of scheduled maintenance of protection/control equipment required by Hydro or Newfoundland Power as a condition of parallel operation;

7) when the response by the Seller to a determination by either Hydro or Newfoundland Power made under clause 4.6 is deemed by either utility to be unreasonable or insufficient, and;

8) for other cause which Hydro or Newfoundland Power may deem necessary for emergency, system reliability, public safety and safety of Hydro, Newfoundland Power or Seller staff.

If the parallel operation is not discontinued within a reasonable time given the circumstances, Newfoundland Power may, in their absolute discretion, immediately disconnect the Seller's facility, through the operation of circuit breaker LAU-901E-B. If emergency circumstances are such, the disconnection may proceed without notification. If practicable, Newfoundland Power shall notify Hydro of the decision to disconnect.

Neither Hydro nor Newfoundland Power shall be liable to the Seller for any loss or damage including, without limitation, special or consequential damages or damages due to loss of use or production which result, either directly or indirectly, from a request or action of Newfoundland Power to immediately discontinue parallel operation in accordance with the terms of this Agreement.

4.12 The Seller shall provide an annual report to Hydro containing information on a monthly basis related to the operation of the Seller's Facility. The items to be reported include information on environmental conditions, operating hours, unit

starts along with the date, time and duration of all forced, automatic and planned interruptions of the Seller's Facility output (refer to Schedule G3 for a detailed listing of required reporting information). Portions of this report will be made available to Newfoundland Power for system analysis.

4.13 Hydro may request a special report containing information on each turbine such as; Megawatt-hours, Megavar-hours, Kilovolts, operating hours, rotor speed, wind speed, air temperature, and air pressure. This report would be collected on a monthly basis and be in CIM (XML Format) electronic form. This information will be used for generation planning and analysis.

4.14 This Agreement is based on the Seller Facility as outlined in Schedule A. Any material change to the electrical characteristics of the Seller Facility must be approved in advance, in writing, by both Newfoundland Power and Hydro.

5.0 MAINTENANCE RESPONSIBILITIES

5.1.1 Newfoundland Power is responsible for routine and emergency maintenance and repair of all Newfoundland Power owned equipment as defined in section 3.1. Newfoundland Power may elect to repair its equipment at any time, even though this may prevent the delivery of energy by the Seller. If the Seller is willing to pay for the extra cost of work being done at a time other than as proposed by Newfoundland Power, Newfoundland Power will endeavour to accommodate such a request. The direct costs incurred by Newfoundland Power for routine and emergency maintenance and repair of the Newfoundland Power owned equipment, as defined in Section 3.1, shall be borne by the Seller. Maintenance and repairs of the Newfoundland Power owned equipment shall be in accordance with Good Utility Practice. Costs of such maintenance and repairs shall be reasonable. Upon the request of the Seller, Newfoundland Power shall provide a detailed cost breakdown for any charge.

5.2 Hydro is responsible for emergency and routine maintenance to its assets on the Interconnected Grid. While undertaking this responsibility there may be occasions where energy delivery by the Seller is affected. Hydro may elect to repair its equipment during normal working hours even though this may prevent the delivery of energy by the Seller. If the Seller is willing to pay for the extra costs associated with performing this work outside normal working hours, Hydro will endeavour to accommodate such a request.

5.3 The Seller is fully responsible for routine and emergency maintenance and repair on all the Seller's owned equipment.

5.4 The Seller shall be responsible for maintaining the relaying, and auxiliary control equipment located at the Seller's Facility that is required by Hydro and Newfoundland Power for parallel operation with the Interconnected Grid (see Schedule B). The Seller shall perform periodic verification of their relaying and control Facility in accordance with the test schedule in Schedule C. These are the minimum maintenance requirements.

5.5 The Seller shall maintain Seller owned switches, transmission line equipment, and battery equipment as per the procedures identified in Schedule D, which states the minimum maintenance requirements.

5.6 The Seller shall submit an annual Equipment Maintenance report to Newfoundland Power and Hydro outlining the maintenance completed during the year on the equipment outlined in Schedule C and D.

5.7 The Seller shall inform Newfoundland Power and Hydro of any proposed changes to the Seller's Facility's electrical protection including equipment and settings. The portion of this protection that affects Newfoundland Power's system and customers shall be set, installed, and maintained in a manner acceptable to Newfoundland Power for the Seller to continue delivering power to Hydro. The Seller shall obtain prior acceptance by Newfoundland Power and Hydro for any modification or setting changes to this protection equipment, which acceptance shall not be unreasonably withheld, conditioned or delayed. The Seller shall inform Hydro and Newfoundland Power of any proposed changes to the Seller's Facility power devices such as transformers, generator, or station service transformer.

5.8 Newfoundland Power and the Seller will discuss planned outages of their respective equipment. They will endeavour to coordinate the maintenance of their respective facilities to minimize interruptions to Newfoundland Power's customers and the Seller's generators.

5.9 By April 1 of each year, each party to this agreement shall provide to the other parties Controlling Authorities information on Scheduled Outages expected to take place that year which will affect the Seller's ability to deliver power to Hydro. These Scheduled Outages will be confirmed at least five (5) working days in advance by the appropriate Controlling Authority.

6.0 ISOLATION & GROUNDING

6.1 When the Seller requires isolation and or grounding by means of a device(s) under Newfoundland Power control, the Seller shall request that Newfoundland Power provide isolation and / or grounding. Once Newfoundland Power completes the isolation and / or grounding, the Seller will then lock the associated Newfoundland Power equipment at the Laurentian Substation using the Seller's locks. Entrance to the Newfoundland Power Substation by the Seller will be under escort by Newfoundland Power staff.

6.2 When the Newfoundland Power requires isolation and / or grounding by means of a device(s) under the Seller's control, Newfoundland Power shall request that the Seller provide isolation and / or grounding. Once the Seller completes the isolation and / or grounding, Newfoundland Power will then lock the associated Seller's equipment at the Ryan's Hill Substation using Newfoundland Power's lock. Entrance to the Ryan's Hill Substation by the Newfoundland Power will be under escort by the Seller's staff.

6.3 Only the person in responsible charge of the isolation and / or grounding has the right to direct the removal of grounds and / or isolation as well as the removal of locks except if that person is unable to continue to exercise his responsibilities due to illness, injury or other cause. In that case, the work shall cease and a qualified substitute may be appointed by the organization initiating the isolation and / or grounding, to direct the removal of grounds and / or isolation as well as the removal of locks.

7.0 COMMUNICATION

7.1 The Seller's Controlling Authority shall take operating instructions, including requirements for generator shutdown, from Newfoundland Power's Controlling Authority or its delegate. Therefore, each shall be able to reach the other by telephone on a 24 hours per day basis. The Seller shall provide 24 hours per day control over the plant in order to facilitate a request for emergency shutdown. A set of phone numbers is listed in Schedule E for this purpose.

If at any time the Seller operates in such a manner that in Hydro's or Newfoundland Power's opinion, power quality is adversely affected or, the safety and security of the Interconnected Grid or of Hydro's or Newfoundland Power's connected customers is threatened, Hydro or Newfoundland Power may give notice thereof to the Seller, which may be given by telephone to an employee of

the Seller who has been designated in Schedule E, and the Seller shall promptly take action to remedy the said problem. If the problem continues for more than fifteen minutes after the notice, then Hydro or Newfoundland Power may, in their absolute discretion, discontinue the receipt of all Power and Energy or the supply of all Power and Energy and neither Hydro nor Newfoundland Power shall be obliged to resume receipt of or supply of Power and Energy until the Seller has remedied the problem.

If the problem is of an emergency nature, Newfoundland Power may, in their absolute discretion, disconnect the Seller's Facility immediately and without notice.

7.2 Connection of the Seller's Facility to the Interconnected Grid following a forced shutdown or a shutdown requested by the Newfoundland Power Controlling Authority shall require prior approval from the Newfoundland Power Controlling Authority which approval shall be promptly given upon resolution of the problem causing the shutdown.

7.3 The Seller's Controlling Authority shall keep the Newfoundland Power Controlling Authority or his delegate informed of the following items to enable the Newfoundland Power Controlling Authority to be fully aware of all the Seller generation operating conditions from time to time, and to facilitate analysis following system disturbances:

1) The time and conditions associated with the Seller's Facility becoming isolated from the Interconnected Grid or unusual voltage or frequency levels; and

2) Conditions which will result in the Seller shutting down its generation for extended periods. Such conditions shall also be reported to the Hydro Controlling Authority.

7.4 In the event of a trip of the circuit breaker LAU-901E-B at the interconnection Point, the Seller's Controlling Authority shall contact the Newfoundland Power Controlling Authority or its delegate for further instruction. The Newfoundland Power Controlling Authority or its delegate will establish if the trip or shutdown is due to problems on the Interconnected Grid and will instruct the Seller's Controlling Authority as required. Under no circumstances shall the Seller reconnect to the Newfoundland Power system until authorized by the Newfoundland Power Controlling Authority or its delegate. Also, under no circumstances shall the Newfoundland Power Controlling Authority or its delegate reconnect the Seller's Facility to the Newfoundland Power system without prior approval from the Seller's Controlling Authority.

7.5 In the event that abnormal operation of the Seller's Facility occurs, including exceeding acceptable limits as defined in Sections 4.5 and 8.2, and the Seller cannot contact Newfoundland Power's Controlling Authority or its delegate, then the Seller shall separate the Seller's Facility from the Interconnected Grid.

7.6 The Seller's Controlling Authority shall advise the Newfoundland Power's Controlling Authority of any planned operations which may affect the Interconnected Grid.

7.7 The Newfoundland Power's Controlling Authority shall advise Hydro and the Seller's Controlling Authority of any planned operations which may affect the Seller's operations.

7.8 The Newfoundland Power's Controlling Authority shall advise Hydro's Controlling Authority of all requests for an unscheduled shutdown of the Seller's facility.

7.9 The Seller is required to provide and maintain real time supervisory monitoring to Newfoundland Power's Controlling Authority. The Seller shall continuously provide real time SCADA telemetry, as per Schedule G.1. The real time information shall be time tagged using Universal Time Coordinates (UTC). The Seller is required to contact Newfoundland Power prior to interconnection to determine the interface requirements for Newfoundland Power's SCADA system. The real time supervisory monitoring system using UTC shall be in place and fully functioning prior to the connection of the first generating unit to the Interconnected Grid. Newfoundland Power shall provide this information to Hydro via the existing ICCP (Inter Control-Center Communications Protocol) data link.

7.10 Newfoundland Power shall maintain a standard telephone communications link to Hydro's export metering equipment, which Hydro will use for remote data acquisition and interrogation.

7.11 The Seller shall report to Hydro the Forced Outage event data as per Schedule G.2 on the next day after the event occurs.

8.0 SELLER ACCESS TO NEWFOUNDLAND POWER PROPERTY

8.1 During the term of this Agreement, the Seller shall have the right to install, inspect, maintain, repair and replace the Seller's Interconnection Equipment on lands owned by Newfoundland Power at or in the vicinity on Newfoundland Power's Laurentian Substation.

8.2 The Seller's Interconnection Equipment shall be installed in the locations marked or delineated in Schedule H.

8.3 No change shall be made to the Seller's Interconnection Equipment or to the location of the Seller's Interconnection Equipment without the prior approval of Newfoundland Power, which approval shall not be unreasonably withheld, conditioned or delayed.

8.4 The Seller's rights as set out in Section 8.0 shall be subject to all of the other terms and conditions of this Agreement.

9.0 PROTECTION AND CONTROL REQUIREMENTS

9.1 Newfoundland Power shall maintain protection and control equipment for the Seller Interconnection as per its standard practices.

9.2 The Seller shall maintain its protection and control devices to:

1) adequately protect the Seller's transmission line from the Seller's end of the line;

2) maintain reliable and adequate protection for abnormal conditions and faults on the Seller's Facility which may cause damage. This includes protection for abnormal voltages, currents, and frequency emanating from the Interconnected Grid;

3) maintain reliable and adequate control for operation into a nominal 60Hz, 66 kV system. Deviation from nominal voltage shall be kept within, 0.95 and 1.05 per unit for the Seller's Facility. The Seller's Facility shall not automatically disconnect from the Interconnected Grid for variations in frequency from 58 to 61.2 Hz. There will be a 200 millisecond trip delay for continuous operation outside of this range;

4) detect voltage and frequency conditions which may occur when Newfoundland Power's and Hydro's facilities serving the Seller and other local customers are "islanded" from the Integrated Grid. The Seller's protection and control shall isolate the Seller's generation from the isolated system if frequency and voltage control are not maintained;

5) prevent any problems for the opening, and reclosing of the LAU-901E-B breaker for connection with the Interconnected Grid;

6) maintain reliable and adequate start-up and shut down capabilities for the Seller's generation;

7) maintain Low Voltage ride through Capability consistent with current industry standards as outlined in Appendix G of the United States Federal Energy Regulatory Commission's document Large Generator Interconnection Agreement. The high voltage terminals of the 66/25 kV power transformer are the appropriate voltage monitoring points.

8) Operate in accordance with settings in Schedule B of this agreement.

9.3 The protection and control devices and the appropriate settings shall be determined in the design process and form Schedule B, Protective Relaying and Settings. These devices and settings once determined and approved, shall not be changed or modified without a request in writing from the Seller and approval in writing from Newfoundland Power and Hydro. Schedule B shall be changed accordingly.

9.4 The Seller shall promptly report the relay targets, annunciator or event recorder data, to Newfoundland Power's Controlling Authority following an operation of its protection devices. Similarly, Newfoundland Power and/or Hydro shall report to the Seller any relay operation that trips circuit breaker LAU-901E-B.

10.0 REVIEW OF OPERATING AGREEMENT

10.1 Hydro will initiate a review of this Agreement every two years. A review of this Agreement may be initiated by either party at any time by providing written notice to the other parties. No change or modification of this Agreement shall be valid unless it be in writing and signed by each party.

11.0 GENERAL PROVISIONS

11.1 Governing Law

This Agreement shall be interpreted, governed, and construed under the laws of the Province of Newfoundland and Labrador as if executed and to be performed wholly within the Province of Newfoundland and Labrador.

11.2 Term of Agreement

This Agreement shall be in effect when signed by the parties and shall remain in effect thereafter as long as the Power Purchase Agreement remains in effect.

11.3 **Consequential Damages**
Newfoundland Power, Hydro and the Seller shall not bear any liability to the other for indirect, punitive or consequential damages.

11.4 **Obligations Surviving Termination**
Notwithstanding the termination of this Agreement for any cause, the obligations of the Seller set out in, or arising from, Sections 1.3, 4.4, 4.12, shall survive any termination and shall remain in force until discharged.

11.5 **Successors**
This Agreement shall ensure to the benefit of and be binding on the respective successors and permitted assigns of the parties.

11.6 **Assignment**
This Agreement is not assignable by either party without the prior written consent of the other parties.

11.7 **Force Majeure**
It is agreed among the parties that neither party shall be held responsible for damages caused by delay or failure to perform undertakings under the terms of this Agreement when the delay or failure is due to strikes, fires, floods, acts of God or the Queen's enemies, lawful acts of public authorities, or delays or defaults caused by common carriers, which cannot reasonably be foreseen or provided against.

IN WITNESS WHEREOF Newfoundland and Labrador Hydro, Newfoundland Power Inc. and NeWind Group Inc. have each executed this Agreement in accordance with its by-laws or regulations and by its duly authorized officers and agents, on the 19th day of August, 2008.

THE CORPORATE SEAL of Newfoundland and Labrador Hydro was hereunto affixed in the presence of:

Jim Haynes

Glenn Hicks
Witness

THE CORPORATE SEAL of Newfoundland Power Inc. was hereunto affixed in the presence of:

Sean La Cour

Geoff Emberley
Witness

THE CORPORATE SEAL of NeWind Group Inc. was hereunto affixed in the presence of:

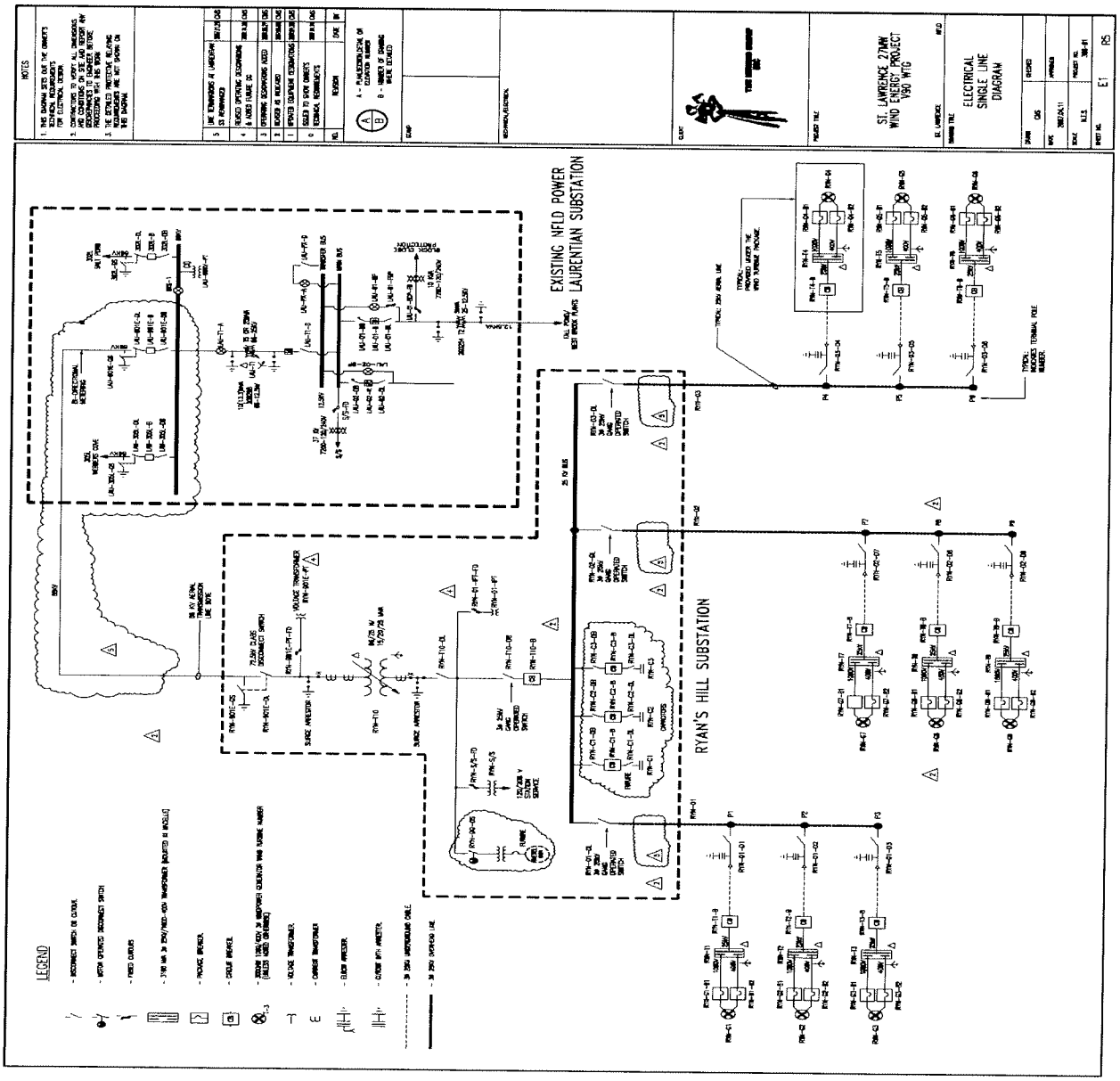
Pascal Brun

Geoff Emberley
Witness

SCHEDULE A

Single Line Diagram

This single line diagram is to be revised.



SCHEDULE B

PROTECTIVE RELAYING AND SETTINGS

(The following devices are preliminary until given final approval by all parties involved.)

DEVICE #	DESCRIPTION	SETTING	DEVICE OPERATED
Transformer Devices			
T10-26Q	T10 HIGH OIL TEMP.	110°C	RYN-T10-B, LAU-901E-B
T10-71Q	T10 LOW OIL LEVEL	TBD	RYN-T10-B, LAU-901E-B
T10-63X	T10 SUDDEN PRESSURE	TBD	RYN-T10-B, LAU-901E-B
T10-49	T10 HI WINDING TEMP.	115°C	RYN-T10-B
Transformer Relay - P632			
11T- 50	66kV BUS INST. O/C	TBD	RYN-T10-B, LAU-901E-B
11T- 50N	66kV BUS INST. G/F	TBD	RYN-T10-B, LAU-901E-B
11T-51P	66kV BUS TIME O/C	400A p.u.	RYN-T10-B, LAU-901E-B
11T-51NP	66kV BUS TIME G/F	TBD	RYN-T10-B, LAU-901E-B
11T-51S	25kV BUS TIME O/C	900A p.u.	RYN-T10-B, LAU-901E-B
11T-51NS	25kV BUS TIME G/F	TBD	RYN-T10-B, LAU-901E-B
11T-64G	T10 TANK GND	TBD	RYN-T10-B, LAU-901E-B
11T-87T	T10 DIFFERENTIAL.	TBD	RYN-T10-B, LAU-901E-B
11T-87NG	T10 R.E.F.	TBD	RYN-T10-B, LAU-901E-B
Voltage & Frequency Relay - P922			
11IC-81O	OVER FREQUENCY.	62 Hz	RYN-T10-B
11IC-81O-62	OVR FREQ. TIME DELAY	0.2 s	RYN-T10-B
11IC-81U1	UNDER FREQ. LEVEL 1	59 Hz	RYN-T10-B
11IC-81U1-62	UND FRQ. 1 TIME DLY	300 s	RYN-T10-B
11IC-81U2	UND. FREQ. LEVEL 2	57 Hz	RYN-T10-B
11IC-81U2-62	UND FRQ. 2 TIME DLY	4 s	RYN-T10-B
11IC-59	OVER VOLTAGE	TBD	RYN-T10-B
11IC-59-62	OVR VOLT. TIME DLY	TBD	RYN-T10-B
11IC-27-1	UND. VOLT. LEVEL 1	15%	RYN-T10-B
11IC-27-1-67	UND VLT 1 TIME DLY	0.625 s	RYN-T10-B
11IC-27-2	UND. VOLT. LEVEL 2	90%	RYN-T10-B
11IC-27-2-67	UND VLT 2 TIME DLY	3 s	RYN-T10-B
25 kV Overcurrent Relay – P127			
11CS-50N	COLL. SYS. INST. G/F	TBD	RYN-T10-B
11CS-51	COLL. SYS. TIME O/C	900A p.u.	RYN-T10-B
11CS-51N	COLL. SYS. TIME G/F	TBD	RYN-T10-B
11CS-67N	COLL. SYS. DIR. G/F	TBD	RYN-T10-B
11CS-67P	COLL. SYS. DIR. O/C	400A p.u.	RYN-T10-B

66 kV Line Differential Relay - P543

RE11L-51	901E TIME O/C	400A p.u.	RYN-T10-B, LAU-901E-B
RE11L-51N	901E TIME G/F	TBD	RYN-T10-B, LAU-901E-B
RE11L-21-Z1	901E IMP. ZONE 1	TBD	RYN-T10-B, LAU-901E-B
RE11L-21-Z1-62	ZONE 1 TIME DLY	TBD	RYN-T10-B, LAU-901E-B
RE11L-21-Z2	901E IMP. ZONE 2	TBD	RYN-T10-B, LAU-901E-B
. . .-21-Z2-62	ZONE 2 TIME DLY	TBD	RYN-T10-B, LAU-901E-B
RE11L-87L	901E DIFFERENTIAL	TBD	RYN-T10-B, LAU-901E-B

<<<Need to add setting for Wind Speed at which the turbine will shutdown>>>>>

SCHEDULE C

Protection and Control Verification Schedule

1. Seller's substation, generator and transmission line protection systems which can impact on the Interconnected Grid shall be verified every five years or as required due to system performance concerns.

2. The Seller shall advise Hydro and Newfoundland Power giving at least 4 weeks notice as to when verification is to take place so that Hydro and Newfoundland Power P&C staff can observe:

   - relay verification and recalibration
   - test tripping of generator breaker(s) and the interconnection breaker
   - measurement and analysis of secondary AC voltages and current to confirm measuring circuit integrity

3. Specific Protection to be observed:

   - All generator, substation, and transmission line protection schemes which trip the breakers
   - Confirm that settings that are approved by Newfoundland Power are applied to the following protection

     (a) over and under frequency
     (b) over and under voltage
     (c) unbalance protection
     (d) substation protection
     (e) transmission line protection

   - Confirm the Hydro Supplied Low Voltage Ride Through Settings.

SCHEDULE D-1

AIR BREAK SWITCH

Inspection Every Three (3) Months:

1. Make sure that the switch is in its required operating position (either fully opened or fully closed).

2. Make a visual inspection of the insulators for cracked skirts and breakages of castings (such as pin and caps), other external parts and connections.

3. Make a visual check of the motor mechanism (if applicable).

4. Check that the mechanism space heater is functioning (if applicable).

No report is required for this three month inspection.

Maintenance Every Two Years: - Requires an Outage
Mechanical Mechanism and Interrupter (where Applicable)

1. Manually operate the switch and check: contact alignment toggles, stops, linkage, undue insulator movement.

2. Check all aluminium operating components for cracks.

3. Check contact pressure. Observe jaw spread as blade rotates in jaw.

4. Check the contacts for burns or wear.

5. Check the silver plating for peeling or wear.

6. Clean and lubricate contacts with low-temperature, multipurpose grease such as Lube 10A.

7. Check that line connections to the switch are tight.

8. Remove gearbox covers and inspect and lubricate gears.

SCHEDULE D-1 (cont'd.)

9. Check switch grounding connections are tight and undamaged.

10. Lubricate all locations fitted with grease fittings.

11. Inspect and clean insulators.

12. Check shunts for tightness, fraying, or deterioration.

13. Test interrupter to ensure that contacts make and break and check that sequence of operation is correct. Check the position indicator (if applicable)

14. Perform Micro-ohm test across the entire switch. Record results.

15. Remove cover from electrical control mechanism. Check internally (if applicable).

16. Check that grounding (including ground mats if supplied) is tight and undamaged.

17. Clean and paint as required.

18. Test operate switch manually and electrically (as appropriate):

SCHEDULE D-2

25 kV BREAKER

Inspection Every Month:

1. Make a visual inspection of the primary connections and grounding.
2. Make a visual inspection of the insulators for cracked skirts.
3. Check for gas leaks and record gas pressure.
4. Inspect general condition of control cabinets and cabinet heaters.
5. Record breaker operations.

Maintenance Every Three Years

1. Perform contact resistance tests.
2. Perform breaker timing tests.
3. Perform insulation tests.
4. Check high voltage terminations.
5. Check heaters.
6. Record breaker operations and gas pressure.

SCHEDULE D-3

Transmission Line Maintenance - 66 kV Circuits

To maintain a reliable supply and assure minimum impact on the Hydro system, Hydro requires a combination of the following inspections and maintenance procedures or their equivalent.

Every 3 months	Visual Inspection
Every year	Snowmobile patrol
Every 3 years	Ground patrol
Every 5 years	Climbing inspection including inspection and testing of suspension type insulators
Every 15 years	Wood Poles Test and Treat (if applicable)

SCHEDULE D-4

STATION CONTROL SYSTEMS BATTERY INSPECTION

The D.C. Battery should become part of a monthly inspection routine.

1. Check that the battery charger D.C. voltmeter reading is within the normal range - investigate any deviations.

2. Check that the battery charge ammeter reading indicates that the battery drain is normal --- investigate any deviations.

3. Record D.C. system voltage.

*4. Record the corrected relative density of the electrolyte and the voltage of the pilot cell and determine if an equalize charge is required.

5. Inspect the battery plates (if visible) for any signs of deterioration and correct.

*6 Top up the electrolyte to the upper limit using distilled or approved water - excessive water loss is an indication of overcharging and should be investigated.

7. Wipe down cells as required.

Note: Items with an asterisk (*) do not apply where maintenance free batteries are used.

Maintenance Every Four Years:

The D.C. Battery is to be subjected to a discharge low check. Replace the battery if they go below 80% capacity.

SCHEDULE E

TELEPHONE CONTACTS

The Seller

The Seller

NeWind Group Inc.
[redacted]

Operator (Controlling Authority)
[redacted]

Assistant Operator
[redacted]

Newfoundland Power

St. John's System Control Centre (Newfoundland Power Control Authority)
[redacted] (such number to be used only for power system control purposes)
(cell phone number to be used in case of failure of previous number)
[redacted] (Fax)

Superintendent System Operations: [redacted]

Area Superintendent Bonavista Burin: [redacted]

Fax: (709) 466-8380

Hydro

Manager - System Operations: [redacted]
Hydro Place - St. John's, NL
[redacted]

ECC Superintendent: [redacted]
ECC - St. John's, NL
[redacted]

ECC Shift Supervisor (Controlling Authority)
(24 hours/day) [redacted]

ECC System Operator
(24 hours/day) [redacted]

SCHEDULE F

Reserved

SCHEDULE G

G.1 Real Time SCADA to interface with Hydro Control Centre

Wind Farm

MegaWatt indication for wind farm (measured by NP at LAU)
MegaVar indication for wind farm (measured by NP at LAU)
Kilovolts indication for wind farm (measured by NP at LAU)
66 kV breaker control & indication (measured by NP at LAU)
Indication of number of wind turbines on-line (measured by NeWind at RYN)
Wind Speed Indication (measured by NeWind at RYN)

G. 2 Forced Outage Event Data

Outages related to the wind farm are reportable to Hydro's Energy Control Centre. The following data shall be reported:

Date & Time of the event
MW Loss
Duration of the Outage
Cause of the event with description of any damage or failed component (Outage Type)
Number of turbines affected
Derating of the Wind Farm, if applicable
Estimated time to restore full wind farm generation capacity, if applicable.

Outage Information

Time information should include the day(s) and the hour the outage started and ended.

Outage types are:

Forced Outage (FO)	- cannot be deferred.
Maintenance Outage (MO)	- can be deferred beyond the end of the next weekend.
Planned Outage (PO)	- planned well in advance, usually occurs 1-2 times a year.

Comments/Cause can be used to provide detailed information on the outage e.g. equipment failure, utility feeder trip, etc.

The report shall include relay targets, annunciator or event recorder data associated with the operation of protection devices

G.3 Monthly Data Collection to be reported annually to Hydro

In addition to the annual report to Hydro, Hydro may make special requests for the monthly data during the year.

Wind Farm

Generation (MWh) for the year
Available Hours for the year
Operating Hours for the year
Number of Starts for the wind farm from an off line status
25 kV breaker indication for each day at 12:00 am

Planned/Maintenance Hours for the year
Planned/Maintenance MW Loss for the year, assuming wind speed prevailing at 12:00 am for the entire day
Number of Planned/Maintenance Events for the year

Forced Outage Hours as a result of equipment breakdown

Forced MW Loss assuming wind speed prevailing at 12:00 am
Number of Forced Events as a result of equipment breakdown

Each Turbine

Generation (MWh) for the year
Available Hours for the year
Operating Hours for the year
Number of Starts for the turbine from an off line status

Planned/Maintenance Hours for the year
Planned/Maintenance MW Loss for the year, assuming wind speed prevailing at 12:00 am on the day of the event
Number of Planned/Maintenance Events for the year

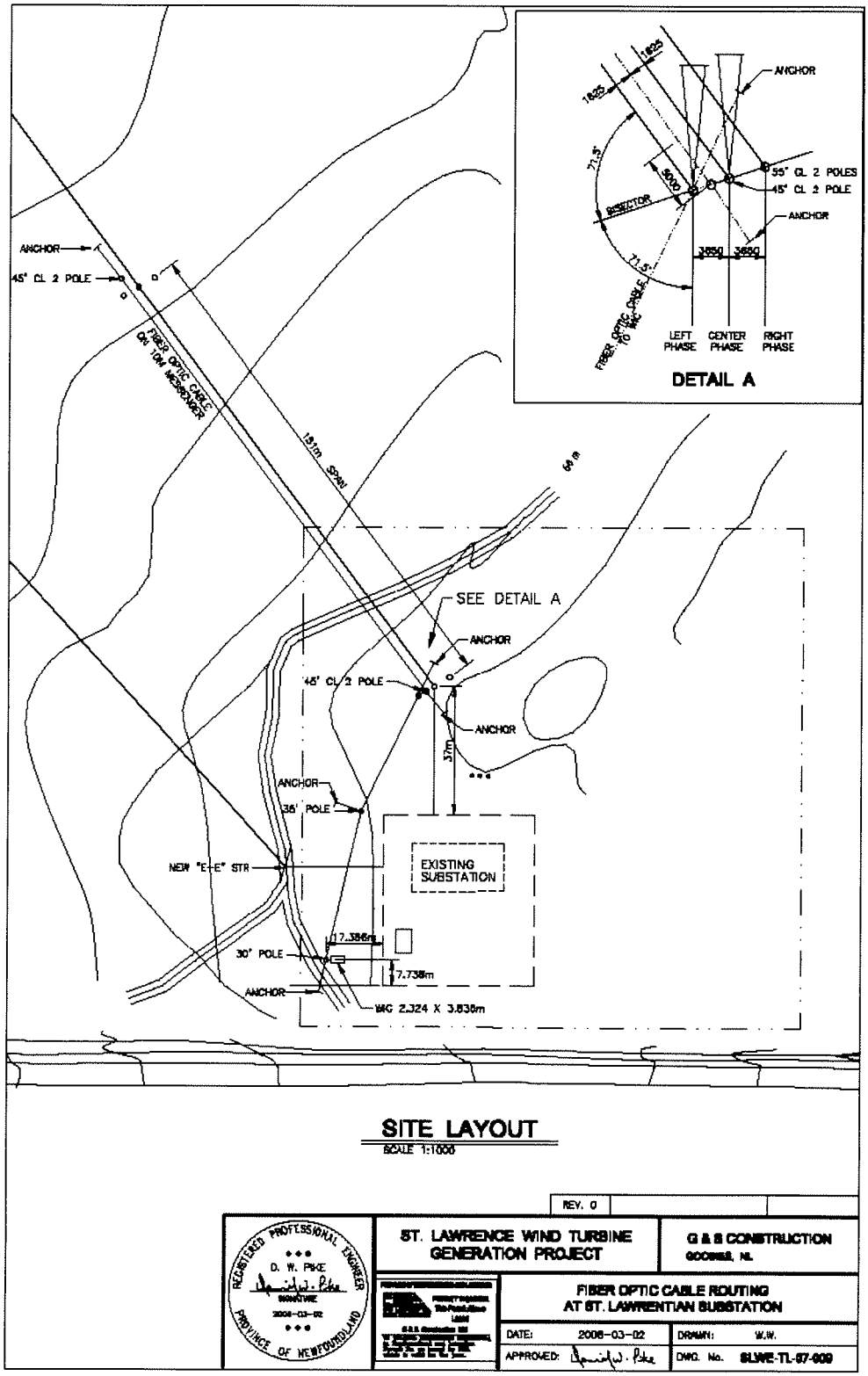
Forced Outage Hours as a result of equipment breakdown
Forced MW Loss assuming wind speed prevailing at 12:00 am
Number of Forced Events as a result of equipment breakdown

Environmental Conditions

Number of Days with too little wind, resulting in no production for the entire day
Number of Days with too much wind, resulting in no production for the entire day
If available from visual observation, lightning activity close to the wind farm - Date and times
If available from visual observation, other weather problems such as ice storms, hurricanes, other extreme weather storms.
Wind Direction Indication each day at 12:00 am
If available, air Temperature Indication each day at 12:00 am
If available, air Pressure Indication each day at 12:00 am

SCHEDULE H

DESIGNATED LOCATIONS OF NEWIND EQUIPMENT AT OR NEAR THE NEWFOUNDLAND POWER LAURENTIAN SUBSTATION


DETAIL A
ANCHOR
55° CL 2 POLES
45° CL 2 POLE
ANCHOR
RESPECTOR
LEFT PHASE
CENTER PHASE
RIGHT PHASE
FIBER OPTIC CABLE TO NLE
ANCHOR
45° CL 2 POLE
FIBER OPTIC CABLE ON 1.0M MESSENGER
1810m SPAN
SEE DETAIL A
ANCHOR
45° CL 2 POLE
ANCHOR
37m
ANCHOR
35' POLE
NEW "E-E" STR
EXISTING SUBSTATION
7.386m
30' POLE
7.738m
ANCHOR
WG 2.324 X 3.838m
SITE LAYOUT
SCALE 1:1000
REV. 0
REGISTERED PROFESSIONAL ENGINEER
D. W. PIKE
PROVINCE OF NEWFOUNDLAND
ST. LAWRENCE WIND TURBINE GENERATION PROJECT
G & S CONSTRUCTION
GOOBIES, NL
FIBER OPTIC CABLE ROUTING AT ST. LAWRENTIAN SUBSTATION
DATE: 2008-03-02
DRAWN: W.W.
APPROVED:
DWG. No. SLWE-TL-07-009

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 1 **of** 9

Introduction

Corner Brook Pulp and Paper (CBP&P) and Newfoundland and Labrador Hydro (Hydro) will, from time to time, enter into an Energy Exchange agreement whereby Hydro will utilize some of the unused storage in the Grand Lake Reservoir during periods of high storage conditions in Hydro's reservoirs. The intent is to have the energy returned to Hydro at some agreed upon time in the future when Hydro's storage conditions are more accepting to the same. In utilizing the Grand Lake Reservoir for temporary storage in this manner, the volume (or potential) of spillage from Hydro's reservoirs is reduced.

The principles of the agreement are as outlined below:

1. At the request of Hydro, Corner Brook Pulp and Paper will reduce its generation in order receive the additional (i.e., exchanged) energy from Hydro. It is estimated that, at maximum, CBP&P can receive exchanged energy at a rate equal to the combined generation of five (5) of its Deer Lake Power (DLP) 60 HZ generators during these periods. The actual rate of exchange will be as determined to be acceptable to DLP operations while continuing to ensure that there is still ample grid capacity to meet system peak load requirements. Hydro will advise of any requirement to increase/restart DLP generation for system peak load considerations.

2. The Exchanged Energy is Hydro's energy stored in the Grand Lake Reservoir. The Exchanged Energy will be calculated so that as much as possible Corner Brook Pulp and Paper Limited will be indifferent in its power and energy costs. To achieve this, the assumption for DLP generation operation is that the selected 60 Hz units under this agreement would have been operated at their maximum load setting unless that would have caused the total DLP 60 Hz supply to be greater than the mill's 60 Hz load, in which case the assumed 60 Hz generation output of these selected units is reduced such that the total DLP 60 Hz supply equals the mill's 60 Hz load.

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 2 **of** 9

Introduction (cont'd.)

3. The maximum load settings for the units selected under this agreement are as determined by the most recent one-hour DLP capacity test, rounded to the nearest 100 kW. A four percent generation loss factor is assumed to equate the energy to the point of measurement.

4. CBP&P will advise Hydro when it is determined that the storage level in Grand Lake should not be increased further due to high spill potential. NLH will cease storing energy as requested by CBP&P. However, if during the period while energy is stored CBP&P must spill water from Grand Lake, it will determine the Spilled Energy Amount. The Spilled Energy Amount will be determined as the estimated total volume of water spilled multiplied by the average water to energy conversion factor for the DLP 60 Hz generation plant.

5. At a time deemed suitable by both parties, Hydro will request that CBP&P return the Exchanged Energy stored in its Grand Lake Reservoir. The Returned Exchanged Energy is the Energy produced by DLP in excess of its needs following the storage of energy.

6. Hydro will report monthly, the running total of energy stored in Grand Lake until the Stored Energy equals zero. The Stored Energy is the sum of all Exchanged Energy less Returned Exchanged Energy and the Spilled Energy Amount.

Under this Energy Exchange agreement there is a requirement for frequent communication exchange between CBP&P's Hydro Plant Operators at the Deer Lake Plant and Hydro's ECC to ensure continued efficient and secure operation of the power system. The information to be communicated includes Start and Stop times of the Energy Exchange or Return periods, Level or Rate of Exchange (in MW), DLP Units selected for the Exchange and communication of any System or local DLP plant conditions that may have an impact on the same.

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 3 **of** 9

RESPONSIBILITY	**PROCEDURE**
Energy Exchange from Hydro to Corner Brook Pulp and Paper	
Hydro	
Manager – System Operations and Customer Services	1. Communicate with the Management at DLP/CBP&P and advise of Hydro's high reservoir storage conditions and the desire to enter into an Energy Exchange Agreement with CBP&P.
	2. Communicate with the Management at DLP/CBP&P and advise of Hydro's decline in reservoir storage conditions and of the desire to stop storing energy in CBP&P's Grand Lake reservoir. This will require one week's written notice.
ECC Superintendent (or designate)	3. Advise the ECC of the establishment of the Energy Exchange Agreement with CBP&P (with associated terms and conditions) and request that the same be implemented.
	4. Advise the ECC when it is the intent of all parties for Hydro to stop storing energy in CBP&P's Grand Lake reservoir under the current Energy Exchange Agreement.
ECC Shift Supervisor	5. Notify CBP&P Hydro Plant Operators when it is acceptable for them to reduce generation under the current Energy Exchange Agreement and to begin a period of energy exchange.

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 4 **of** 9

RESPONSIBILITY	**PROCEDURE**
Energy Exchange from Hydro to Corner Brook Pulp and Paper	
Hydro	
ECC Shift Supervisor	6. Notify CBP&P Hydro Plant Operators of the expected level of generation reduction and an estimate of when it is anticipated that this generation (or part thereof) will be required again to ensure system reliability and security. 7. Notify CBP&P Hydro Plant Operators that restoration of its generation (or part thereof) is required to ensure system reliability and security. Where possible – at least two hours advance notice of restart shall be provided. 8. Request that DLP revert back to normal operations when it is the intent of all parties for Hydro to stop storing energy in the Grand Lake reservoir under the current Energy Exchange Agreement. 9. Maintain a record of all communications with CBP&P Hydro Plant Operators with regard to start and stop times of the energy exchange periods, requested levels of generation reduction, DLP 60 HZ units selected for the exchange and any changes that occur during the period of an exchange. Any restrictions in loading at the DLP units should also be noted.

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 5 **of** 9

RESPONSIBILITY	**PROCEDURE**
Energy Exchange from Hydro to Corner Brook Pulp and Paper	
Hydro	
System Operations Engineering Supervisor (or designate)	10. Ensure that the monthly records are obtained and fully communicated to the Industrial Billing Officer. 11. Revise, maintain and check the DLP billing spreadsheets as required to accurately report the monthly energy exchange. 12. Report monthly, the running total of Hydro's stored energy in DLP's Grand Lake reservoir.
Corner Brook Pulp and Paper	
CBP&P Management	1. Communicate its acceptance of an Energy Exchange Agreement with Newfoundland and Labrador Hydro. Any special considerations with respect to reservoir storage, inflows or known restrictions in 60 HZ generation supply shall also be communicated. 2. Advise Hydro when CBP&P determines that the water in Grand Lake should not be increased further due to high spill potential. Hydro will cease storing energy as requested by CBP&P. This will require one week's written notice.

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 6 **of** 9

RESPONSIBILITY	**PROCEDURE**
Energy Exchange from Hydro to Corner Brook Pulp and Paper	
Corner Brook Pulp and Paper	
CBP&P Hydro Plant Operators	3. Carry out the ECC request to reduce generation under the current period of energy exchange and advise of any special considerations that would prevent their operations from fully achieving the requested level of generation reduction. 4. Provide notice to the ECC of any developments within an energy exchange period that impacts on the level of generation reduction or the units selected for exchange. 5. Resume normal operations when advised by the ECC that restoration of its generation (or part thereof) is required to ensure system reliability and security. 6. Revert back to normal operations when it is the intent of all parties for Hydro to stop storing energy in the Grand Lake reservoir under the current Energy Exchange Agreement. 7. Maintain a record of all communications with Hydro with regard to start and stop times of the energy exchange periods, requested levels of generation reduction, DLP 60 HZ units selected for the exchange and any changes that occur during the period of an exchange. Any restrictions in loading at the DLP units should also be noted.

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 7 **of** 9

RESPONSIBILITY	**PROCEDURE**
Energy Return by Corner Brook Pulp and Paper to Hydro	
Hydro	
Manager – System Operations and Customer Services	1. Communicate with the Management at DLP/CBP&P and advise that Hydro is now in a position to accept a return of the energy stored during the present Energy Exchange Agreement.
	2. Communicate with the Management at DLP/CBP&P to advise that all exchanged energy has been returned, less any pre-advised spill that resulted while Hydro's energy was in CBP&P's storage, and the desire to terminate the current Energy Exchange Agreement.
ECC Superintendent (or designate)	3. Advise the ECC of the intent of CBP&P to return the energy exchanged under the current Energy Exchange Agreement and communicate any terms and conditions that affect the same.
	4. Advise the ECC when all the energy stored under the current Exchange Agreement has been returned to Hydro.
ECC Shift Supervisor	5. Notify CBP&P Hydro Plant Operators when it is acceptable for them to start returning the energy stored under the current Energy Exchange Agreement.
	6. Maintain a record of communications with CBP&P with regard to start and stop time(s) of the energy return period(s).

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SYSTEM OPERATIONS
STANDARD PROCEDURE

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 8 **of** 9

RESPONSIBILITY	**PROCEDURE**
Energy Return by Corner Brook Pulp and Paper to Hydro	
Hydro	
System Operations Engineering Supervisor (or designate)	7. Ensure that the monthly records are obtained and fully communicated to the Industrial Billing Officer.
	8. Revise, maintain and check the DLP billing spreadsheets as required to accurately report the monthly returned energy.
	9. Report monthly, the balance of Hydro's stored energy in DLP's Grand Lake reservoir.
Corner Brook Pulp and Paper	
CBP&P Management	1. Communicate its agreement to return the energy stored on behalf of Newfoundland and Labrador Hydro. Any special considerations with respect to reservoir storage, inflows, spill or known restrictions in 60 HZ generation loading shall also be communicated.
CBP&P Hydro Plant Operators	2. Carry out the ECC request to return the energy exchanged under the current Energy Exchange agreement and, where possible, operate all sources of 60 HZ supply at maximum levels until all the energy has been returned.

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SYSTEM OPERATING INSTRUCTION

TITLE: Corner Brook Pulp and Paper and Newfoundland and Labrador Hydro Energy Exchange Agreement	**Inst. No.** 009 **Page** 9 **of** 9

RESPONSIBILITY	**PROCEDURE**
Energy Return by Corner Brook Pulp and Paper to Hydro	
Corner Brook Pulp and Paper	
CBP&P Hydro Plant Operators	3. Resume normal operations when advised by Hydro that all the energy under the current Energy Exchange Agreement has been returned. 4. Maintain a record of all communications with Hydro with regard to start and stop time of the energy return period.

REVISION HISTORY

Version Number	Date	Description of Change
0	2011-02-09	Original Issue

PREPARED: [redacted]	**APPROVED:**

newfoundland labrador hydro
a nalcor energy company

SYSTEM OPERATING INSTRUCTION

STATION:	Fermeuse Wind Farm	**Inst. No.**	T-087
TITLE:	Operating Procedures and Record Keeping	**Page** 1	**of** 3

Introduction

Fermeuse Wind Farm is a non-utility generator (NUG). It is a nominal 27 MW plant which is expected to produce an average of 84 GWh per year.

The contractual agreement between Hydro and Fermeuse requires Hydro to purchase all energy the Fermeuse Wind Farm delivers to the Nfld. Power's Fermeuse Substation, except in circumstances where the safe and secure operation of the system or safety and security of our customers may be affected. To achieve safe and secure operating conditions, it is important that communications be maintained between ECC, Fermeuse Operators and with Nfld. Power.

The ECC Shift Supervisor in discussions with Nfld. Power shall assess and determine situations when it is necessary for safety and security that the Fermeuse Wind Farm must be shutdown or is to be prevented from starting up. The ECC Shift Supervisor will keep a written log of any occurrences where the Fermeuse Wind Farm is prevented from operating and delivering power to the grid.

Also anytime the Fermeuse Wind Farm comes off line the Fermeuse operator must contact Nfld. Power for approval prior to bringing the plant back on line. Nfld. Power will coordinate with ECC when the plant can be placed back on-line. Records shall be kept of any failure of the Fermeuse operator or Nfld. Power to provide notice and receive approval to bring the plant on.

The transmission line, 902L, is owned, operated, and maintained by Fermeuse Wind Farm. Any time the line trips at Fermeuse, the Fermeuse operator must coordinate restoration with Nfld. Power. Nfld. Power will coordinate restoration with ECC.

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SYSTEM OPERATING INSTRUCTION

STATION:	Fermeuse Wind Farm	**Inst. No.**	T-087
TITLE:	Operating Procedures and Record Keeping	**Page** 2	**of** 3

Instruction

A. ECC/NP Initiated Shutdown or Load Reduction of the Fermeuse Station

1. The ECC Shift Supervisor or NP SCC will determine when a condition exists that the Fermeuse station must be shutdown or load reduced. NP SCC will consult with ECC when possible prior to initiating action. NP will notify the ECC immediately following the action. It can be done for reasons of safety and security only.

2. The ECC Shift Supervisor shall contact Nfld. Power, who will contact the Fermeuse operator to request the plant be shutdown or load reduced, giving the reason for the request and indicating when the plant may be restarted or resume normal loading.

3. The ECC Shift Supervisor shall record the time and cause of the forced shutdown or load reduction in the Station Diary.

4. If the Fermeuse operator cannot be contacted then the Fermeuse station shall be shutdown in coordination with Nfld. Power. Nfld. Power will open the line breaker at Fermeuse Substation.

5. The Fermeuse operator or other designated contact shall be informed following a forced shutdown.

6. The record of the shutdown shall be provided to the ECC Superintendent on the next working day.

B. Plant Start-up

1. Prior to coming on line and loading up the Fermeuse wind farm. The Fermeuse operator must notify Nfld. Power. Nfld. Power will inform ECC.

2. The ECC Shift Supervisor in discussions with the Nfld. Power will provide approval for the plant to go on line unless there is a system condition related to safety and security preventing this. A record of any refusal by the ECC or NP SCC for the plant to come on line shall be made.

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SYSTEM OPERATING INSTRUCTION

STATION:	Fermeuse Wind Farm	**Inst. No.**	T-087
TITLE:	Operating Procedures and Record Keeping	**Page** 3	**of** 3

Instruction (cont'd.)

B. Plant Start-up (cont'd.)

3. The time of the plant coming on line shall be recorded in the Station Diary. It should also be noted if the Nfld. Power failed to give prior notice to the ECC.

C. Transmission Forced Outages

1. If a trip occurs on any transmission equipment between the Fermeuse Wind Farm and Nfld. Power's equipment. Nfld. Power, in coordination with ECC, will establish when the Fermeuse Wind farm can be returned to service. Nfld. Power will not restore 902L following a trip of breaker FER-902E-B without receiving prior approval from the Fermeuse operator.

D. Plant Forced Outage

1. If the Fermeuse plant trips the Fermeuse operator will not start the plant and place it back on line until approval is received from the Nfld. Power. Nfld. Power will coordinate restoration with ECC. This will allow the ECC Shift Supervisor to determine if there was a system condition causing the plant to trip.

2. The Fermeuse Operator will report relay information to the Nfld. Power and ECC Shift Supervisor to assist in the determination of the cause of the outage.

REVISION HISTORY

Version Number	Date	Description of Change
0	2009-04-29	Original Issue
1	2011-09-07	Remove reference to ownership

PREPARED: [redacted]	**APPROVED:**

HYDRO
THE POWER OF COMMITMENT

SYSTEM OPERATING INSTRUCTION

STATION:	RATTLE BROOK GENERATION STATION	**Inst. No.**	T-065
		Rev. No.	
TITLE:	OPERATING PROCEDURES AND RECORD KEEPING	**Page** 1	**of** 4

Introduction

Rattle Brook Hydrolectric Station is a non-utility generator (NUG) owned by Algonquin Power Corporation. The 4 MW plant will produce on average 18 GWh per annum.

The contract between Hydro and Algonquin Power requires Hydro to purchase all energy produced by the Rattle Brook plant that is delivered to Hydro at the Rattle Brook tap, located between Jackson's Arm Tap and Coney Arm Station. Hydro is not required to accept delivery of power from Rattle Brook where the safe and secure operation of the system or safety and security of our customers are affected. To achieve safe and secure operating conditions, it is importation that communications be maintained between the ECC and Rattle Brook operators.

The ECC Shift Supervisor shall assess and determine situations when it is necessary for safety and security that the Rattle Brook plant must be shutdown or is to be prevented from starting up. The ECC Shift Supervisor will keep a written log of any occurrences where the Rattle Brook plant is prevented from operating and delivering power to Hydro.

Also anytime the Rattle Brook plant comes off line the Rattle Brook operator must contact the ECC for approval prior to bringing the unit back on line. Records shall be kept of any failure of the Rattle Brook operator to provide notice and receive approval to bring the unit on.

PREPARED BY:	**APPROVED/CHECKED BY:**	**ISSUED DATE:** 1998-11-23 **REV. DATE:**
[redacted]		

HYDRO
THE POWER OF COMMITMENT

SYSTEM OPERATING INSTRUCTION

STATION:	RATTLE BROOK GENERATION STATION	**Inst. No.**	T-065
		Rev. No.	
TITLE:	OPERATING PROCEDURES AND RECORD KEEPING	**Page** 2	**of** 4

Instruction

A. ECC Initiated Shutdown or Load Reduction of the Rattle Brook Plant

1. The ECC Shift Supervisor will determine when a condition exists that the Rattle Brook plant must be shutdown or load reduced. It can be done for reasons of safety and security only.

2. The ECC Shift Supervisor shall contact the Rattle Brook operator and request the unit be shutdown or load reduced, giving the reason for the request and indicating when the unit may be restarted or resume normal loading.

3. The ECC Shift Supervisor shall record the time and cause of the forced shutdown or load reduction in the Station Diary.

4. If the Rattle Brook operator cannot be contacted then the Rattle Brook station shall be shutdown from the ECC by first attempting a unit shutdown command. If this fails breaker L53T1 at Rattle Brook shall be used to force the unit off-line.

5. The Rattle Brook operator or other designated contact shall be informed following a forced shutdown.

6. The record of the shutdown shall be provided to the ECC Superintendent on the next working day.

PREPARED BY:	APPROVED/CHECKED BY:	ISSUED DATE: 1998-11-23 REV. DATE:
[redacted]		

HYDRO
THE POWER OF COMMITMENT

SYSTEM OPERATING INSTRUCTION

STATION:	RATTLE BROOK GENERATION STATION	**Inst. No.**	T-065
		Rev. No.	
TITLE:	OPERATING PROCEDURES AND RECORD KEEPING	**Page** 3	**of** 4

Instruction (cont'd.)

B. Plant Start-up

1. Prior to coming on line and loading up the Rattle Brook plant the Rattle Brook operator must notify the ECC.

2. The ECC Shift Supervisor will provide approval for the unit to go on line unless there is a system condition related to safety and security preventing this. A record of any refusal by the ECC for the unit to come on line shall be made.

3. The time of the unit coming on line shall be recorded in the Station Diary. It should also be noted if the operator failed to give prior notice to the ECC.

C. Transmission Forced Outages

1. If a trip occurs on any transmission equipment affecting the Rattle Brook unit the ECC Shift Supervisor will notify the Rattle Brook operator and indicate when the plant can be placed back on line.

D. Unit Forced Outage

1. If the Rattle Brook unit trips the Rattle Brook operator will not start the unit and place it back on line until approval is received from the ECC Shift Supervisor. This will allow the ECC Shift Supervisor to determine if there was a system condition causing the unit to trip.

2. The Rattle Brook Operator will report relay information to the ECC Shift Supervisor to assist in the determination of the cause of the outage.

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[redacted]		

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THE POWER OF COMMITMENT

SYSTEM OPERATING INSTRUCTION

STATION:	RATTLE BROOK GENERATION STATION	**Inst. No.**	T-065
		Rev. No.	
TITLE:	OPERATING PROCEDURES AND RECORD KEEPING	**Page** 4	**of** 4

Instruction (cont'd.)

E. Plant Peaking Operation (During Winter Months between 0800 to 2000 hours)

1. The ECC Shift Supervisor may request the Rattle Brook Operator to adjust the plants operation to assist in meeting system peak requirements.

2. The Rattle Brook Operator will operate the plant in this manner provided it does not cause spill or inefficient operation of the plant.

F. Isolated Plant Operation

1. The Rattle Brook plant is not capable of operating isolated from the power system to supply the White Bay area load.

G. Voltage Control

1. The Energy Control Centre has remote control of the Rattle Brook unit terminal voltage, within prescribed limits set by Rattle Brook personnel. **The unit terminal voltage may be operated between 3.8 kV and 4.4 kV.**

PREPARED BY: [redacted]	**APPROVED/CHECKED BY:**	**ISSUED DATE:** 1998-11-23 **REV. DATE:**

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SYSTEM OPERATING INSTRUCTION

STATION: ST LAWRENCE WIND FARM	**Inst. No.** T-086
TITLE: OPERATING PROCEDURES AND RECORD KEEPING	**Rev. No.**
	Page 1 **of** 4

Introduction

St. Lawrence Wind Farm is a non-utility generator (NUG) owned by the NeWind Group Inc. It is a nominal 27 MW plant which is expected to produce an average of 104 GWh per year.

The contractual agreement between Hydro and St. Lawrence requires Hydro to purchase all energy the St. Lawrence Wind Farm delivers to the Nfld. Power's Laurentian Substation, except in circumstances where the safe and secure operation of the system or safety and security of our customers may be affected. To achieve safe and secure operating conditions, it is important that communications be maintained between ECC, St. Lawrence Operators and with Nfld. Power.

The ECC Shift Supervisor in discussions with Nfld. Power shall assess and determine situations when it is necessary for safety and security that the St. Lawrence Wind Farm must be shutdown or is to be prevented from starting up. The ECC Shift Supervisor will keep a written log of any occurrences where the St. Lawrence Wind Farm is prevented from operating and delivering power to the grid.

Also anytime the St. Lawrence Wind Farm comes off line the St. Lawrence operator must contact Nfld. Power for approval prior to bringing the plant back on line. Nfld. Power will coordinate with ECC when the plant can be placed back on-line. Records shall be kept of any failure of the St. Lawrence operator or Nfld. Power to provide notice and receive approval to bring the plant on.

The transmission line, 901L, is owned, operated, and maintained by St. Lawrence Wind Farm. Any time the line trips at Laurentian, the St. Lawrence operator must coordinate restoration with Nfld. Power. Nfld. Power will coordinate restoration with ECC.

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[redacted]		REV. DATE:

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SYSTEM OPERATING INSTRUCTION

STATION: ST LAWRENCE WIND FARM	**Inst. No.** T-086
TITLE: OPERATING PROCEDURES AND RECORD KEEPING	**Rev. No.**
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Instruction

A. ECC/NP Initiated Shutdown or Load Reduction of the St. Lawrence Station

1. The ECC Shift Supervisor or NP SCC will determine when a condition exists that the St Lawrence station must be shutdown or load reduced. NP SCC will consult with ECC when possible prior to initiating action. NP will notify the ECC immediately following the action. It can be done for reasons of safety and security only.

2. The ECC Shift Supervisor shall contact Nfld. Power, who will contact the St. Lawrence operator to request the plant be shutdown or load reduced, giving the reason for the request and indicating when the plant may be restarted or resume normal loading.

3. The ECC Shift Supervisor shall record the time and cause of the forced shutdown or load reduction in the Station Diary.

4. If the St. Lawrence operator cannot be contacted then the St. Lawrence station shall be shutdown in coordination with Nfld Power. Nfld Power will open the line breaker at Laurentian Substation.

5. The St. Lawrence operator or other designated contact shall be informed following a forced shutdown.

6. The record of the shutdown shall be provided to the ECC Superintendent on the next working day.

PREPARED BY:	APPROVED/CHECKED BY:	ISSUED DATE: 2009-04-28
[redacted]		REV. DATE:

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SYSTEM OPERATING INSTRUCTION

STATION: ST LAWRENCE WIND FARM	**Inst. No.** T-086
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Instruction (cont'd.)

B. Plant Start-up

1. Prior to coming on line and loading up the St. Lawrence wind farm. The St. Lawrence operator must notify Nfld. Power. Nfld. Power will inform ECC.

2. The ECC Shift Supervisor in discussions with the Nfld. Power will provide approval for the plant to go on line unless there is a system condition related to safety and security preventing this. A record of any refusal by the ECC or NP SCC for the plant to come on line shall be made.

3. The time of the plant coming on line shall be recorded in the Station Diary. It should also be noted if the Nfld. Power failed to give prior notice to the ECC.

C. Transmission Forced Outages

1. If a trip occurs on any transmission equipment between the St. Lawrence Wind Farm and Nfld. Power's equipment. Nfld. Power, in coordination with ECC, will establish when the St. Lawrence Wind farm can be returned to service. Nfld. Power will not restore 901L following a trip of breaker LAU-901-B with out receiving prior approval from the St. Lawrence operator.

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[redacted]		REV. DATE:

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SYSTEM OPERATING INSTRUCTION

STATION: ST LAWRENCE WIND FARM	**Inst. No.** T-086
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Instruction (cont'd.)

D. Plant Forced Outage

1. If the St. Lawrence plant trips the St. Lawrence operator will not start the plant and place it back on line until approval is received from the Nfld Power. Nfld. Power will coordinate restoration with ECC. This will allow the ECC Shift Supervisor to determine if there was a system condition causing the plant to trip.

2. The St. Lawrence Operator will report relay information to the Nfld. Power and ECC Shift Supervisor to assist in the determination of the cause of the outage.

PREPARED BY: [redacted]	**APPROVED/CHECKED BY:**	**ISSUED DATE:** 2009-04-28 **REV. DATE:**

HYDRO
THE POWER OF COMMITMENT

SYSTEM OPERATING INSTRUCTION

STATION:	CORNER BROOK COGENERATION	**Inst. No.**	T-077
TITLE:	OPERATING PROCEDURES AND RECORD KEEPING	**Rev. No.**	
		Page 1	**of** 3

Introduction

Corner Brook Pulp and Paper operates a cogeneration facility at its mill in Corner Brook. It is a nominal18 MW facility which is expected to produce around 100 GWh per year. Hydro pays to Corner Brook Pulp and Paper a base rate for energy delivered by this facility up to 110 GWh in a calander year and an excess rate for energy delivered over 110 GWh in a calander year.

The contractual agreement between Hydro and Corner Brook Pulp and Paper requires Hydro to purchase all energy the Corner Brook cogeneration facility delivers to the interconnection (or metering) point, except in circumstances where the safe and secure operation of the system or safety and security of our customers may be affected. To achieve safe and secure operating conditions, it is important that communications be maintained between ECC and the cogeneration steam plant operator.

The ECC Shift Supervisor shall assess and determine situations when it is necessary, for safety and security, that the Corner Brook cogeneration facility be shutdown or is prevented from starting up. The ECC Shift Supervisor will keep a written log of any occurrences where the cogeneration facility is prevented from operating and delivering power.

Also anytime the cogeneration facility comes off line the cogeneration steam plant operator must contact the ECC for approval prior to bringing the facility back on line. Records shall be kept of any failure of the cogeneration operator to provide notice and receive approval to bring the facility on line.

PREPARED BY: [redacted]	**APPROVED/CHECKED BY:**	**ISSUED DATE:** 2003-01-24 **REV. DATE:**

HYDRO
THE POWER OF COMMITMENT

SYSTEM OPERATING INSTRUCTION

STATION:	CORNER BROOK COGENERATION	**Inst. No.**	T-077
TITLE:	OPERATING PROCEDURES AND RECORD KEEPING	**Rev. No.**	
		Page 2	**of** 3

Instruction

A. ECC Initiated Shutdown of the Corner Brook Cogeneration Facility

1. The ECC Shift Supervisor will determine when a condition exists that the cogeneration facility must be shutdown. It can be done for reasons of safety and security only.

2. The ECC Shift Supervisor shall contact the cogeneration steam plant operator and request the facility be shutdown, giving the reason for the request and indicating when the facility may be restarted.

3. The time of the cogeneration disconnection shall be provided by the steam plant operator. ECC Shift Supervisor shall record this time and cause of the forced shutdown in the Station Diary.

4. If the problem continues beyond 15 minutes after notification to disconnect the cogeneration facility, then the ECC will exercise its operating authority of the facility's breaker and have it opened.

5. A record of the shutdown shall be provided to the ECC Superintendent on the next working day.

PREPARED BY: [redacted]	**APPROVED/CHECKED BY:**	**ISSUED DATE:** 2003-01-24 **REV. DATE:**

HYDRO
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SYSTEM OPERATING INSTRUCTION

STATION:	CORNER BROOK COGENERATION	**Inst. No.**	T-077
TITLE:	OPERATING PROCEDURES AND RECORD KEEPING	**Rev. No.**	
		Page 3	**of** 3

Instruction (cont'd.)

B. Cogeneration Facility Start-up

1. Prior to coming on line and loading up the Corner Brook cogeneration facility, the steam plant operator must notify the ECC.

2. The ECC Shift Supervisor will provide approval for the facility to go on line unless there is a system condition related to safety and security preventing this. A record of any refusal by the ECC for the facility to come on line shall be made.

3. The time the facility came on line shall be provided by the cogeneration steam plant operator. ECC shall record this time in the Station Diary. It shall be noted in the diary if the steam plant operator failed to give ECC prior notice.

C. Cogeneration Facility Forced Outage

1. If the cogeneration facility trips, the steam plant operator will not start the facility and place it back on line until approval is received from the ECC Shift Supervisor. This will allow the ECC Shift Supervisor to determine if there was a system condition causing the cogeneration facility to trip.

2. The cogeneration steam plant operator will report the time at which their facility breaker tripped and relay information to the ECC Shift Supervisor to assist in the determination of the cause of the forced outage.

Reference Corner Brook Pulp and Paper Cogeneration Operating Procedures and Guidelines and Contact documents for further information.

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SYSTEM OPERATING INSTRUCTION

STATION:	**Energy Control Centre**	**Inst. No.**	T-093
TITLE:	**Island Generation Supply – Gross Continuous Unit Ratings**	**Page** 1	**of** 5

Introduction

As a System Operator is it important to keep an accurate account of available generating capacity on the Island Interconnected System. In this manner adequate reserves can be maintained, in consideration of current and forecasted demands, in order to cover the unplanned trip of a large generator and to avoid prolonged customer interruption.

Procedure

The attached table (the original spreadsheet is located in H:\Operations\ECC Management\INSTRUCTIONS\Technical directory) provides a listing of generator capabilities on the Island Interconnected System. It includes the following resources:

- NLH owned – hydro
- NLH owned – thermal
- NLH owned – standby
- NLH – purchases (hydro, thermal and wind)
- NP – customer owned (hydro and standby)
- DLP – customer owned (hydro)

The nameplate ratings are taken from available sources such as Canadian Electrical Association (CEA) input sheets, generator capability curves, data supplied from non-utility or customer owned generators, etc. These ratings generally represent the maximum power-generating capacity of a generating unit and are usually designated by the manufacturer. The gross continuous unit ratings for Hydro's units are generally reflective of the nameplate ratings but may be adjusted due to known permanent limitations or unavailability. For NLH purchases and customer owned generation, gross continuous unit ratings reflect the generation that is assumed during peak times and may be adjusted to account for available prime mover supply (i.e. wind, water or steam) or load restriction.

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SYSTEM OPERATING INSTRUCTION

STATION:	**Energy Control Centre**	**Inst. No.**	T-093
TITLE:	**Island Generation Supply – Gross Continuous Unit Ratings**	**Page** 2	**of** 5

Procedure (cont'd.)

The gross continuous unit ratings may also be adjusted on an operational basis to reflect times of low water levels or inflows, unit availability and temporary unit de-ratings. The gross continuous unit ratings, adjusted for any operational de-ratings, should be entered and maintained in the AGC (Automatic Generation Control) application by the ECC operators. The ratings should be entered into the "HI REG" limit in AGC to ensure that the ratings are propagated into all applications for accurate and timely real time indication, reserve calculations and for historical reporting of generation capacity. (*It should be noted that currently there is no provision in AGC to enter the capability of customer owned generation at Newfoundland Power and Deer Lake Power. This functionality will be added to AGC in the upcoming weeks.*)

Responsibility	Procedure
NLH Supervisor - ECC	Request, annually, that a capacity test of all NLH owned hydro generation be carried out no later than November 30 of each year. Request, annually, that Newfoundland Power conduct a capacity test of its hydro and thermal generation, to be carried out no later than November 30 of each year. Request, annually, that Deer Lake Power conduct a capacity test of its 60 Hz generation, to be carried out no later than November 30 of each year. Communicate, as required, with the NLH Asset Owners to ensure that any forced unavailability or de-ratings to generation are addressed immediately or that a plan is put in place to address these deficiencies in a timely manner to ensure there are no violations or potential violations of the n-1 reserve criterion. Update, annually, the Island generating capacity table, to reflect generation additions or deletions or any longer term or permanent generating unit de-ratings.

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SYSTEM OPERATING INSTRUCTION

STATION:	**Energy Control Centre**	**Inst. No.**	T-093
TITLE:	**Island Generation Supply – Gross Continuous Unit Ratings**	**Page** 3	**of** 5

Responsibility	Procedure
NLH (cont'd.)	
ECC Shift Supervisor	Request, monthly, (during the first week of the month) that a generation test of all NLH standby generation be carried out as per existing Instructions T-051 (Diesel testing) and T-054 (Gas turbine testing). Request, weekly (on Tuesdays), that a capacity test of all operating NLH owned thermal generation be carried out. The maximum unit loading to be achieved during the test should be in consideration of *T-068 - Guideline For Unit Maximum Loading*. Enter, on a daily basis, or as required, operational unit ratings for NLH owned hydro, thermal or standby generators in the corresponding "HI REG" limit areas in AGC. These ratings should be reflective of unit availability or any short term capacity de-ratings. Communicate, on a daily basis, with Newfoundland Power (NP) Control Room Operators and Deer Lake Power (DLP) Plant Operators to determine the current status of generation and outage plans. Short term operational unit unavailability or de-ratings are to be reflected in the corresponding "HI REG" limit areas in AGC *(once this functionality is made available for customer owned generation)*.
Hydro Generation - Operations	Conduct, annually, a capacity test of NLH's hydro generation, to be carried out no later than November 30 of each year. Ensure that deficiencies found at the hydro units during the annual capacity tests or at any other times during the year are communicated immediately to the ECC Shift Supervisor.

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SYSTEM OPERATING INSTRUCTION

STATION:	**Energy Control Centre**	**Inst. No.**	T-093
TITLE:	**Island Generation Supply – Gross Continuous Unit Ratings**	**Page** 4	**of** 5

Responsibility	Procedure
NLH (cont'd.)	
Hydro Generation – Work Execution	Ensure that deficiencies found at the hydro units during the annual capacity tests or at any other times during the year are addressed immediately or that a plan is put in place to address these deficiencies in a timely manner.
Thermal Generation - Operations	Communicate, daily, to the ECC Shift Supervisor, the known ratings of each of the thermal generating units. Conduct, weekly (on Tuesdays), a capacity test of NLH's operating thermal generating units. Ensure that deficiencies found at the thermal units during the weekly capacity tests or at any other times are communicated immediately to the ECC Shift Supervisor.
Thermal Generation – Work Execution	Ensure that deficiencies found at the thermal units during the weekly capacity tests or at any other times are addressed immediately or that a plan is put in place to address these deficiencies in a timely manner.
TRO – Operations and Work Execution	Conduct, monthly, (during the first week of the month) capacity tests of NLH's stand-by generation, as per existing Instructions T-051 (Diesel testing) and T-054 (Gas turbine testing). Ensure that deficiencies found at the standby units during the monthly tests or at any other times during the month are communicated immediately to the ECC Shift Supervisor.

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SYSTEM OPERATING INSTRUCTION

STATION:	**Energy Control Centre**	**Inst. No.**	T-093
TITLE:	**Island Generation Supply – Gross Continuous Unit Ratings**	**Page** 5	**of** 5

Responsibility	Procedure
NLH (cont'd.)	
TRO – Operations and Work Execution	Ensure that deficiencies found at the standby units during the monthly capacity tests or at any other times during the month are addressed immediately or that a plan is put in place to address these deficiencies in a timely manner.
Newfoundland Power	
NP Management	Arrange, annually, a capacity test of NP's hydro and standby generation, to be carried out no later than November 30 of each year.
NP Control Room Operators	Communicate, on a daily basis, with the ECC Shift Supervisor, the current status of NP's hydro and standby generation and generation outage plans.
Deer Lake Power	
DLP Management	Arrange, annually, a capacity test of DLP's 60 Hz hydro generation, to be carried out no later than November 30 of each year.
DLP Hydro Plant Operators	Communicate, on a daily basis, with the ECC Shift Supervisor, the current status of DLP's hydro generation and generation outage plans.

REVISION HISTORY

Version Number	Date	Description of Change
0	2014-05-27	Original Issue

PREPARED: [redacted]	**APPROVED:**

Island Interconnected System

Generation Supply Table

Unit Name	Turbine Rating (MW)	Generator Rating MVA	Generator Rating Power Factor	Nameplate Rating (MW)[1]	Adjustment (MW)	Gross Continuous Unit Rating (MW)
Bay d'Espoir Unit 1	80.6	85.0	0.90	76.5		76.5
Bay d'Espoir Unit 2	80.0	85.0	0.90	76.5		76.5
Bay d'Espoir Unit 3	80.0	85.0	0.90	76.5		76.5
Bay d'Espoir Unit 4	80.0	85.0	0.90	76.5		76.5
Bay d'Espoir Unit 5	80.6	85.0	0.90	76.5		76.5
Bay d'Espoir Unit 6	80.6	85.0	0.90	76.5		76.5
Bay d'Espoir Unit 7	154.4	172.0	0.90	154.4		154.4
Total Bay d'Espoir Plant				613.4		613.4
Cat Arm Unit 1	68.5	75.5	0.95	68.5	(1.5)	67.0
Cat Arm Unit 2	68.5	75.5	0.95	68.5	(1.5)	67.0
Total Cat Arm Plant[2]				137.0		134.0
Hinds Lake	77.3	83.3	0.90	75.0		75.0
Granite Canal	40.0	45.0	0.90	40.0		40.0
Paradise River	8.2	8.9	0.90	8.0		8.0
Upper Salmon	86.0	88.4	0.95	84.0		84.0
Mini Hydro				1.4	(1.4)	0.0
Total NLH Owned Hydro				**958.8**		**954.4**
Holyrood Unit 1[3]		194.4	0.90	170.0		170.0
Holyrood Unit 2[3]		194.4	0.90	170.0		170.0
Holyrood Unit 3[3]		185.0	0.85	150.0		150.0
Total NLH Owned Therma				**490.0**		**490.0**
Hardwoods GT[4]		63.3	0.85	50.0		50.0
Stephenville GT[4]		63.5	0.85	50.0		50.0
Holyrood Diesels[13]				14.6	(4.6)	10.0
St. Anthony Diesel Plant				9.7		9.7
Hawkes Bay Diesel Plant				5.0		5.0
Total NLH Owned Standby				**129.3**		**124.7**
Total NLH Owned				**1,578.1**		**1,569.1**
Star Lake				18.0		18.0
Rattle Brook[5]				4.0	(4.0)	-
CBPP Co-Gen[6]		18	0.85	15.3	(7.3)	8.0
Nalcor Grand Falls and Bishop's Falls[7]				95.6	(32.6)	63.0
Nalcor Buchans[7]				1.9	(1.9)	-
St. Lawrence Wind[8]				27.0	(27.0)	-
Fermeuse Wind[8]				27.0	(27.0)	-
CBPP Curtailable Load[9]				-	-	-
Total NLH Purchases				**188.8**		**89.0**
Total NLH System Supply				**1,766.9**		**1,658.1**
Newfoundland Power (Hydro)[10]				97.5	(18.4)	79.1
Newfoundland Power (Standby)[10]				41.5		41.5
Total Newfoundland Power Owned[11]				139.0		120.6
Total NLH and NP System Supply				**1,905.9**		**1,778.7**
Deer Lake Power 50 Hz[12]				55.0	(23.0)	32.0
Deer Lake Power 60 Hz[9]				81.1	-	81.1
Total Deer Lake Power Owned				136.1		113.1
Total Island Supply				**2,042.0**		**1,891.8**

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Notes:

1. Unless otherwise noted, this is the minimum of the turbine rating or the generator rating at rated power factor.
2. Units at Cat Arm are adjusted as a plant generation of 134 MW is the maximum that can be sustained based on experience.
3. Ratings of the Holyrood units based on long standing published values. To determine net generation subtract station service of 24.5 MW.
4. The units were permanently de-rated to 50 MW at the end of 2012.
5. No peaking capability during winter assumed for the Rattle Brook Unit. Generation output will fluctuate depending on available inflows.
6. Only 3 MW of peaking capability assumed for the CBPP co-gen when short term capacity assistance arrangements are in place (see note 9 below). Generation output will fluctuate depending on mill steam requirements, and is reduced significantly when a large amount of load is curtailed. Otherwise 8 MW is assumed on peak.
7. Nalcor Grand Falls, Bishop's Falls and Buchans nameplate data taken from Statistics Canada survey data.
8. No peaking capability assumed for the wind generation. Generation output will fluctuate based on the wind levels.
9. Under the short term capacity assistance arrangements Hydro can call upon 20 MW, 40 MW or 60 MW blocks of capacity from CBPP's 60 Hz generation. This is achieved through load curtailment at the Mill. Currently, the arrangements are in place until March 31, 2014.
10. These are the generation capacities indicated by Newfoundland Power in their response to PUB-NP-001 of the Inquiry RFIs.
11. Overall Newfoundland Power generation adjusted using a 15.3% reserve margin, as per the 2013 GRA Application.
12. Deer Lake Power has 55 MW of installed 50 Hz generation capacity. Of this amount, 32 MW is utilized – 20 MW through frequency conversion and 12 MW of Mill 50 Hz load.
13. The 14.4 MW nominal black start diesel plant at Holyrood was connected on . 10 MW can be made available to the grid for peaking power.